Exploring Visitor Experiences on Going-To-The-Sun Road in Glacier National Park

by

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M.S. , University of Montana, 2002

Presented in partial fulfillment of the requirements

for the degree of

Master of Science
in
Forestry

The University of Montana

August 2002

ABSTRACT

Giordano, Robert N., M.S., Resource Conservation, January 2002

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Going-to-the-Sun Road (GTSR) is one of the premier road facilities in the world. As the only cross-mountain route through Glacier National Park, the road brings nearly two million visitors a year into the heart of Montana wilderness. How to meet this demand for travel while protecting the nature of the visitor experience and the pristine setting for which the experience exists is a challenge of on-going complexity.

This research was designed to assist park managers in determining future changes to GTSR by describing and analyzing the experiences on the road today. Through 40 on-site interviews at Logan Pass (the pinnacle of GTSR) with drivers, passengers in a car, cyclists, and shuttle riders, it is hoped that a greater understanding of the 'mobility dynamics,' both within modes and between modes, can be gained. To this end, three research questions were addressed: 1) What are the experiences of travelers on Going-to-the-Sun Road? 2) How does travel mode affect the experience? 3) How might travelers' experiences be improved on Going-to-the-Sun Road?

The results of this study imply that there is a broad range of experiences being felt on GTSR and that mode choice does makes a difference. The results also suggest that eight distinct, yet highly interrelated *emergent managerial issues* are influencing the GTSR experience. A final interpretation puts forth a set of mitigating measures and framework scenarios for improving the traveling experience on GTSR in Glacier National Park.

ACKNOWLEDGMENTS

This study would not have been possible without the guidance of several people. I would like to extend my thanks to Norma Nickerson, committee chair, who has provided me with extensive professional insight to bring this thesis to fruition. The members of my committee, Richard Barrett and Dave Jackson, have contributed to this research with timely suggestions, support and review. I wish to thank Glacier National Park for assistance in data collection. I also would like to thank the more than forty people I interviewed at Logan Pass on Going-to-the-Sun Road for taking the time to give their reflections on the 'traveling experience.' Finally, this research would not have been possible without the support of numerous family and friends.

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CHAPTER ONE: CONTEXT OF STUDY

Going-to-the-Sun Road (GTSR) in Glacier National Park is one of the premier road facilities in the world. Twenty years in the making, this historical landmark carves its way from the pristine valley floors of western Montana to the crescendo of the continental divide at Logan Pass, and then meanders its way back down the other side, finally emerging at the eastern doorstep of the Front Range of the Rocky Mountains. To experience GTSR is to experience the beauty of nature and the marvels of human engineering in one grand swoop. Yet, all is not well with the 'Road.'

Going-to-the-Sun Road, the dominant transportation feature in Glacier National Park (GNP), is in dire need of repair. Nearly seventy years of avalanches, freeze/thaw cycles, erosion, and intense visitor use has taken an immense toll on the structural integrity of the only cross-mountain route in Glacier National Park. How to best repair GTSR is an on-going question of complexity.

Any restoration efforts to restore GTSR need to adhere to the management objectives set forth in official GNP policy. These objectives, from Glacier National Park's Statement for Management (National Park Service, 1985) include:

* To enhance and provide reasonable protection for the visitor and his property from hazards in the natural and manmade environment

* To give visitors a quality experience by providing them with the opportunity to see, enjoy, and appreciate the park's resources to the maximum extent possible without adverse effects on these resources and visitor safety

* To make available diverse opportunities for public recreational activities in locations and at intensity levels that are compatible with long-term perpetuation of natural and cultural resources

* To provide visitors the opportunity to experience the natural phenomena of Glacier safely and nonconsumptively

The challenge of restoring GTSR while adhering to these management objectives becomes more difficult as the number of visitors increases. From 1977 to 1995 park visits to GNP increased by more than 50% to a total of roughly two million visits per year (McCool, 1996). Eighty percent of visitors to GNP from July 29 to August 4, 1990 were found to have traveled to Logan Pass, the pinnacle of GTSR (Littlejohn, 1991). Combining these two statistics shows that the demand for utilizing GTSR is high.

In order to balance the restoration of GTSR, adherence to management objectives, and heavy visitor use, it would be helpful to have a thorough understanding of the range of visitor experiences that are happening on the road today. Currently, there is a lack of knowledge about visitors' experiences on Going-to-the-Sun Road.

Purpose of this Study

The purpose of this study is to describe and analyze the experiences of visitors on Going-to-the-Sun Road and provide this information to decision makers so they can best determine future changes to the road. Through tape-recorded and analyzed interviews with forty travelers on GTSR, a range of insights about feelings, emotions, desires, likes, and dislikes about the experiences happening on the road will be gained.

Part of the purpose of this study is to uncover 'clues' as to what is working on GTSR and what can be improved. These clues can best be found by engaging everyday users on GTSR about their experiences. To help guide this process of inquiry, several research questions were developed.

Research Questions

The research questions that addressed the purpose of this study were as follows:

R1: What are the experiences of travelers on Going-to-the-Sun Road?

R2: How does travel mode affect the experience?

R3: How might traveler's experiences be improved on Going-to-the-Sun Road?

Answering the first research question, 'what are the experiences of travelers on Going-to-the-Sun Road,' was the backbone of this study. Through the interview process, the types of experiences being felt on GTSR were revealed. The analysis of these experiences (or a 'weaving' of themes) helped tie together any discovered phenomena. Providing answers to this question may help decision-makers better understand the types of experiences that are happening on GTSR.

Answering the second research question, 'how does travel mode affect experience,' considers any special characteristics that might apply to four of the most prevalent methods for traveling on GTSR: driving a car, riding in a car, cycling, and riding in a shuttle. This assumes that mode choice might make a difference in the types of experiences on GTSR. This also assumes that different management decisions might be needed to address the needs of different modes of transportation.

Answering the third research question, 'how might traveler's experiences be improved on Going-to-the-Sun Road,' builds on the results of the first two research questions and looks to the future. By combining information about the present experiences on GTSR, visitor responses for future desired changes, current research, and in-depth analysis, a better understanding may be gained about improving visitor experience on GTSR.

Nature of this Study

This study is exploratory in nature. This means that while the process of undertaking the study was well defined, the product or type of result was not initially known. The study takes its own course with the purpose and subsequent research questions guiding the data collection and analysis.

There are no stated hypotheses to be tested or experiments to be undertaken. Qualitative in approach, the basis for this study was performing tape-recorded interviews with 40 travelers on GTSR.

Thesis Organization

This thesis is presented in five chapters. This chapter provided some context to the study- mainly describing the prevailing problem being addressed and the questions to be answered. Chapter two provides a literature review of the relevant topics associated with this study. Chapter three outlines the methods used to perform this study. Chapter four brings forward the results of this study and a subsequent analysis. Finally, chapter five summarizes the findings of this study, provides a discussion and interpretation of the results, and gives guidance for any future studies.

CHAPTER TWO: LITERATURE REVIEW

This chapter looks at the relevant literature pertaining to this study. Four main topics are presented. First, a history of transportation in Glacier National Park will be examined. This will help give perspective on today's situation. Second, transportation systems in four different national parks will be presented in order to reflect some of the changes in transportation planning and development that are happening around the country. Third, a review of what constitutes an 'experience', along with an assessment of past studies concerning the nature of experience, will be examined. Lastly, there will be an overview of the literature pertaining to visitors' experiences in Glacier National Park.

History of Transportation in Glacier National Park

> "Glaciers were the first trail-makers. Then came the rivers bursting with irresistible force through the canyons with wild leaps from crag to crag. Then came the shy wild-life creatures, leaving, as the centuries passed, little indurated hard trail marks, which the Indian followed in his hunger-hunt, till the white man came with ax and dynamite and bridge and motor car" (Laut, 1926, p.5).

Glacier National Park's transportation system has a rich and varied history. Up until the late 1800's, the means for getting around Glacier consisted mainly of trails and steam boats in and around Lake McDonald (Robinson, 1960). This is further reflected in Robert Haraden's forward in Through Glacier Park in 1915: "Glacier has always been known as a "trail" park, so imagine for a moment this great park with only trails- no roads, with most people traveling by horseback" (Rinehart, 1983, p.2).

This 'no roads' state of affairs remained until Glacier became an official National Park in 1910 (Robinson, 1960). This does not mean that some were not at least thinking about the possibilities of bringing roads and motorization to the park before the official

designation. Henry Ford produced his first automobile, a 'steamer', in 1901, and the excitement of 'horseless carriages' was catching on throughout the country. As early as 1906, W. J. Hillegass, of the Great Northern Railway, had found a 'practical route for a wagon road' over the mountain range (Hanna, 1983). With the appearance of cars in Glacier National Park in 1911 came the beginning of efforts for major road building (Robinson, 1960).

The first public transportation system in Glacier ran from 1912-1914 (Robinson, 1960). This system consisted of three four-horse coaches. Each coach was capable of transporting eleven riders. The business was owned and managed by the Brewster Brothers of Canada (Robinson, 1960). In 1914, Montana native Roe Emery founded the first authorized, motorized transportation system utility of any National Park. His business, Glacier Park Transportation Company, put an end to the Brewster Brother operation. One account of the situation reads,

> "Mr. Emery hired A.K. Holmes as manager of the company, imported ten buses, five touring cars, and a couple of trucks, all from the White Motor Company, and started operation in earnest, very effectively eliminating the Brewster Brothers from the transportation picture" (Robinson, 1960, p.73).

The establishment of a public transportation system in Glacier continued to galvanize road-building efforts. A clear park mandate was lacking at the time (the formal charge to protect natural resources was not established until enabling legislature was passed in 1916) and pressure from private interests, such as Louis Hill, lobbyist for the Great Northern Railway, convinced Congress to authorize considerable public monies for roads (Schene, 1990).

The year 1914 was very dry and permitted considerable road building in the park. A Congressional committee had come to Glacier National Park in that same year and

‘three of their machines went into the ditch. They went home and voted some money for the road’ (Rinehart, 1983). The pursuit to build a cross-mountain route was now in high gear.

The year 1915 proved a different story for road building as it rained almost every day. One of the road builders reflected on the situation in a letter reprinted in the Driver’s Manual for bus operators (Hays, 1948):

> “After all is said and done, in looking back it was a pretty rugged type of transportation. One of the things I remember best is that during that terribly rainy summer, Mr. Emery would say every night, “we are quitting tonight- no more buses”. The next morning, when the sun would shine for a while, he would say, “Well, I guess we will try it again”. This was repeated every day during the rainy season” (p.65).

In 1916, the Bureau of Public Roads sent an engineer to Glacier National Park to survey routes to connect both sides of the Park. The engineer’s report led to the first appropriation of congress- $100,000 in 1921 (Hanna, 1983). In 1924/25, work began on the eastern side of Glacier Park.

In June of 1929, GTSR was completed to Logan pass from the west side. There was a direct increase of 19,000 people to GNP that year, with most making their way to Logan Pass (Hanna, 1983). By 1930, the Glacier Park Transportation Company (which had changed hands to become the Glacier Transport Company) operated a fleet of over 65 buses. This was the beginning of the ‘Red Jammers’ (Robinson, 1960). Highway 2, the southern border of the park, was also completed in 1930.

The full GTSR, 50 miles in length, took twenty years to finish and was finally completed in 1934. Official dedication took place on July 15, 1933 and was attended by 5,000 people (Hanna, 1983). This included 150 members of the Blackfeet, Flathead, and

Kootenai Indian tribes, 'their ardor apparently undampened by the death of two of their number as the result of an automobile accident on the way to the pass' (Hanna, 1983, p.26). Completion of GTSR changed not only the character of Glacier National Park, but also the character, or nature, of the visitor experience. This is reflected in the following quotes:

> "This highway caused *the* major transition in the park because it changed the dominant vehicle for viewing the park from horse to automobile" (Grant, 1987, p.11).
>
> "It is now possible for a transcontinental traveler to leave his train at the eastern or western gateway of Glacier National Park, cross the park in a motor bus by its most spectacular route, and resume his train travel the next day at the opposite gateway from which he entered" (National Park Service, 1935, p.24).
>
> "It was a highway that had to be built, not merely as a connecting link between two points, but rather to serve as a showcase for the Park's treasures for the special benefit of the large number of visitors whose sight-seeing is limited for what ever reason to vehicular travel" (Hanna, 1983, p.9).

Various road and transit service improvements took place over the next few decades. Buses were added and upgraded for passenger comfort, and issues such as flexibility in roadway capacity were addressed (Hays, 1948). From 1943-1945 commercial transportation services were suspended due to wartime restrictions (Hays, 1948). In 1957, the Glacier Transport Company was sold to Glacier Park Company and resold yet again in 1961 to Glacier Park Incorporated (GPI) (Robinson, 1960). GPI is the current owner and operator of one of two commercial transportation service companies in Glacier National Park (the other service provider is Sun Tours). GPI and GNP are partnering to oversee the restoration of 33 of the red buses (the historic 'jammers') that will eventually make their way back into operation.

Transportation Systems in Four Select National Parks

This section looks at some of the changes being made in the transportation systems of four National Parks from around the United States. The primary way each of these Parks has made a change is in available mode choice. Stated more clearly, these parks have made a conscious effort to encourage (or force) a shift from driving to transit and/or bicycling. This changing dynamic relates to this study in that research question #2 looks at the effect mode choice has on visitor experience. The four parks referenced here- Denali National Park, Zion National Park, Acadia National Park, and Yosemite National Park- show how park management decisions are shifting from a heavy focus on private automobile use to a more holistic approach that embraces shuttles, bicycles, and clean-fuel technology.

Denali National Park

Denali National Park closed the main road into the park to cars in 1972 (past mile marker 14). Due to projected traffic increases, the choice was either close the road to cars and initiate an extensive public transit system or widen the road and accommodate the growing numbers of vehicles to the park (M. Phyliss, personal communication, May 2001). Visitor satisfaction surveys convey success with the bus system. Seventy-nine percent 'agreed' or 'strongly agreed' that the system enhanced their experience (Miller& Wright, 1999).

Denali promotes the enhanced wildlife viewing opportunities available on a shuttle or tour bus: "Riding a bus enhances your chances of spotting wildlife. You are sitting higher than if you were in a car and there are many pairs of eyes watching" (Denali Website, 2001). Denali also encourages transit use by providing additional

information and a reservation system via the Web. Riders can get on or off the buses at any time. The buses are purposely not booked full so there is the option to pick up riders along the way (Park ranger, personal communication, January 2002).

Denali National Park has initiated a road lottery for driving in the park for four days at the end of the season. A fact sheet (Denali National Park, 1998) reads:

> The Denali Road Lottery began in the fall of 1990. Before the lottery, the road was open to private vehicles in the fall. This created numerous problems: up to1200 cars a day were on the road creating traffic jams and hazardous driving; wildlife disappeared from view; pets running loose, illegal camping and food storage concerns were also prevalent. To eliminate this madness, Superintendent Berry implemented a road lottery to allow 400 cars a day for 4 days to drive the park road….the lottery has brought some order to the old chaotic road opening. Problems still remain, but things are much better than before (p.1).

Zion National Park

Zion National Park began a mandatory shuttle system in May 2000 (Zion Website, 2001). Part of the catalyst for this system was that while there were only 400 parking spaces in the canyon there was a peak of 5,000 cars on the busiest days of tourist season (Clarke, 2001). A town shuttle loop is free and the park loop is twenty dollars for a family, which includes the park entrance fee (Zion Website, 2001). Gateway parking locations in nearby communities eases the burden of needing to build new parking lots and also supports local business.

The system cost $28.1 million and consists of 29 propane-fueled buses. Each bus is capable of handling 31 passengers (Clarke, 2001). Each bus can also tow a 35-seat trailer during peak demand. The result has been 2,500 less vehicles per day in the park. This equates to 4.5 million less vehicle miles traveled in the park each year (Clarke, 2001). Wildlife viewings are up and noise is down. A negative aspect of this system includes the impacts of unloading 60 people all at once at one stop (Clarke, 2001).

Some of the challenges facing this new system are finding a way to accommodate pets, affording everyone a good view with big enough windows, and keeping a comfortable temperature on the shuttle. Tinted windows that keep the bus from heating up too quickly also cut down on the views, especially when the top windows are opened for cooling and slid down. This creates a 'double tinting effect' on the bottom windows (J. Rozelle, personal communication, January 2002).

Acadia National Park

Acadia National Park operates 17 free, propane-fueled buses. The buses were purchased with a grant from the National Park Service (Friends, 2000). The same stated goal as Zion National Park exists: reduce traffic congestion and parking problems, and improve air quality (Clarke, 2001). The official web site for Acadia National Park actively promotes use of the propane-fueled buses, highlighting the reductions in nitrous oxides, carbon monoxides, and carbon dioxides resulting from 42,000 car trips replaced with shuttle trips in 1999 (Acadia Website, 2001). Ninety percent of riders said the shuttle system made their visit better (Clarke, 2001).

The buses are all alternatively fueled, can seat 28 people, are wheelchair accessible, and have both a front and rear bike rack capable of holding two bikes each (Friends of Acadia, 2000). Plans are moving forward to test some new technologies, a GPS tracking and information systems for example, thanks to a $2 million grant from the United States Department of Transportation (Friends of Acadia, 2001). Funding for operation of the shuttle system comes from a partnership between the park service, the Maine Department of Transportation, and surrounding towns.

Bicycling is a popular activity in Acadia National Park. While the buses stick to the main scenic loop road (27 miles) there is a network of carriage roads (45 miles) that provides a place for walking and biking. Although bikes are allowed on the scenic loop road, they are not encouraged to be there by the park. There is not enough room to cycle safely (W. Moran, personal communication, January 2002).

Part of the scenic loop road is one way for cars, with the extra room given over to parking. This provides an extra challenge for cyclists who venture onto the loop road because of opening car doors. Walking is allowed on the scenic road, but lack of designated space puts pedestrians off the shoulder (W. Moran, personal communication, January 2002). Although the road is closed to vehicles in the winter and is not maintained, a volunteer group provides free grooming for cross-country skiing activity (Acadia National Park, 2001).

Yosemite National Park

The Yosemite Area Regional Transportation System (YARTS) finished a two-year demonstration project in the summer of 2000. A cooperative of three counties, the National Park Service, Caltrans, the US Department of Transportation, and the US Forest Service, the YARTS board has now embarked on a five-year project based on the success of the trial project. The success was stated as 110 fewer cars a day driving in the park (Clarke, 2001).

According to the YARTS fact sheet (YARTS, 2001), the YARTS system started with the purpose to give visitors “an affordable option for getting into the park without

having to drive their cars, if they so choose." Two of the bullets under *Project History* in the 2001 fact sheet, state that:

> * Originated by Mariposa County in 1992 in an attempt by the Counties involved to find a way to reduce dependence upon single –family vehicles for visiting the area and accessing Yosemite National Park
>
> * Counties sought to improve upon the economic vitality of their communities, while maintaining the character of the Region

The system consists of eight diesel buses leased by the National Park Service until alternatively fueled buses can be bought (Clarke, 2001). The buses pick up riders at parking lots in gateway communities. The fare ranges from ten to twenty dollars, which includes the Park entrance fee (YARTS, 2001). The YARTS system also connects with the free Yosemite Valley shuttle that circulates within the park. Chip Jenkins, the park's chief of strategic planning, says: "we saw people who might not otherwise have visited, people who did not have cars, younger people, and foreign visitors" (Clarke, 2001, p.35).

Each of these four parks demonstrate that changes to the transportation structure of our national park system is sometimes necessary in order to continue to protect natural resources and protect visitor experience. Each park is proactively addressing issues such as congestion, pollution, and parking. GNP may be able to learn from both the successes and failures of places like Denali, Zion, Acadia, and Yosemite for implementation of any projects that may be needed down the road.

Understanding Experience

Since the purpose of this study is to describe and analyze visitors' experiences on Going-to-the-Sun Road, it would be relevant to review what constitutes an 'experience.' An experience is defined as 'the act or process of directly perceiving events or reality'

(Merriam-Webster's Collegiate Dictionary, 1984). By delineating experience as a process, it can be inferred that there are several parts making up a whole. This is reflected in the literature on experience. Coe (1985), Clawson and Knetsch (1966), Hammitt (1980), and Stewart (1998) all talk about the multi-faceted dimension of experience. For example, Coe divides experience into six different parts: 1) anticipation, 2) lack of distraction, 3) novelty, 4) fulfilled expectation, 5) emotional involvement, and 6) reinforcement.

Experience is not a snapshot, but rather a complex process that evolves over time. Experience has a dimension of change, meaning the nature of the experience can shift as new information or ways of thinking come to light. This might suggest that there is no neat and tidy end to experience, only a continuation of a process. This variable nature of experience is reflected in the variety of questions used in the interview guide for this study.

In addition to understanding what experience is, it is useful to also understand people's underlying motivation to have an experience in the first place. Within the general body of research, two distinct paradigms on this topic have emerged over the decades. The first is the Goal-Directed Paradigm and the second is the Emergent Experience Paradigm.

The Goal-Directed Paradigm, the oldest of the two paradigms, is centered on the end-result of an experience. The basis for this paradigm is that people have preconceived notions or goals and that attaining those goals is the over-riding objective of the undertaken experience (Patterson et al., 1998). This paradigm is concerned mainly with

the product of experience. A limitation to this paradigm is that 'how' an experience is obtained is left out of the picture.

The Emergent Experience Paradigm has resulted because of this limitation to the Goal-Directed Paradigm. This rival paradigm suggests that the true value in an experience is derived from the nature of the process in obtaining the goal or experience, not just whether or not that goal or experience can be checked off a list (Omodei & Wearing, 1990). Thus, the Emergent Experience Paradigm tends to put more weight behind the processes and dynamics of undertaking an experience, unlike the emphasis on the product of experience in the Goal-Directed Paradigm.

This study is primarily grounded in the Emergent Experience Paradigm. This paradigm lends itself better to the research questions being explored. By utilizing this research approach, an assumption is being made that the nature of the experience (the kind of experience, the details, the process, etc.) is of importance to visitors and park managers alike.

Several studies have attempted to look at and understand the various aspects of a recreational experience. Hull, Stewart, and Yi (1992) assessed seven different qualities of experience of day hikers in the White River National Forest in Colorado and how those experiences related to site characteristics. The hikers were chosen by convenience sampling at the trailhead and, if they agreed to participate in the study, were instructed to fill out a one-page questionnaire at twelve predetermined locations along the hike. The questions required answers in rating form and addressed scenic beauty, current mood, and measures of satisfaction. The results of the study suggest that the recreation experience varies over the course of engagement.

McIntyre and Roggenbuck (1998) utilized pagers to capture the experience of black-water rafters in underground caves in Waitomo, New Zealand. Twenty-eight students, divided into three groups, filled out surveys when they were 'buzzed' at five different sites during the experience. The survey consisted of a 7-point semantic differential to gauge mood, a 10-point scale to gauge attention, and a 10-point scale to measure perceptions of competence and risk. The study also included an analysis of personal, written accounts that the students completed at the end of the experience. The report documented that moods, such as *relaxed* and *aroused*, varied significantly throughout the experience, while other moods, such as *sociable*, did not.

Another study sought out patterns in the experiences of 586 rock climbers and white-water boaters at the New River Gorge and Seneca Rocks in West Virginia (Ewert & Hollenhorst, 1994). Similar to the above two studies, the primary method for data collection was a questionnaire. Respondents rated attributes such as "whitewater sports say a lot about who I am" on a 5-point scale of *strongly agree* to *strongly disagree* and also answered more straight forward questions such as 'number of engagements in the past year.' The results of the study found that 51 of 56 possible combinations of attributes had a positive correlation, with 19 achieving statistical significance.

Borrie and Roggenbuck (2001) sought insights to the hypothesis that three distinct phases exist in an on-site wilderness experience. To test the hypothesis, a convenience sample was used to identify sixty-two groups of canoeists at the Okefenokee National Wildlife Refuge. The participants filled out a questionnaire at the prompting of an electric beeper during the entry, immersion, and exit phases of the experience. Findings of the study suggest a greater focus on the environment and self/introspection and a

greater care for wilderness at the exit phase of the experience when compared to the entry phase.

With a focus on snowmobiling, a study in Yellowstone National Park used mail-back questionnaires and on-site surveys to gather information about visitor's motivations for coming to the park, satisfaction with certain experiences, and support for management decisions (Davenport, et al., 2000). Part of the study's aim was to measure visitor's acceptability rates with different levels of snowmobile encounters. One result of the study found that, within each visitor type, there was a broad range of desired experiences. The report goes on to suggest that "management strategies that increase the opportunity for nature study, personal growth, and quiet fitness, are likely to be supported by a broad subset of the visitors" (Davenport, et al., 2000, p.91).

A study from the University of Florida (Ashton-Shaeffer et al, 2001) sought to identify themes in the experiences of adults at a disability sport camp. Using in-depth semistructured interviewing as the data collection instrument, the reflections of 15 men and women were brought out and analyzed. The results suggest that three major themes are prevalent in the experience: surveillance, resistance and empowerment.

Montag (2000) and Kearns (2001) also used interviewing techniques to perform their respective studies to look at the nature of visitors' experiences in viewing wolves at Yellowstone National Park, and to explore the meaning in visitor's dialogue with regards to viewing Grizzly bears in captivity. Montag's convenience sample consisted of 29 interviews performed over two seasons while Kearn's convenience sample consisted of 35 interviews performed in three segments over a four-month period. The methodologies of both of these studies relate to the approach taken in this study in that interviews were

transcribed and analyzed to uncover themes in the visitor experience. The results from Montag's study suggest that there are a variety of types of wolf watching experiences, a variety of interpretations of those experiences, and a variety of social constructions from which the experiences are based. The results of Kearn's study suggest that an important factor in how a person interprets an encounter with bears in captivity is the character, or context, of the interaction they are seeking.

Glacier National Park Research

Several research projects performed in Glacier National Park over the last several decades have examined various aspects of the visitor experience. Hoflich (1950) analyzed a range of quantitative data collected from out-of-state, overnight automobile tourists entering Glacier National Park. The data collection method was a survey with the results focusing on themes that analyzed where visitors came from, how long they stayed, and how much money they spent. Another report summarized the numbers and types of people who entered GNP in 1968. The 964,493 visitors were broken down into categories such as camper days, bus passengers, picnickers, fishermen and so on (National Park Service, 1969). Eisner (1973) summarized and evaluated public transportation systems in various national parks and then made recommendations for Glacier National Park. The main focus of Eisner's study was to look at ways of reducing congestion in Glacier National Park through improved shuttle services. Another study looked at the indirect effect of visitors hiking around Logan Pass. The study found that treated boardwalks used to minimize erosion from hikers were leaching PCP's that were killing alpine furs (Beaver, 1975). Hartley (1980) inspected and analyzed visitor impacts on subalpine meadows around Logan Pass. Seibert (1981) looked at visitor compliance

with a zone-type backcountry camping permit system in the Middle Fork of the Flathead River area of Glacier National Park. Pedevillano and Wright (1987) assessed the effects of visitors on the behaviors of Mountain goats trying to cross highway 2 along the southern border of Glacier National Park. McCool and Frost (1988) looked at the effects of regulations on visitor experience in association with the viewing of bald eagle migration behaviors. McCool and Braithwaite (1989) used voluntary registration surveys and personal counts to estimate that 157,400 people were backcountry day users of GNP in the summer of 1988. Braithwaite and McCool (1991) continued to estimate backcountry day use for GNP in the 1990 season for the Many Glacier area. Semler (1993) reviewed visitor impacts on backcountry camping areas of GNP. Miller, Freimund, and McCool (1997) performed a comprehensive survey of 1,554 visitors at three trailheads in GNP and showed that 37.1 percent chose 'agree or strongly agree' with 'too much traffic' at Logan Pass (Miller et al., 1997). Miller (1997) used the same surveys utilized in the above-mentioned study to look at the relationships between visitor stress levels and different coping behaviors, with a focus on testing the correlation between primary and secondary appraisals of stress. Finally, 1,049 quantitative, exit surveys were administered to drivers of motorized vehicles in an attempt to determine visitor responses to alternative construction scenarios for GTSR (National Park Service, 1997).

In summary, a diverse breadth of research relating to visitor use in Glacier National Park has been performed over the years. Yet, none focus on in-depth, qualitative assessment of visitor's experiences on GTSR. This study aims to fulfill that

niche by analyzing forty interviews with a variety of travelers arriving at Logan Pass. The following chapter outlines the methods that were used to accomplish that task.

CHAPTER THREE: METHODOLOGY

A scientific methodology is a "system of explicit rules and procedures upon which research is based and against which claims for knowledge are evaluated," (Frankfort-Nachmias & Nachmias, 1996). This sections outlines the procedures that were followed in performing this study.

Research Approach

Qualitative research, and more specifically, tape-recorded interviews, was the chosen method of data collection for evaluating visitor experiences on GTSR. Qualitative research was chosen over quantitative research because of the nature of the research questions:

R1: What are the experiences of travelers on Going-to-the-Sun Road?

R2: How does travel mode affect the experience?

R3: How might traveler's experiences be improved on Going to the Sun Road?

The goal was not to measure any kind of quantity; in fact, the opposite was true. The goal was to describe experiences, look at the effect of travel mode on experience, and seek to understand any kind of improvements that may be made to the experience. This can be best accomplished with a qualitative format. Patterson and Williams (in press) state that qualitative research is an approach "in which empirical systems are represented by nonnumerical measures." This definition fits well with this study because of the nature of the phenomenon being described: experience (again, experience being a

process of perceiving events). A 'nonnumerical measuring' system seems appropriate for the process of describing, analyzing, and tying together themes.

Patterson and Williams (in press) go on to explain that one of the reasons for utilizing a qualitative research approach is "because a holistic rather than multivariate understanding is needed." This fits well with the goals of this study in that this approach allows the many pieces of experience to come together into one finished puzzle. Another advantage to the qualitative approach is that it permits discoveries and observations to be made that might not be imaginable at the onset.

Selection of Study Site

The selected study site was the visitor center at Logan Pass in Glacier National Park, the highest point on GTSR (6664'). This was a logical place to interview people about their experiences on GTSR for several reasons. One reason is that anyone encountered at the visitor center can be assumed to have just experienced traveling on the road (thus the experience was 'fresh'). The exception would be the multi-day hiker arriving at the pass from a nearby trail. Another reason Logan Pass was chosen as the study site was because this area is a natural stopping point/destination for most of the travelers on GTSR (a large parking lot gives access to several hundred drivers and passengers at one time, the visitor center is a stop for most shuttles, and virtually 100 percent of cyclists stop at the pass before descending). A final reason for choosing Logan Pass was that the visitor center provided a casual atmosphere to undertake tape-recorded conversations. A noted limitation to the study site was that all travelers had just experienced coming <u>up</u> the road, and had yet to go back down. This limitation provides basis for further study and will be discussed in the last chapter.

Study Site Description

Logan Pass, the approximate mid-point of GTSR, is located on the continental divide. Two trail heads for hiking and camping begin at Logan Pass. A visitor center with bathrooms, water, educational displays, and park staff is open seasonally to assist park visitors. With magnificent, panaramic views, there is hardly a more picturesque place on Earth. This location provides an atmosphere that puts people at ease and is conducive for conversation.

An asphalt parking lot with several hundred parking spaces fronts the visitor center. This parking lot was almost always full and it is likely that this affected the number of drivers and passengers who visited Logan Pass. This might have been a limitation to the study since the goal was to gain a wide range of experiences and those who could not find parking were not interviewed.

Many species of wildlife are present at and around Logan Pass. Mountain goats (high in the cliffs as well as occasionally roaming the parking lot), hoary marmots, bighorn sheep, grizzly bear, and several species of birds are some examples. The wild life is part of the draw to Logan Pass for many of the visitors. Several of the educational displays focus on wildlife information.

Interview Guide

Nineteen questions were drafted, pre-tested in an informal setting in and around Missoula with people who had recently visited Logan Pass, and finalized prior to visiting the study site. The questions were mainly open-ended, and elicited a mix of both short-answer and in-depth responses. Several introductory questions were designed for

background data, the middle questions were designed to bring out the heart of the experience, and the last questions gained insights on lasting impressions and how the experience might be improved. The interview guide was just that: a list to keep the conversation flowing. As appropriate, answers were further probed for clarification or to explore new themes. The interview guide can be found in Appendix A.

Sampling Frame

A total of forty people were interviewed. This was further broken down to include ten drivers, ten passengers, ten shuttle riders, and ten bicyclists. The number forty was chosen because this is a manageable number of interviews to process while still providing enough information to deduce a range of experiences. The breakdown of ten interviews in each category (drivers, passengers of cars, shuttle riders, and bicycling) was chosen because these types of travelers represent the four most prevalent ways for getting to Logan Pass.

It must be noted that while the number of people who reach Logan Pass in each of these categories varies greatly (i.e. there are many more drivers than cyclists), this does not diminish the importance of each mode. This insight is confirmed by a statement from Glacier National Park: "The area's philosophy is to provide all visitors with an opportunity to experience the scenic majesty and historic character of the park through a wide range of visitor activities" (Glacier Website, 2001). A contradictory statement to this philosophy can be found in the draft transportation plan/environmental assessment of 1989. The statement, in justifying the removal of alternatives that would provide for enhanced cycling opportunities, reads, "Further investigation of bicycle traffic showed that the numbers of riders were not high enough (8.5 bicycles/day in July 1984) to

warrant the increased cost and environmental damage" (National Park Service, 1989). Due to increasing awareness as to the value of multi-modal transportation planning and the later date of the GNP statement supporting all visitors being provided with experience opportunity, it is assumed that bicycling is a legitimate mode of transportation on GTSR.

Timing of the Interviews

The interviews took place at Logan Pass on August 1-3, 2001, on a Wednesday, Thursday, and Friday. This was close to the peak time for visitors. Interviews were held all day, with the interviewer arriving each morning around 9 a.m. and leaving Logan Pass at about 6 p.m. (the exception was the first day, August 1st, when the interviewer, coming from Missoula, arrived at approximately noon). To perform the interviews, a special use permit had been obtained from GNP prior to undertaking the study.

Weather During Interviews

For all forty interviews the weather was close to 'perfect.' The date, time, and weather were all recorded at the end of each interview. Sunny and warm was the prevailing comment for describing the immediate weather conditions. This is an important factor as weather has been proven to affect experience. In this study location, especially, bad weather can drastically reduce visibility, hence changing the experience.

Nature of Interview

Each interview lasted approximately seven to twenty minutes, with the bulk of interviews lasting eleven to fifteen minutes. The few, shorter interviews were a result of people on the shuttles not having much time at the pass (about twenty minutes total at the pass).

As for the initial contact with a potential respondent, the interviewer would simply ask a person if they would mind being interviewed on tape about their experience on GTSR. It was explained that this was for a school research project and that the interview would be anonymous. If they agreed, it was further explained that they could opt out of the interview at anytime for whatever reason.

A potential respondent was any adult who looked as though they might be able to talk about their experience. To be more specific, someone who was sitting on the visitor center retaining wall, standing quietly alone, or just 'moseying' about, qualified as a potential respondent. For all categories, an effort was made to interview a diversity of people. This diversity consisted mainly of age and gender differences. This was done to capture the greatest range of experiences. The demographics of the forty respondents can be found in Appendix B (the names have been changed).

For the category of shuttle rider, the interviewer watched for shuttles unloading in the Logan Pass parking lot and then approached anyone who was not hurrying along. Mental notes were also made about the riders so they could be approached before getting back on the shuttle. For the cyclist category, the interviewer kept an eye out for arriving bicyclists to Logan Pass. Obviously, the cyclists were easy to spot. No cyclist was seen going over Logan Pass without stopping at the visitor center. There was a designated bicycle parking rack located on the sidewalk next to the visitor center. This is usually where the cyclists were approached. Cyclists were also wearing distinct, recreational clothing. All the cyclist interviews took place in the morning. This was mainly due to the 11 a.m. to 4 p.m. time restriction when cyclists are not allowed to be climbing the west side of Logan Pass (due to high traffic volumes).

Fulfilling the Quota

To make sure that ten people in each of the four categories were interviewed, the first question asked how they got to Logan Pass. Early on it made no difference which category they fell into (driver, passenger, shuttle rider, bicyclist) because no category was close to being filled. The last part of the last day of interviews, however, specific categories of people were sought out. In fact, three hours were spent waiting for a shuttle to arrive at Logan Pass to perform the final two interviews.

Effect of Tape Recorder

Each interview was tape recorded in its entirety. The presence of the tape recorder seemed to have little effect on the interviewee. The tape recorder was small and unobtrusive and was powerful enough to record the conversation from several feet. No one opted out of the interview process early.

Analysis Process

The first step of the analysis process consisted of transcribing all forty interviews from tape recorder to computer disc. Hired services were used. The next step was for the researcher to go through the transcriptions of the interviews while listening to the tapes. This was done to ensure accuracy and to fill in any blanks. There were a few occasions where high winds at Logan Pass obscured some of the data. This can be considered a limitation to this study, although not one of high importance. Completion of the first step (ensuring an accurate transcription) had a beneficial side effect: the researcher became more familiar with the data and was able to start the process of data organization.

Data Organization and Theme Development

To assist in managing the data, interviews were entered into the qualitative software program, QSR N'Vivo. The data was then coded into 'meaning units.' Meaning units are complete thoughts that can stand alone. These meaning units can then be grouped together. In the program QSR N'Vivo, meaning units are highlighted and coded with a key word. It is the coding process that allows similar meaning units to come together into one section for analysis. This qualitative software program is merely a tool to assist in data management.

The meaning units that appear in the results and discussion chapter represent a range of insights into the traveling experiences. To ensure no one view dominated the data, different perspectives (sometime contradictory) on any one topic were specifically sought out. While some sections may seem like overload or redundancy, to most accurately describe the experiences of visitors on GTSR, an in-depth rehashing of meaning units was necessary.

To answer the first research question, 'what are the experiences of travelers on Going-to-the-Sun Road,' the first task was to break down the experience into different aspects, or discussion points (recalling that experience is a process with different parts that make up the whole). The following eight aspects were chosen to help represent the overall experience on GTSR:

* Aspect #1: Reasons for Coming to GNP
* Aspect #2: Nature of Experience
* Aspect #3: Effect of Traffic Conditions on the Experience
* Aspect #4: Effect of Behaviors of Others on Experience
* Aspect #5: Favorite Segment of the Road
* Aspect #6: Way Expectations Were Met or Not Met
* Aspect #7: Importance of Mode Choice
* Aspect #8: Lasting Impressions

These eight aspects provided natural 'breaks' in the data and could be analyzed independently. This is partly the result of in-depth work done up-front in developing the interview guide, and partly the result of sufficient data being obtained from respondents. There is some overlap in these aspects. An example would be Davis, in response to 'can you tell me about your experience' (which contributed to information for aspect #2, *nature of experience*), saying his experience was 'congested the whole way.' While this response also fits with aspect #3, *effect of traffic conditions on experience*, since Davis's response was to the specific question, 'can you tell me about your experience,' this is where the discussion of his response takes place. This method of sorting is one way to ensure a consistent context for analysis.

After the data was grouped into different aspects, it became much clearer to find and evaluate themes and relationships. These themes are usually discussed at the beginning of each of the eight aspect sections. A combination of meaning unit presentation and theme discussion answers the first research question, 'what are the experiences of travelers on Going-to-the-Sun Road?'

The second research question, 'how does travel mode affect the experience,' is answered throughout any aspect section where differences in experience due to travel mode were thought to be found. This allows one to see how mode choice not only might have affected overall experience, but also how mode choice might have affected individual aspects of experience.

The final research question is answered by combining meaning units found throughout the entire interview process with responses to the specific question, 'what

would improve your experience on Going-to-the-Sun Road.' This analysis takes place in a section called 'emergent managerial issues.' To explain further, there were several issues that, independent of the questions asked, 'spoke' for themselves and have implications for management. Accompanying the eight emergent managerial issues are a series of 'mitigating measures' that are designed to help guide management decisions for future changes to GTSR in Glacier National Park.

Response Rate

Overall, the response rate for this study was very good. Forty-two people were asked if they could be interviewed about their experience and forty said yes. The two who said no included one person who did not speak any English and one person who had to reboard a shuttle immediately.

CHAPTER FOUR: RESULTS/ DISCUSSION

This chapter is the results and discussion section. First, R1 (what are the experiences of travelers on Going-to-the-Sun Road?) and R2 (how does travel mode affect the experience?) are answered through a presentation of the different aspects of experience that emerged from this study. Next, R3 (how might traveler's experiences be improved on Going-to-the-Sun Road?) is answered with a presentation of the emergent managerial issues and accompanying mitigating measures.

Results/Discussion of Aspects of Experience

Through in-depth analysis, sorting, and evaluating various methods for presenting the emergent themes of this study, the following aspects of experience were chosen to paint a picture of traveling experiences on GTSR (see the methodology chapter for a more thorough explanation of how these aspects were chosen):

* Aspect #1: Reasons for Coming to GNP
* Aspect #2: Nature of Experience
* Aspect #3: Effect of Traffic Conditions on the Experience
* Aspect #4: Effect of Behaviors of Others on Experience
* Aspect #5: Favorite Segment of the Road
* Aspect #6: Way Expectations Were Met or Not Met
* Aspect #7: Importance of Mode Choice
* Aspect #8: Lasting Impressions

A reading of this section provides a richness and broadness of experiences. Presenting and discussing the chosen eight aspects of experience answers the first two research questions, 'what are the experiences of travelers on Going-to-the-Sun Road,' and 'how does travel mode affect the experience?'

A brief introduction is given at the beginning of each aspect section, with general themes and insights spread throughout the discussion. Any apparent effects of mode choice on experience are discussed at the beginning of the meaning unit list for the corresponding category of traveler. Probing or follow-up questions by the researcher are in parenthesis.

Aspect #1: Reasons for Coming to GNP

The reasons, or underlying motivations, people have for undertaking an activity influence the overall nature of the experience. It is often the anticipation of an event that actually begins the experience.

Some of the themes relevant to travelers' reasons for coming to the park include seeing beauty, soaking in scenery, viewing and learning about wildlife, experiencing sweeping views, knowing about wildflowers, and feeling the thrill of being in a spectacular, natural setting. Some wanted to show friends what Glacier is all about. A couple of people were curious about the park or the park was on the way to some other destination. In addition, the cyclists said they came to GNP to 'bike it.'

Drivers:

Jason: Never been here. Wanted to hike all over and see all the wild animals.

Davis: We're here for a wedding in Libby and came to Glacier to explore the beautiful outdoors and enjoy ourselves for a couple of days."

David: For the scenery and we came from Roseburg, Oregon and we decided it would be a spot we could come to that would be unique and we could enjoy the views.

Fritz: Oh, because we were curious. We were just traveling the northern part of the state and so we decided we ought to have a look at this.

Walt: Because it's so beautiful.

Neil: Because we had visited the Canadian Rockies about two years ago up in Jasper, Banff and Lake Louise and just enjoyed it so much. Wanted to see something different, so we flew into Calgary this year and drove down, rented a car and drove down here.

Rick: My favorite park. I like the fact that with the trails, there's a good chance of seeing wildlife.

Ella: I came on a show-me trip. I brought relatives that are visiting me.

Song: Just to see the scenery.

Al: We came back to Glacier Park; we'd been here 15 or 20 years ago and came back again because the wildflowers are so beautiful.

Passengers:

Joanne: My husband used to work here when he was in college and he used to clear the trails. And he talked about it for years and he loved it so much that he wanted to send me out here to see the mountains that he's talked about for so many years.

Ashley: We just wanted to see it.

Francis: Oh, family vacation. Our boy's 13 and we thought we'd better finally get a vacation with him- so, that's why.

Jack: Because we'd been here many, many years ago and wanted to revisit it. Because I think if you've seen Glacier, you've seen them all.

Adele: Well, I just wanted to see it, I guess. We've been going around to all the parks and this happened to be the one that was closest this year.

Will: Well, this is like our sixth time coming and just really great views. You can actually get pretty close to the animals, stuff like that. Just like after a few years, you kind of begin a tradition a little. Come out here, it's a nice place to be, nice place to hike.

Darlene: Well, our daughter had heard about it and we were traveling through here and we just thought we'd come see it before we had to start back traveling toward home in 2 or 3 days.

Jenny: On a family vacation, we love backpacking and I've heard about out here and I've never been out here so.

The cyclists were the only visitors to mention their specific mode of traveling as a strong reason for coming to the Park. A majority of the cyclists said that they wanted to come to GNP to bicycle GTSR.

Cyclists:

Steve: Because it's a place you can get to on the train and every summer I go off for a week with my buddies, boys week out on our bikes camping and we've always just liked the aspect of taking a car so this is the first time we haven't taken a car to begin our trip.

Jared: One, it was on the route and it was planned. Two, I heard it was a beautiful park and I have to agree with it.

Mark: Well, I guess we came here mostly because my kids hadn't been out here and I hadn't been out here since I was a kid almost, so we had to get back out just to do some hiking and riding in the mountains, seeing the beautiful place.

Stuart: Me and my dad just decided to bring our bikes because we wanted to do the riding so it was kind of a family thing, I guess.

Amory: Going-to-the-Sun Road is one of the three or four most spectacular bicycling roads in my opinion.

Daniel: Probably the most beautiful, one of the most beautiful places in America and my body, my brain, and my spirit just feels better at 6600 feet.

Stan: Well, a cross-country bike trip and it was kind of on the way. Wanted to see it, heard good things about it.

Tommy: All this beauty, I mean, it's a really unique part of the world. Done a lot of travel to 70-80 countries and this is really unique. (What makes it unique out of all those places?) Terrain, the mountains are just gorgeous, I don't think you can find shapes like this. I haven't seen them elsewhere. I mean I've been to the Andes and across Russia and it's just beautiful.

Jane: It's an area we had wanted to tour in by bike for a while. We've backpacked here before and thought it would be a good experience to do it on bikes.

Matt: I've just been wanting to for years, certainly the Going-to-the-highway road is something I'd heard about years and years ago and definitely had it on my to do list.

Shuttle Riders:

Cynthia: Never been here. We retired eight years ago so we are trying to hit all the parks while we are still able.

Tim: To hike, we like the wide-open spaces.

Brian: It was a final destination of a two-week road trip.

Paul: Well, to hike, natural beauty, wildlife.

Linda: To see what it looked like.

Larry: Cause it's on the tour. I hadn't heard about it before.

Nolan: Well, I'm doing some research of my own for a book that I may be writing.

Troy: Because we hadn't been here before and we wanted to see it.

Susan: Well, we're originally from Tennessee and we've never seen Montana. And my husband, this has always been his dream vacation, to come to Montana, so here we are.

Mary: Never been here before and we love national parks.

Jim: Mostly word of mouth, reputation, been recommended. Been to a lot of them, though.

Aspect #2: Nature of Experience

While all eight aspects in this section contribute to an overall experience, special attention might be paid to the meaning units obtained in response to the specific question, 'can you tell me about your experience on the Going-to-the-Sun Road?' It is likely that the heart of what people were feeling as they came up GTSR came out in reply to this question.

For almost everyone, the nature of the experience is perceived to include two main components- trying to take in fantastic, exhilarating scenery, and being affected, in varying degrees, by traffic congestion. More than others, the drivers seemed to have a hard time balancing this dual nature of the GTSR experience.

Drivers:

Jason: Well, actually we came up yesterday this far and it was very easy, it was raining and there were very few people on the road. And, so far this morning there was nothing to it. I mean there were some cars but it wasn't bad. So, I didn't see any difficulties. It was easy.

Davis: Yeah, actually the first time we came up a couple of days ago, it wasn't that bad. It was pretty slow-moving. This coming up this last time was definitely the worst and it's congested the whole way, probably from the end of Lake McDonald up, congested pretty much the whole way. I mean, it's still beautiful, but as a driver, I don't get to look around much. There were also people I noticed this time up, there were people who would just stop their cars and they were walking on the road, which seemed to be very unsafe. And then the cyclists, I only noticed them, really, when we were coming down this morning there were cyclists coming up and that held up a lot of traffic. It just seemed like there was quite a bit of congestion around the three or four different sets of cyclists we saw. I was surprised to see cyclists coming up actually. It's great. We would probably not be here again, well we would definitely not be here again if we were just doing our own thing. But we were with this group. We would be off, you know, in some of the other camp areas doing hikes out away from here. (Well, what is it that would not bring you back here? Is it the congestion?) Yeah, it's just that there's so many people and we would prefer to be off on...we hiked up Glacier, you know, up to Pernell Glacier yesterday, you know, and just saw 50 people total on the hike as opposed to 50 people in my eyeshot right here. It's a different experience. (Anything else?) Let's see...there was quite a bit of construction, road work being done, which I noticed both directions just cause you kind of had to stop. It actually doesn't have a lot of kind of intrusive road signs. It's kind of nice in that way but it's rock on the side, it isn't just...it's not like you've got yellow markers or anything. In that way, it seems pretty natural. I like that about it.

Fritz: Oh, very exciting, very nice. And it's restful to hike. I think it's even more interesting than auto but we simply have no time and so we decided to drive and go to some parks and the campsites but all of the people obviously also have no time.

David: Yeah, it's been very picturesque, we've enjoyed it a lot.

John: I kind of like the fact that it's a, that it's not a four-lane highway. It makes it a little tougher to get up here but it's not stopping anybody at the same time. I was surprised to see how many people were on the road.

Walt: Well, it was about as I expected. We've been on it before, slow drive and my engine began to get kind of hot, but beautiful.

Neil: It's been fine. I just pull over and let everybody else scoot by because I want to enjoy the scenery. So I am not driving quickly- I prefer to drive slowly only to, in order to see things, to take it in, so the driving's been fine.

Rick: Well, for the most part, it's been a pretty positive experience but, you know, sometimes it's really depressing when you get behind all these slow drivers but I lucked out today and got an early start so I beat most of them here. But that's the only drawback, I think, on Going-to-the-Sun Road.

Ella: It was good. It was less construction than I expected according to what was in the paper, so, yeah, it was good, easy.

Song: Road was good, except that there's construction site with considerable delay. (How was that delay?) I think it was 15 minutes, yes.

Al: I drove it two days ago, too, the whole way, the whole way over. In general, it's the most nerve-wracking thing for me. It's a bit nerve-wracking going when you are on the rock side- on the cliff side doesn't bother me. On the side where the rocks are up there going to hit you, the side of your car, that's the part that keeps me most nervous. And, basically coming up along the road you keep yourself in your own lane but jagged rocks make you kind of gun-shy on the right- hand side. It's not really a very scary road, though. (But that was sort of, would you say that's the overriding feeling as a driver?) As a driver, that's my primary feeling. I've got to conserve my vehicle so I can go home. (Yeah. Can you take in the scenery in between?) No. Well, in between a little bit, yeah. I try not to, though. The more you get, the less attention you pay, the less you want to watch something up in the road. (But you had done this 15 years previously, so you knew...) Yes, and we'd driven it once before this week so it was fine. Going east it was easy, I don't mind the rock guardrail and the edge of the road doesn't bother me. It's a spectacular road, you stop at the overlooks and things like this and take some pictures. It's just wonderful.

Traffic seemed to have played a lesser role in the experiences of passengers.

Passengers:

Patty: It's beautiful views, slow-moving, a little nerve-racking on the passenger side. The first trip up being right on the edge on a couple of the points was...I don't know if I would pull over in some sections cause it's really really close to the edge.

Joanne: Oh, we had much to look at, much to giggle about and much to oooh and aaaah about. You know, oooh, there's the goat, oooh, there's the something else, look at the colors on that rock. We were even amazed at the clouds. At some point, it was almost eerie. We were driving on the road through the clouds and we couldn't see a foot ahead of us and that's eerie. You know, it's an eerie feeling. And you know the road's there, you just can't see it. But there was a lot to look at and a lot to just, you know, giggle at, it makes memories, a lot of memories.

Penny: It just gave me the feeling of being, the power and majesty of it being very awesome, being very minute, just getting to, and watch people.

Ashley: It was a little narrower than I was expecting and of course, with the road construction it makes it a little...but it's really nice. I really like the view, it was really beautiful. I felt comfortable as long as I wasn't driving.

Francis: It was pretty awesome. We liked it, it was pretty. Stopped a few times, cause at one point there was a bear along the road I think, but up in the mountains but we didn't get a chance to see it. Too much of a traffic jam. So...but yeah, it's very pretty.

Adele: We had a nice drive, I mean, everybody was courteous and that was the main thing. Traffic flowed very well. We didn't have too much. We only had one driver that wanted to take part of our road but that was it.

Will: Well, I'm sure, since I really don't like heights that much, going up the road is kind of fun, kind of exhilarating, especially if you go back that way as passengers. You're right next to the edge of the road; it's kind of exciting.

Darlene: It was wonderful, we really enjoyed it. It was beautiful.

Jenny: It was really beautiful. I've never, I've been to the Rockies in Colorado and I've never really been up here in Glacier.

In addition to experiencing scenery and traffic, the cyclists cited other elements that may be central to their experience. One was the physical and mental exertion of energy to

make it to the top. Another potentially more potent element mentioned was the engagement of the senses. In other words, the cyclists talked about and alluded to the smells, sounds, and feelings of the surroundings in a way that was different from the other categories of travelers.

Cyclists:

Steve: It wasn't bad actually. The traffic wasn't too bad. I liked the fact that they restricted access of RV's. That was nice. The one place that was a little bit intimidating was the tunnel 'cause the noise of the tunnel, no matter which way it is, you think they are just going to climb right up on your back but yeah, I thought it was pretty good. It wasn't that steep compared to riding from East Glacier to St. Mary's with a fully-loaded bike was just short of hell yesterday in the rain.

Jared: Well, I waited two days for the weather to clear and I must say it was probably the most spectacular ride I have ever been on. Too much to look at and too narrow a road. We were even weaving back and forth because of the head swiveling taking in the sites. Grade was good, it wasn't bad at all. I think some of these passes I went over in Washington were much worse. It was all in all a good experience.

Mark: We came all the way up and the only thing that was bad was every time you hit one of those steel gratings that goes across the road, they're real slippery and your tires slide all over the place. So, it would be real dangerous to go down. So, luckily, the family came up and they met us up here actually we planned to do that so we got a ride back down. I don't think you could ride down it very safely. (If it was wet?) When it's wet, yeah. The grating steel is really slippery and your tires just slide on it. Treacherous.

Amory: It was cold starting out, I didn't know the temperature, my fingers and toes got cold. Really didn't get any sun until almost at the top. It's nice and sunny up here.

Daniel: Well, because I was on a bicycle and huffing and puffing, I mostly tried to shut down my conscious experience and just concentrate, you know, on getting up over the next curve and the next hump. But I did manage to stop every couple hundred feet and you know, when you stop and the panorama opens up as you lift up your head- it's just gorgeous.

Stan: It was very breathtaking as far as the site goes and physical challenge, it was magnificent.

> Tommy: Fun. I've been looking forward to it for quite a while. So I just did it. My son joined me and it was great. Actually, it was easier than I thought.

Peter and Jane, two cyclists riding together, were interviewed together.

> Jane: It's a very good experience in a number of different ways. We enjoyed the ride, it's beautiful. It's not the most difficult pass we've ever done so it was enjoyable in that way. And the traffic was good, very respectful, nobody, we had really good experience with people giving us plenty of room to ride, pulling far enough around us to give us some room, slowing down.
>
> Peter: I think one of the things that helps is that coming up, if you motion people around you, you know, you can see better than they can, cause the driver is sitting closer to the center line and we're off to the right. And so we can see what's up ahead so if you wave people on by you, I think that helps. They tend to go further out around you…

Peter's next comment solicits a probing question to explore the dynamic of trying to take in scenery and pay attention to traffic at the same time. This probe leads to the uncovering of two points. One is that on the steeper sections, when cyclists are peddling hard and perhaps needing more focus and attention on their <u>own</u> experience, it is more difficult to wave waiting auto traffic around to pass. The other observation made by Peter is that some of the water drainages may pose a serious hazard to cyclists.

> Peter: The scenery is fantastic. (Can you watch the scenery and bike at the same time?) To a degree, I mean, you have to be careful but there are quite a few places where you don't have to, you know, you're not having to peddle so hard that you're having to swerve around and whatever, and so you can watch, you know with gaps in traffic, especially earlier on. Once the traffic starts to pick up a little bit later as you get towards the top, as you get further up, it gets a little tougher to do that cause you have more and more cars coming by and so....there is one hazard along the way. I don't know if this is the time to talk about that. There's three different grates. Most of the grates have a grid pattern on them and that's not a problem for the bicycle; but there's three different sets of grates as you come up that when you're riding along, they've got a gap of maybe an inch and a half and they're going with you and the hole is maybe a foot long. That's a real tire grabber. They don't come very far out into the lane but if you're trying to stay far right to avoid the cars, that could really grab a wheel pretty easy. I don't know if anybody's ever done that before or not, but it seems like that could be something that would be a little bit of a hazard that would be pretty easy to fix.

The following continued dialogue with Peter and Jane helps paint the overall cycling experience- focusing on some of the numerical aspects of the ride. This may be helpful to managers of Glacier National Park as far as informational purposes for other cyclists.

> (How early did you start?) We started at 6:30. (And got up here when?) About 10:30. (Which camp...did you leave from a campground?) Sprague Creek. (Ok, how many miles is that? Do you know?) Jane: Twenty-two or three, probably twenty-two. Peter: Twenty-two point nine. (Ok. Do you have other readings on there, your average speed and all that?) Yep, we averaged 7 miles an hour, that's from the campground. A max of 24.3, that was on a slight downhill somewhere along the way just before we got into the real climbing. And it took us just under four hours to get here from when we started and we had actually three hours and fifteen minutes of actual riding time. So it was only about twenty minutes longer than it took me to ride up. Jane: He rode it without a load a few days ago. (Twenty minutes longer with a load?) Jane: That's surprising; I thought it would have been longer. (Can you estimate how many pounds you've got on here?) Peter: I'm not sure I want to. Jane: I don't know, 40 maybe? Peter: Yeah, I'd say 40-50 with the food and everything else on there and hers is closer to 40. I think she's got less food on this. (So you spent about 45 minutes stopping. Was that spread out in small, five-minute stops?) Jane: Yeah. 5-10 minutes, a few breaks to eat, a few breaks just to take a leg break. We took maybe four or five breaks along the way. (How were the pullouts? Was it mainly the car pullouts you were using?) Yeah. (Were these adequate?) Peter: Yeah, it was. We used a couple of the bathrooms along the way and that kind of stuff and that was just fine. (So, it's fine pulling in and out of those?) Jane: Yeah, they are easy to get in and out of. There's always plenty of room to get a start before the traffic catches up with you.

Matt makes a point about the narrowness of the road naturally slowing traffic down. What might need to be differentiated though, is that he (and several others) might not necessarily be saying that the narrowness of the road is a desired quality, but rather the slower speeds that result from the narrowness of the road is a desired quality. To explain further, it may be probable that cyclists would just as well like more room as long as slower speeds were undertaken by motorists and/or enforced by park personnel.

> Matt: It was fabulous. Incredible views and perfect weather, very courteous drivers. It makes this very nice that the road is so narrow that the traffic speeds

are so slow. Everyone was perfectly patient when they couldn't see around the corner. So, it was very, very positive. The mountains, the streams and the views, the wildflowers were just spectacular. And, you know, I mean, biking up it is such an ideal way because you are going slow enough you can really fully appreciate it. Yeah, it was just awesome all the way around.

The amazing scenery continues as a theme for shuttle riders. Less emphasis is placed on traffic or congestion affecting the experience. Several riders mention that they were thankful that they did not have to drive. Two other themes also came up that may have affected and colored the shuttle experience. These were the price of the shuttle and the frequency of the shuttle.

Shuttle Riders:

Cynthia: It's steep. It's beautiful. A lot different than what we're used to in California. We really have enjoyed it so far.

Tim: Scary at times, you know, right along the edge.

Brian: Spectacular views, no other real experience. The only reason we're not going to continue on is just the cost of the van is kind of absurd for what you're getting. (How much is it?) $16.00 to come from here and back. So if I want to go to St. Mary's, and back to here, it would cost me $32.00. Well, between me and my wife, that's $64 bucks. Kind of crazy. I'm just disappointed in the Park Service for gouging like that.

Paul: Well, the shuttle left late. It got us here. The shuttle coming up from the Loop was on time and it was a pleasant ride.

Nolan: It was good, it was interesting. Beautiful scenery and all that.

Troy: It was very pleasant. Good drivers. We drove up to the park and we decided the best way to see it was to have someone drive us.

Susan: It was quite pleasant. We got to see a lot. Especially since my husband has been doing most of the driving so it was a break for him. We just really enjoyed it.

Mary: Well, beautiful scenery. My first thought was I was glad I wasn't driving, especially last night on the other side. It's so narrow and I love mountains but I

> don't like the edges and therefore, it bothered me on each drive. It was nice to be able to look and watch, thanks to the driver. Some wonderful scenery- we saw some goats last night up close and saw a bull moose yesterday.

Aspect #3: Effect of Traffic Conditions on Experience

The responses to 'how did different traffic conditions on this road affect your experience?' are all fairly similar. In general, the more traffic the worse the travelers perceived their experience. Also, some people mentioned that slow traffic was better than fast traffic. It might be inferred that there are thresholds of traffic that make a difference to the end experience. In other words, the slope of a line depicting the negative aspects of growing traffic may not be constant. The line may have more of a steep slope followed by a plateau, steep slope followed by plateau, and so on. Glacier National Park might be on one of those plateaus; with room to absorb more traffic (mainly auto traffic) without too great a loss in experience. An important question might be 'when will the next threshold be crossed?' In other words, what is the next traffic level that might cause a quick decline in the 'pleasantness' of experience? Another important question might be, 'when will traffic levels reach a point that the resulting aggravation of trying to move along the road overrides the sheer exhilaration of enjoying what the road has to offer?' This latter question is explored on p.26 in the 1990 Glacier Transportation Plan, in a section labeled *Traffic Forecasts.* For an explanation of the engineering concept for thresholds of traffic, called level of service, or LOS, see p.20 of the same transportation plan (National Park Service, 1990).

Drivers:

> Jason: Well, obviously the more congested the more you have to pay attention to the car that is just in front of you as opposed to being able to pay attention to the scenery so...that takes away.

John: Oh, I′d like to see less traffic because when we wanted to pull off and in some cases weren′t able to due to the fact that the lots were full, back here, some of the waterfalls, that sort of thing. So, less traffic would be nice, of course, so it gives you more freedom on where you want to stop.

Fritz: Yeah, driving makes it more condensed and more...I think it′s better to walk and to have more time.

Walt: Well, as it′s more crowded, it gets a little hairier, I guess, having people tailgating us. We don′t have a very powerful vehicle, we don′t go very fast. And the more traffic you meet, the more you have to drive way over to the right, always a little traumatic.

Neil: Not at all. Because as I say, I pulled over and let them go by, you know, the overlooks, etc.

Rick: If the traffic′s really jammed up or people are pulling over or not pulling over, just stopping because they see wildlife, then it′s kind of a negative experience because I might want to get to point A to point B as quick as possible. If, otherwise, it′s a pretty positive experience because you get to see beautiful scenery and if you catch it early enough, normally you don′t have those concerns.

Song: Well, as I said, the construction delays is somewhat annoying. I think you can speed up the delay… to beat the queue, when the road is clear.

Al: Like I said before, the only traffic conditions was when I was going along the side of the road where I was next to the cliff going up and there was lots of traffic on the way and I was pretty nervous the whole way. When the traffic thinned out, it was no big problem. (Because you could inch a little closer to the center, because you knew you had the escape?) I could avoid rocks very easily. The main problem I see with other drivers is even when I′m having an easy time of it, everybody′s kind of driving on that yellow line instead of getting over by the rocks or by the cliff.

The passengers perceive traffic to be less of an influence on their experience.

Passengers:

Penny: Oh, I don′t believe it did. Now there was a couple of places we would have stopped had there been a place to park but I don′t foresee that that ruined my experience or anything. I wouldn′t give it that privilege

Ashley: Oh, I think it's a matter of keeping a good, safe distance from the car in front of you and to expect that there's going to be people and animals and traffic on the road. And so, if you are watching your speed and, you know, just kind of being careful, I thought the traffic road conditions were fine, you know. You just kind of move around people, you can tell when people are nervous in front of you, you know, and then they will eventually pull off and that helps. It keeps things moving along. Actually even the road construction I didn't think was holding it up that long because the one lady when we were on our way up here, she told us we were going to have to wait about 2-3 minutes and we waited about 30 seconds, so...

Francis: Actually, it was not too bad. Everybody goes slow and drives very good, I think. There's no, you know, maniacs on the road so that helps. I thought it was good.

Adele: Well, it's just mainly is people be courteous. On a road like this, if there's not courtesy, than it's just a road. Flow in and out of sites, so that way everybody is safe.

Will: I don't really like the traffic that much. It kind of takes away from, takes away from the scenery and beauty of the park when you see so many cars going up and down all over the place.

Jenny: They had a little, there was some construction on one section, there was one lane, we waited like 5 minutes for that but overall no problems.

Cyclists:

Steve: I wouldn't know, to me it seemed rather light this morning. Talk to me when I get down, I'll be able to tell you.

Jared: Well, the traffic was not bad; most were very understanding and polite. I tend to ride a little further from the edge because I didn't want to be pushed off the edge. With the traffic control at the construction site was groups of traffic so it was really very widely spaced. All in all, traffic was not a problem. We did get up pretty early this morning to make it here before the 11 o'clock cutoff but other than that, it was no problem.

Mark: It wasn't bad. The cars all seemed to be pretty good about things and hopefully, the bikes are staying to the side and not slowing the cars down too much. It looked like everything was pretty well co-existing there, the bikes and the cars and things. Some of the cars are a bit scary, I mean the trucks, with the dual wheels on the back get a little wide I think at times. Those are kind of tricky to get by sometimes. Otherwise, yeah, it was fine. We didn't have many cars

building up behind us and sometimes they would stop the traffic. There were some movie crew filming down there or something and they stopped the traffic. And then you'd have this big hoard of cars come by so we'd just pull off to the side for a while and let them go by and then it would be quiet for quite a while. So that was actually kind of nice.

Stan: Well, I guess, I mean, they affect it quite a bit. Obviously the construction areas but those areas...in general the cars seemed to have been very, very understanding except for those California people but for the most part, it was pretty...it was better than I was expecting since I got the idea that there was going to be a shoulder.

Tommy: Well, when there's a lot of cars and some cars know how to be careful of bikes and some don't and ideally this road would be about 12 feet wider, 6 feet on each side, for bikes.

Peter: Well, I think it would affect it more if it had been more crowded. You know, like I said, I kind of like the fact that we got an early start and it was definitely more enjoyable lower when there was less traffic so...Jane: Yeah, it's nice when it's quiet. I did have a thought, though, close to the top, it still would have been a pretty good ride even if traffic had been a little heavier. I was trying to gauge how much traffic there would have had to be to sort of make me a little more weary about making the ride. But I think we could have handled a fair amount more and it still would have been ok; but it's still obviously preferable to ride with less just because of the noise mainly and...Peter: It made it a lot more enjoyable. Jane: Yeah. (That's interesting. I wonder if there are thresholds of traffic where even more can be better?) I wouldn't necessarily say that. In my mind, riding, the less traffic while I'm riding in any situation I think is better for a number of reasons- noise, breathing exhaust, just the danger in general that somebody's going to come too close to you. Peter: Well, if they are not already considering shuttles, I think they should. I know there are some, but I mean as far as a mandatory bus shuttle for at least the peak times or something. It's just getting so that there's so many cars in all the parks these days that it's really a problem.

Matt: Well, certainly the more traffic there is, the less pleasurable but even with ...I would say it was a moderate amount of traffic. Not heavy and it wasn't at all a deterrent for me today, but I'm an experienced cyclist comfortable with the traffic. I kind of think why it wasn't a big deterrent was just because it was going so slow. And, you know, 99% of the people were waving and giving thumbs up out the door and were really encouraging. So that's, that's cool.

Like the passengers in cars, the shuttle riders did not seem to be affected by outside traffic conditions.

Shuttle Riders:

Cynthia: It hasn't today. This is sure a lot better than Yosemite. Yosemite is just a mess everywhere you go, even walking you have to watch where you walk. And this is wide open and we couldn't believe the traffic even coming up to, getting to East Glacier, how open it was. So we think your roads are great here compared to ours in California and Nevada, that's for sure.

Brian: I had no experience with that.

Nolan: I didn't really notice too much, just noticed some of the road construction and we had to stop and wait cause they had it narrowed down to one lane. But it didn't take very long to wait.

Troy: It was pretty disappointing, sit and wait on the construction. Sometimes I would say at least 15-20 minutes so, because of construction on the road you have to wait...

Jim: Yesterday, we got caught in where they are working on the road and 30 minute, probably close to 30-minute delays. But that was for everybody. It wasn't because of the traffic.

Aspect #4: Effect of Behaviors of Others on Experience

While the previous section mainly explored themes relating to the effects of traffic as a whole on experience, this section explores themes relating more to the effects of individual people and/or vehicles on experience. These meaning units are mostly in response to the question 'how did the behaviors of others along Going-to-the-Sun Road affect your experience?'

An interesting theme that seems to be prevalent is that, for the most part, travelers do not perceive individual actions or behaviors of others to affect their experience to a great degree. This contrasts somewhat with the previous theme of traffic as a whole

being perceived to have a negative effect on the overall experience. This suggests that traffic is a phenomenon where the whole is greater that the sum of the individual parts. In other words, traffic as a whole, and traffic as individual units of travel (a pedestrian, bicycle, car, etc.), are two different issues that may need two different management approaches. For example, a bicycle/car interaction is a separate issue from growing congestion. Another example would be all individual drivers doing everything 'right' (moving at slow speeds, sharing the road with bicycles, having patience and courtesy with parking, etc.) but still degrading park resources and visitor experiences because of sheer numbers.

No matter what the level of traffic is for GTSR, management attention is needed on the ways different modes of transportation interact (i.e. how they pass each other on the road).

Drivers:

Davis: There were some drivers who went really slow, slowly, and just seemed totally uncertain with how they were operating their vehicle and didn't necessarily take off the turnabout when they probably should have. It's annoying but you just kind of have to not get too stressed about it. The cyclists definitely kind of was the focus when they were near you and I'd said even more so. The cyclists actually are aware of you and kind of moving. But people were walking in places where they really shouldn't be. That, probably, to me was the biggest safety hazard that I saw. People would randomly just get out of the car and also, when there's any wildlife, you know how you get that congestion when there's any wildlife, people everywhere and they're not paying attention. They're looking up the road and they're hanging kind of out in the road or whatever. I saw a couple of times where that seemed to be an issue.

Neil: No, everybody's been relatively polite, I think, on the road.

Rick: Oh, yeah, just inconsiderate drivers, ones that, for example, they don't, they're not in a hurry to get to point A to B, they don't have the courtesy to pull over in the pull-outs and let you pass them up; and just stopping in areas that

really aren't stopping compatibility. They were the main concerns that I would have.

Ella: Actually, they were pretty good. And keeping those long vehicles off the road like they used to allow is certainly a real plus.

Song: I think it's reasonable, no special unreasonable behavior.

Al: Oh, some people are a bit aggressive, you're not driving fast enough for them but that's probably down in the flatter spots. You get up in the middle; I don't pay attention to anybody else except me and the guys in the other direction.

Passengers:

Joanne: Umm, actually, you know, some people we've met almost at every stop. We'd almost stop together, they were either in front of us or behind us, some are on bicycles because it was early in the morning and they were allowed to be on the road. And I think they are supposed to be off the road by 11:00. But you get to talking, you get to meet people and that's people from all over the world, not just, you know, ones that speak English. And so it's an exciting time.

Fred: These knot heads making, they pass you and then they park. That's the thing that gets my natty when I was pulling the trailer, why they'd pass you and then they'd park. They'd go like the devil to get by you and get in front of you and it seemed like the nature of man or people is that they don't want nobody ahead of them. And when we was with the trailer or the car even now, when the wife and I come up here to Montana, these knot heads speed up and go around you and the first thing you know they dilly dally and park. Then they do it over again and keep that up all the way. That's the main thing that bugs you worse than anything.

Ashley: Well, I think it's just important that, you know, if you want to gawk around and look around, then you should pull over and stop and look. And, you know, you have your people that are, that have been in the park many times before and are pretty familiar with it and they just want to go. If you have somebody tailgating behind you and you've never been on that road before, you might feel a little nervous about that but all in all, you know, the two times I've been on it, it seems like people respect, you know, the different drivers and how they are handling the road.

Katy: Friendly. No aggressive drivers yet. No problem.

Cyclists:

Steve: Ah, the people were friendly at the couple of the turnouts that I stopped at. That was pleasant, yeah. People on motorcycles and people in cars, they were, you know, they were friendly. They were relaxed.

Jared: Really no bad experiences. I think we got up early enough and got going early enough that we missed most of the traffic. And like I said, drivers were courteous, construction workers were courteous, really no problem.

Mark: Oh, we met a couple of other cyclists along the way that were really friendly and talked to them for a while so kind of added to it, I guess. And everybody was real decent and there were no rude drivers, so that was good.

Stuart: I don't know, most of the cars are pretty nice. A few of them buzzed by you pretty fast but...you know, it's nice to meet people.

Amory: I had no troubles at all. I think that the Park Service is wise to encourage people coming up the west side to do it at 7 or 8 o'clock in the morning rather than in the afternoon. So I didn't really have any interference from cars at all.

Daniel: Actually, the traffic, you know, as far as the cars go, I felt that they were pretty good this morning, didn't feel like there was any major issues. Sometimes the really loud motorcycles kind of throw you off but, you know, not a big problem. It's nice seeing people stop though and just take a look, especially people who are older, like 50, 60, 70, 80. You see them looking at this place and enjoying it and they're looking at you and you wonder what they're thinking. I like watching people watching nature and seeing them record stuff cause somebody's got to be out there doing it.

Stan: Yeah, there were a few- California drivers. Honking at me, they never, but I guess there are people in cars that don't have patience. There were some other bikers coming up, very supportive. It was very excellent since I'm carrying more of a load than most people do and the construction workers were nice, too, gave encouragement....

Jane: I would say there was nothing negative for me. I, lots of people waved, people smiled. We had one crowd cheer us. A crowd of cyclists- they were taking their bikes up in a van and...Yeah, there were a few bikes on the road but...

Peter: That was kind of fun. But I think what I said before about the fact that people went out around us pretty well. But I think there again, if you're aware of them and kind of wave them around, then I think that helps. Because if they are having to guess if there's a car coming the other way, they are trying to go by faster and they're also coming closer to you. If you're waving them around, they're taking it that you are watching and saying, you know, there's nobody

coming, come on around, and they do that- they go way out around you. That helps a lot. (That′s got to be hard to watch the road, wave people around and...) Not really, I have a rearview mirror and I use it constantly. (That′s key?) Yeah. That's pretty key and you know, so you can hear them coming up, too, and you know, you start to hear somebody coming and you start watching a little bit and it′s just awareness.

Matt: There weren′t any- no one did anything wrong. No one was rude at all. I had one van where I thought for half a second, another foot or two would have been nice, but, you know, they had the whole other lane. But I had a good couple feet so...that was the only thing close to anyone doing anything wrong and they didn′t really do anything wrong. (You did say they had the whole other lane. Could it have been a problem if there was a stream of traffic coming?) Well, if there is a stream of traffic coming, I mean the advantage of that road is it′s narrow enough that even when you′re staying on the right side, you′re more or less commanding the lane, so cars really do have to wait until the lane's clear to pass. And, as it should be. I mean if there were a question, if there were a car that sounded like it was going too fast and was going to try to squeeze in between, especially when you′re going up it, there′s a drop up there, I′d move further into the road just to force a car to wait to pass until it was safe to do so. That′s something again that not necessarily many lesser-experienced cyclists would have the knowledge of that that′s actually a safer thing to do or have the confidence to do. I think that just the narrow width of the road more or less makes that happen.

The responses of the shuttles riders seemed to convey the possibility that their experience was not really affected by the behaviors of others.

Shuttle Riders:

Cynthia: Everybody′s been quite nice. We haven′t had any bad experiences at all.

Tim: Well, as the driver was pointing out, some of the people aren′t used to mountain driving and were kind of hogging the road. A personal bias, I think the motorcycles were kind of a distraction. You′re out here to see the beauty and, you know, you hear these Harleys just rumbling. You know, that kind of takes away from it.

Paul: Well, yeah, people would stop for wildlife so there'd be a big backup. And one of the things I noticed this year that is so different than 7 years ago, there is a lot more traffic. So one person stops to look at a moose and you've got a quarter of a mile, a half-mile backup.

Nolan: I didn't really notice much. We've been kind of tired on the way back so we've been just kind of staring out the window. I think that's the difference between actually driving and sitting in a tour bus you don't notice the traffic as much. I'm not paying attention to that.

Troy: Most of the people have been very courteous. Occasionally, when a moose was sighted, people would park their cars where they shouldn't park them. Most of the drivers, I think, have been pretty courteous.

Susan: I really wasn't watching people. You know, just really watching the scenery.

Aspect #5: Favorite Segments of the Road

This section explores the thoughts and dialogue of respondents about their favorite segments on GTSR. A majority of these meaning units are in some way tied to the question, 'did you have a favorite segment on the way up?' Some of these responses were pulled from other parts of conversations, for instance in talking about the nature of the overall experience. In analyzing these meaning units, the favorite segments for all travelers seem fairly varied.

Drivers:

Jason: The shot of St. Mary's Lake, that was nice. Just, you know, the big panoramic vistas with the valleys and stuff. Those are great. So...

Davis: I liked the Weeping Wall. It caught my attention. Again, I had, it was a little hard for me to focus on everything around, but you know, just the ascent here right before you get up is really nice, I think.

John: Well, we've only gone halfway, just this way up. In terms of, I like it all. I like the waterfalls down below were nice, and then, of course you get up here and see the peaks, saw a little wildlife, we got to stop. It's awesome.

Neil: No, because we haven't completed it, so I couldn't really say which ones were favorites.

Rick: Logan Pass all the way down towards Goose Island, that's my favorite area.

It's interesting to note that Al experiences his favorite segment after he gets out of his car and becomes a pedestrian.

> Al: Yeah, my favorite segment is the, I think it's the first switchback going down from here. (Down the west?) Down the east side. I think that's it because you can get out and you can walk up to the river, creek there and watch the wildflowers. That's my favorite spot because I can get out and take a look at the scenery.

> **Passengers:**

> Patty: The last two miles.

> Joanne: You know, that's really hard to say because around every corner and every bend is something new. So, no I don't know what to say to that, it's just all beautiful.

> Ashley: Yeah, the top would be the best.

> Will: I think it's probably this stretch right here, coming up to the pass from the east.

The cyclists differed somewhat from the other travelers in that some of the favorite segments mentioned had to do with engaging the senses. For example, Steve talks about a flat section (not needing to pedaling hard) and Mark talks about a section where the sun becomes visible (as it was cold outside).

> **Cyclists:**

> Steve: I like riding relatively flat down by St. Mary's Lake because I hadn't done any flat riding since I've been here. Flat and light, it was nice. It was real nice.

> Mark: …when you first saw the sun, because it was really cold, the sun was nice. But it was so beautiful when we went on that first sharp switchback down where you go to Granite Park and then came around and then came out into the sunlight.

And you could see up the valley toward the Bird Woman Falls. It was so beautiful up there. Yeah, that was the nicest part, I think.

Amory: Well, probably from the Loop on up.

Daniel: No, just the park, the path actually.

Stan: A couple of them actually. There was a section that had a really nice view of Bird Woman Falls and where you're just getting closer to it and you can really make it out and can still see the, I don't know if it was a glacier above creating it, but also you could see the sprawl going out- the sprawl going out east.

Tommy: All of it, I don't know, it's just, all of it.

Shuttle Riders:

Cynthia: I don't like the cliffs, you know, looking down, so I like the wide-open spaces.

Paul: Well, the Logan Pass, I guess, would be my favorite part of the road.

Linda: I enjoy all of it.

Larry: Well, one canyon there was really pretty but, you know, we got a lot to go yet.

Nolan: I felt the Aztec Falls was pretty neat, we kind of paused there a moment on our way to McDonald Lake and we'll stop and pull off on the way back so that was nice.

Aspect #6: Way Expectations Were Met or not Met

This section explores the thoughts and dialogue of respondents to the question, 'how has your Going-to-the-Sun Road experience met or not met your expectations?' A few of these meaning units may have been pulled from other parts of the interview, such as the 'nature of the experience.' Expectations can influence the overall experience in that anticipation levels and subsequent satisfaction levels can be tied directly to the type of situation or outcome one is looking forward to.

Almost everyone responded that his or her expectations were met or exceeded. It is interesting to note that the only three people who hinted at not having their expectations met were all drivers. Their reasons seemed to relate to the scenery and not the functioning of the road (two cited lack of glaciers).

Drivers:

Jason: Well, I guess I had neutral expectations of just being on the road. I mean I came to see the animals and hike in the park so the road was only a facilitator. So the road, by itself, is very beautiful because the surroundings are beautiful but it's just a road.

Davis: Let's see, I would say overall I'd say it's met my expectations just because I would expect that when you come to a place like this, that you're going to deal with some difficulty getting there and that kind of comes with the territory. In terms of the natural beauty, it definitely meets my expectations. The actual road itself, it's pretty narrow and it's pretty tight so you're having to concentrate pretty hard but I don't know that I really had strong expectations one way or the other. I don't expect it to be easy out here, let's put it that way, when you come.

Fritz: I think the name, Glacier Park, this is just irritating, there are no glaciers. I mean, if you have ever seen glaciers...

Walt: Well, it was very much in line with my expectations.

Neil: I thought there'd be more glaciers. I expected to see a lot more ice than what we have here. I thought it might be similar to the ice fields in Canada. But it's, that was somewhat of a disappointment.

Song: Not as good as I expected but the scenery is very impressive. I think the road was ok. You know, on a mountain road, you can't expect too much.

Al: In general, it was about what I expected. There appears to be more traffic than I had the last time I was here but that's a part of the problem with driving along the east side.

It is interesting that Martha did not expect a road to go 'high into Glacier.' This is perhaps the reason the levels of traffic at Logan Pass surprise her. She expresses herself

with a belief that access this ‘deep’ into the Park is both good and bad. The following conversation between Martha (a passenger) and Davis (the driver) elaborates on this issue.

Passengers:

Martha: I didn′t actually expect there was a road that came this high into Glacier. I was surprised by that. I mean I didn’t have much knowledge about Glacier anyway so I guess a part of it was that.

Davis: You think you just have to hike into these areas.

Martha: Yea, I figured, I mean the fact that there is a road that takes you this far into the park and through the park is impressive.

Davis: It′s very accessible in that way.

Martha: Yea, which is both good and bad, I think. I mean it gives more people access but, you know, it also causes like these sort of more urbanish realities of traffic and stuff that you just wouldn′t maybe expect as much coming to a place that you know is sort of more of a protected, such a large, relatively untouched wilderness. There must be some kind of shuttle system for people who just kind of want to come up here, though people have a hard time giving up their cars.

Joanne: Oh, it′s a spectacular view, I mean, now that the clouds have cleared out it′s a spectacular view. It′s just, there′s so much here to look at and it′s like it changes every few minutes and yet it doesn′t change. It′s just a hard thing to explain, the way the sun hits it, the way the clouds move across or amongst the mountains. And watching constantly for wildlife, I′m not disappointed, even if I never saw a mountain goat or anything, it′s the most spectacular sight I′ve ever seen, really. And I live in Tennessee so we have mountains but not like this.

Penny: It has exceeded my expectations in the majesty and even though, yes, I know they′re big, experiencing seeing that little dot down there that is a human being and being here is different than thinking about it.

Ashley: Oh, I think it met my expectations because I′ve never been on it before. I had heard about it- one of the relatives that we are traveling with has been here before and so he′s pretty familiar with the park. Yeah, I thought it was very nice, you know, they′re, you know, doing a lot of work on it. It′s going to make it really, you know, nicely accessible for anybody that wants to drive up there.

Adele: Well, it always does, I mean, any of these parks that you go to, you meet your expectations. It's just that each one is unique in whatever it shows you or whatever you see. My eyes would be different from someone else's maybe but I think they do, all of them, come within what you want them to be.

Darlene: Oh, yes, more so, I mean, more than I had expected. I never prayed about it being so beautiful.

Jenny: I don't really know that it has either way. I didn't really have the expectations so...

Cyclists:

Steve: You know, it's a very nice, beautiful scenic ride. The traffic, because I ride so much in the city, doesn't bother me that much and the people are pretty polite, you know, the drivers are pretty polite, they don't honk at you or yell at you or nothing like that so...it's exceeded my expectations in terms of being more mellow than I thought it would be.

Mark: Oh, yeah, absolutely. Fantastic.

Stuart: Oh, it's been pretty good. I was kind of looking forward to all the torture of riding up it and I think it's pretty much fulfilled that. So yeah, it's pretty; it's been pretty nice, yeah.

Amory: Well, this is probably the fourth or fifth time I've done it and this is right on par with my other trips up here. The weather is just lovely, very nice ride.

Daniel: I try not to have expectations about things like this.

Stan: I would say met or exceeded. Yeah, it was pretty amazing.

Tommy: Yeah, except that it's too short. We got here after three hours. We left at 7:30 and got here about 10:30.

Jane: I think it's exceeded my expectations for how it would be to ride with traffic and for the difficulty. I almost expected the grade to be more difficult. So, that's what it was for me.

Peter: I'd say about the same, I think. It was, I've been up it several times in a car but that's, it's a little difficult to determine how it's going to be on a bike when you're in a car. But I expected the traffic to be worse and with starting off earlier, it's definitely the way to go.

Matt: I mean I think I had pretty high expectations for this road and I think they were pretty easily met.

Shuttle Riders:

Cynthia: Oh, I think it's met our expectations. I think we are really happy, I think we are really getting our money's worth out of the tour. But having a Blackfoot Indian bring us on it, it just adds to it.

Brian: Oh, it's definitely met our expectations.

Troy: I would say it has met our expectations.

Susan: Yes, it has.

Aspect #7: Importance of Mode Choice

Understanding some of the underlying motivations for why visitors choose various methods of travel on GTSR may help in the understanding of the total experience.

Overall, the drivers were the only category of traveler to have several respondents state that they did not consider it important to come by their chosen method of travel. They stated a willingness to take public transit if it were accessible and flexible.

Drivers:

Jason: Actually, if they had really good shuttle service, I'd be fine with that. Yeah, I could go either way. But it was nice to be able to come and go when we wanted to.

Davis: On this particular trip I guess it would have been important to the extent that we needed to get to the other side and we wanted to be mobile to get up to Many Glacier. I think in coming up to here and then back down, it would not have been necessarily that important. But definitely because we ended up either going three or four different spots in two days, we needed, we wanted to be able to get around pretty quickly. So it would have had to have been a very good bus system that, you know, is fairly accessible.

Fritz: Oh, just saving time. I would prefer to hike, but...this time it didn't work.

David: I would much prefer to drive. Cause then I have control of where we go and when we stop and so forth.

Walt: Not terribly, I guess. I′d probably see more if I was a passenger.

Neil: I′d say, important because I like to take my time, pull-off, prefer not to be with a guided tour buses, you′re always on the move. This gives us time to linger and take our time.

Rick: Well, that′s a hard one to answer. I think it′s good because I can get from point A to point B fairly quickly normally; but I can see drawbacks involving the traffic problems occur at times.

Song: How important? You mean, without a car? I don′t think I come up.

Al: That′s a good question; I′ve considered that one. I think it′s a good experience. I think it′s a nice experience to be able to drive over the road. However, for the sake of really sightseeing, it would probably be better to take a bus or something like that.

Passengers:

Joanne: Well, it's better to be a passenger rather than the driver. The driver can't look, you know, as easily because the roads are very narrow and at some point you almost feel like you should stop the car and let the other car go by first so you can get around it's so narrow. And some of the drop-offs are pretty steep and it's intimidating that way. But to be a passenger, you don't miss anything. I mean and we have a friend who can point out on the sides of the mountains where the avalanches are in the wintertime and how deep the snow was in the avalanches and how they had to clear them away. It's just such an education so I've enjoyed it.

Ashley: Yeah, I let my husband do the driving. It was nice for me because then I get to look around so... (Pretty important?) Yep. The one thing that surprised us though is how the white vans that are shuttling people around really, they really move, you know, they go fast and they really move around people like they're on the flatland but obviously they are not causing any accidents but they really, they really move it out. (Too fast?) I think too fast. (You foresee that it could be a problem?) But then if you are from the mountains, then you are pretty used to that, you know, where in Minnesota we don't have any mountains so we are just used to flat driving.

Francis: Much more important than a driver. I don't want to drive. I do not like the curves so now I just didn't eat much all day because I knew it. So no I don't mind passengering but I would not want to drive it.

Jack: Yeah, it wouldn't make any difference if I was driving or a passenger, you know. As a passenger you can view the landscape better, you know, and you wouldn't have to be concentrating on driving.

Adele: Well, I can see a lot more and I can sort of give him an idea of where we all want to stop with the little maps we get, what's coming up next, sort of be a tour guide for the driver.

Will: Important? Well, it gives me a chance to really enjoy the scenery.

Darlene: It's important to me- I really enjoyed it.

Jenny: Yeah, I don't think I would want to bike up but I don't know. I wouldn't have minded driving, but anyway, it was great. I might feel safer if I was driving cause I talk to myself more but...

The cyclists perceive their chosen method of travel as extremely important. Using descriptions like 'essential,' 'I waited my whole life to bike it,' and 'riding a bike is part of my life,' conveys a possible deeper connection with their travel mode than that of the drivers, passengers, and shuttle riders.

Cyclists:

Mark: Oh, very important, yeah. It's roads like this that are made for bikes it seems like.

Steve: Well, I wouldn't drive up here, I tell you that. So it's the only way I'd get up here. I mean especially I wouldn't drive up here after seeing this zoo, you know. No, my days of driving to scenic, beautiful spots are history.

Jared: Well, considering it's the only vehicle I have, it was probably real important. And I figure we're on a bicycle trip across country so that was the chosen method.

Stuart: It's pretty important. I've heard, you know, stories from people back in Minnesota who had ridden it and they said it was really great and all this stuff so I really wanted to- when I came here, I wanted to make sure I did it on my bike.

Amory: I′d say it′s very important. I think that road cyclists ought to have these kind of fantastic experiences riding this beautifully engineered road, of six percent grade; it′s very exciting at times. I′d much rather ride it on a bicycle than in a car myself. I drove it yesterday, rather boring by comparison.

Daniel: Oh, well, I waited my whole life to bike it with my dad, so pretty important.

Stan: It was pretty important for this whole journey that I′m doing.

Tommy: Very important. Riding a bike is part of my life.

Matt: Oh, absolutely essential. I would probably not come on this road any other way if I could help it. I mean maybe someday with a young family, you know, and drive a car then. I think that the bicycling is the best way to see things; it′s the ultimate convertible, its absolutely low impact. You know, I′m not leaving any emissions in the park or causing any, you know, wear and tear on the road.

Shuttle Riders:

Cynthia: I′m disabled so otherwise I wouldn′t be able to get out and see that much of it without the shuttle.

Tim: Well, we′re using my father′s RV, which is too big to go on the road so that′s why we used the shuttle. Personally, if I had a car, then I′d rather do it in a car because then there′s more spots you can stop and hike. Otherwise, you′re limited to as far as the shuttle stops. So if they had more shuttle stops, it'd probably be better used.

Brian: I think very important. There is no way you are going to enjoy the scenery if you're staring at the yellow line.

Paul: Well, it allowed us to at least plan this Loop trail and it was very important that the shuttle service be enough that if bears are on the trail and they shut down a trail, that you have an alternate and you′re not just stranded up here. We were a little worried coming up because they didn′t take reservations and a whole bunch of hikers showed up at the Many Glacier Hotel and we were worried about getting us all on. So that was the only concern we had was for the room on the shuttle so we could get back.

Nolan: I could have driven but I′m out here by myself so I thought that it would be easier to be able to see things on the shuttle when I didn′t have to worry about watching the road, also. And I was on vacation in Corsica earlier this spring and

it was very mountainous, very windy roads there, too, so I kind of had experience driving those- you know, wanting to watch the scenery but not being able to as much.

Troy: Person driving a car, it's not quite fair to the person who's driving because you have to keep your eyes on the road and my wife does most of our driving, so…

Susan: Real important.

Aspect #8: Lasting Impressions

This section presents and considers responses to the question, 'if your friends were coming to Glacier National Park, what would you tell them about Going-to-the-Sun Road?' These responses may be more valuable then one might think at first glance. The reason for this is that the 'advice' or 'stories' people tell others are, in a way, a significant part of the lasting impression from the traveling experience. What one tells others may also be what one tells oneself in remembering or recollecting a specific experience. Additional weight might be appropriate for this section given that, even though communication methods have changed significantly over the last fifty years, the number one reason sited for coming to Glacier National Park in 1949 was 'advice of friends' (Hoflich, 1950).

Most people said, in one form or another, that they would tell friends to 'do it, to take the road.' A subtler theme that seemed apparent as a lasting impression is that someone visiting Glacier National Park needs to be aware of the surrounding traffic and to act accordingly. Act accordingly seemed to mean 'take the road slow.'

Drivers:

Jason: The road itself, this is very beautiful to drive on, getting up here is great and there are a lot of nice hikes off of it, but I would tell them to stay at Many

Glacier or Rising Sun as opposed to staying at East Glacier where I did for the first two nights. It's too far out. It's inconvenient. (As far as services or something?) Well, I mean if you want to come into the park, you have to drive 20 miles, actually 30.

David: I'd make sure they had enough time to do it correctly and enjoy it.

Walt: Not to miss it. If they are not used to mountain driving, expect somewhat hair-raising experiences.

Neil: Well, up to Logan Pass, it's not all that bad of a drive, coming from east to west; but it may be a little more so coming the other way.

Rick: I'd tell them to get an early start; otherwise you might catch a lot of traffic.

Ella: Oh, it's something you have to experience. One is from Florida and one is from Wisconsin and they're duly impressed. I made them go up and look at the photographs up there of the construction.

Song: It's good, but I think that the scenery down at the lake is more beautiful.

The following dialogue with Al reveals that the width of a vehicle can be a factor in the 'awareness' of the experience.

Al: I'd tell them to go in June when the Weeping Wall was pouring water. We were disappointed, it was almost dry. But, just tell them to go and enjoy it. But don't drive a truck. (What do you mean, what kind of truck?) I've got a Chevy Tahoe. I pull a trailer so it's big. It's big. (It's an extra challenge?) Well, it makes you aware of the mirrors sticking out there and you don't want to rip them off. (Do bicyclists present a special problem?) I saw a very few on it, they would make me real nervous if there was one around and I had to pass them for some reason on the steep part. I happen to bicycle so I can appreciate their problems.

Passengers:

Patty: Beautiful but have patience.

Joanne: It's a must-see. Must-see. There's so much to see but this is definitely one of the things that my husband made sure that I was going to see.

Penny: To get somebody from around here to drive. Just so that they can look around, but to kind of visit. To be able to take some of the little walking tours, take lots of pictures- but it's hard to look and drive at the same time.

Francis: Got to do it. Pretty, got to take the road, it's a must, yeah.

Adele: I'd tell them that they should take it, whether they take it only one way or if they go in and come back, cause you always miss something. Each side of the road is different.

Will: I'd tell them it's actually quite an experience. I mean, you get to come up here on the continental divide and that's an experience in itself that's for sure. Not many people have done something like that. I'd say it was worth it- great scenery.

Darlene: I'd tell them it's a little scary but it's beautiful. It's worth the trip.

Jenny: I would definitely say to come up here. It's a very beautiful spot. There are not really any other places where you can get this kind of thing, so.

More than others, the cyclists' advice included language that not only seemed to convey a willingness to tell others to 'take the road,' but also a willingness to suggest to others that they must use a specific mode of transportation (i.e. 'bike the road').

Cyclists:

Steve: Well, I'd tell them it's probably one of the coolest places I've ever ridden a bike. They should do it, no matter how long it takes them, it's worth it.

Jared: Great bike ride, go ahead and do it. It's probably one of the best roads I've ever been up in my life. It beats the heck out of anything in the Smokey Mountain National Park.

Mark: Oh, I'd tell them to ride it for sure. Absolutely.

Amory: Take it if the weather's good and take it early in the morning.

Daniel: I'd tell them to go early in the morning or late in the afternoon. That's about it. I wouldn't tell them to go in the middle of the day; it's too much like Disney World.

Stan: I'd tell them to ride up here, plan accordingly, it's just incredible.

Tommy: Bike it.

Jane: I think it's more enjoyable on a bike, I really do. I mean, you can definitely get the same views if you're a passenger in a car. I don't think you can if you're driving but if you're on a bike, you're definitely going slowly enough to be able to enjoy it.

Matt: I'd tell them they'd have to bike it. They'd have to, even if they were like renting cars and racing around, I'd encourage them to get bikes and bike up it. We just met a guy who's mountain biking up it, unloaded, and he was totally stoked and had a great ride. That's wonderful.

Shuttle Riders:

Cynthia: Oh, I definitely think it's something that you should see. You should experience it at least once, yeah.

Tim: I'd tell them to allocate at least a couple of days so you could see it a couple of times, stopping and stuff.

Brian: Aw, it's part of it; it's something they have to experience.

Linda: You got to take care, there's no guardrails.

Larry: A definite must to see.

Nolan: I think that, see, I've spent most of my time over in East Glacier and I haven't really gotten into the park. I went up to Many Glaciers, also. But, I kind of hurt my leg so I haven't been able to do any hiking. This is kind of the first time I have actually felt like I've been in the park so I think it's really good for that. You feel like you get into the park rather than just kind of seeing it from the outside. (What do you mean? What part makes you feel like you're in the park?) Well, I mean in terms of since I'm not able to get out and hike, coming along the Going-to-the-Sun Road, I sort of...you know, in East Glacier you're seeing just the eastern edge of the mountains where here you are actually in the mountains. You know, you have mountains all around so in that sense.

Troy: I would suggest to them that they take the shuttle.

Susan: Oh, do it, do it, and be prepared for awesome, breathtaking panoramic, whatever words you can think to describe it.

Jim: I wouldn't drive the west side. A tour would probably be better. The east side doesn't seem so bad if you drive it.

Summary of Experiences and Effects of Mode Choice

Aspect #1: Reasons

The general reasons given for coming to GNP include the beauty, scenery, wildlife, open views, wildflowers, and the general thrill of being in a spectacular, natural setting. The cyclists were the only category of interviewed traveler that mentioned their specific mode of transportation as a strong reason for coming to the park.

Aspect #2: Nature of Experience

For almost everyone, the nature of the experience is perceived to include two main components: trying to soak in fantastic, exhilarating scenery, and being adversely affected by traffic congestion. More than others, the drivers seemed to have a hard time balancing this dual nature of the GTSR experience. The drivers expressed a challenge with focusing on the road while taking in the beauty of the park. An effect of mode choice seemed apparent with the cyclists. They were the only category of travelers that alluded to the engagement of the senses as they moved along the road (i.e. the smells, sounds, and feelings of the surroundings). Another difference was noted with the shuttle riders. They were the only category of traveler to mention the price and availability (i.e. frequency of operation, or *headways*) of their chosen mode of transportation as a possible factor in affecting the nature of their experience.

Aspect #3: Effect of Traffic Conditions

In general, traffic was perceived to have a negative effect on experience. Passengers of cars and especially shuttle riders perceive traffic to be less of an influence on their experience as compared to cyclists and drivers.

Aspect #4: Effect of Behaviors of Others

For the most part, travelers do not perceive individual actions or behaviors of others to affect their experience to a great degree. This contrasts with the previous theme that traffic as a whole possibly takes away from experience. This suggests that the effects of traffic, as a whole, on experience are greater that the sum of the effects of traffic as individual parts and also suggests that two different management approaches for these issues may be needed. Even more so than the other three categories of travelers, the responses of the shuttles riders seemed to convey that their experience was less affected by individual behaviors of others.

Aspect #5: Favorite Segment

The favorite segments for all travelers had a fairly wide range. From the mentioning of specific places like Birdwoman Falls or Logan Pass, to the more general sweeping views and panoramas, each person had their own personal preference for what qualified as their 'favorite.' The only difference that mode choice might have had on this aspect of experience was fairly slight. The favorite segments mentioned by a couple of the cyclists corresponded with being able to engage the senses (i.e. talking about steepness of the road or places where it was cold).

Aspect #6: Expectations

Almost everyone responded that his or her expectations were met or exceeded. The only three people, of the forty total, who hinted that their expectations might not have been met were all drivers. Each of these three drivers seemed to have different expectations with the scenery, two citing lack of glaciers as somewhat of a 'disappointment.'

Aspect #7: Importance of Mode Choice

The chosen mode of travel on GTSR seemed to be very important for all interviewees except the drivers. The drivers were the only category of traveler to have several respondents state that they did not consider it important to come by their chosen method. In contrast, the cyclists perceive their chosen method of travel as extremely important. Passengers and shuttle riders also conveyed an importance for the way they traveled, often being thankful that did not have to drive GTSR.

Aspect #8: Lasting Impressions

Most people said, in one form or another, that they would tell friends to 'do it, to take the road.' The cyclists differed somewhat from the other types of travelers in stating that their advice to others would be to 'bike the road.'

Results/Discussion of Emergent Managerial Issues

The following section reflects the data that was collected for this study that speaks to present and future decision-making and is intended to answer research question #3, 'what improvements can be made to the GTSR experience?' These *emergent managerial issues* (EMI) are likely more than just simple observations or passive feelings held by the forty travelers of GTSR interviewed at Logan Pass. To some degree, these issues might be considered a range of 'red flags' and 'opportunities'. In other words, this section addresses topics that may be highly influential to the GTSR experience in Glacier National Park. Park managers are likely to be well aware of these issues and already working on solving potential hazards (or red flags) and/or looking to improve the overall GTSR experience (searching for opportunities). Yet, this section may present new

information and insights to assist in any tough, looming decisions. A goal of this section is to also present a more complete picture of how all these emergent managerial issues fit and tie together.

The eight emergent managerial issues from this study are:

* EMI #1: Bicycle Time Restrictions
* EMI #2: Bicycle/Car Interactions
* EMI #3: Congestion
* EMI #4: Information
* EMI #5: Road Width
* EMI #6: Shuttle Services
* EMI #7: Parking
* EMI #8: Road Surface Features

The first part of this section lists a specific emergent managerial issue. Underneath each of these issues meaning units are presented with name of respondent and travel mode abbreviation attached in front. Some of these meaning units have already been presented in the *aspect* section of this chapter while some of the meaning units come from direct responses to the question, 'how can your GTSR experience be improved?' Analysis is performed throughout each of the emergent managerial issues, usually before each meaning unit. One or more mitigation measures are then recommended at the end of each emergent managerial issue. Each mitigation measure is intended to alleviate hazardous situations and/or create enhanced experience opportunities. In other words, the mitigation measures are a specific attempt to answer research question #3, 'how might traveler's experiences be improved on Going-to-the-Sun Road?'

One point needs to be made with regards to the way some interviewees spoke of potential improvements. In some instances, the respondents added these improvements rather nonchalantly, only bringing up the subject because they had been asked the specific question (the last question of the interview), 'what would improve your experience on Going-to-the-Sun Road?' In other instances, the responses were much more passionate, with the interviewee conveying a thankful, even grateful, demeanor in being given a chance to express themselves about ways to improve the experience. This heightened level of expression might be expected given the magnitude of the experience in traveling GTSR (i.e. the 'specialness' or spiritual nature of the journey). What you, the reader, will not 'feel', however, in reading these meaning units is the tone and body language used by the respondents. This is a limitation to qualitative data analysis. In fact, it has been said that language is roughly a third of communication, with tone and body language making up the rest. It is beyond the scope of this thesis to bring in analysis of tone and body language. This can be considered a limitation to this study.

Many people stated that they would change nothing, that the experience was great as is. This points to an overall wonderful experience that is fulfilling expectations and producing happy 'customers' of Glacier National Park. In other instances, potential changes are brought up that may improve experience. These include less traffic, a better shuttle system, better information, and more parking. Some of these suggestions are contradictory. For instance, increasing parking is likely to increase the amount of traffic in the long run. Park managers, the public, advocacy groups, politicians, and so on will all have to weigh the pro's and con's of any future potential changes.

EMI #1: Bicycle Time Restrictions

Amory had several insights into the time restriction. The first was taken from his description of the experience in general. His response, in talking about the coldness of starting out early in the morning, points towards the Park service's influence on the cycling experience by restricting times. Cyclists are not allowed to be climbing the west side of Logan Pass between 11 a.m. and 4 p.m. Amory's second insight, which was in response to the question about traffic conditions affecting the experience, shows that he actually appreciates biking in the early morning because of less traffic. There is one notable word in his response; he says the Park Service is wise to "encourage" early bicycle travel, but the reality is that the Park Service is not encouraging, but enforcing.

> Amory (c): It was cold starting out, I didn't know the temperature, my fingers and toes got cold. Really didn't get any sun until almost at the top. It's nice and sunny up here. I think that the Park Service is wise to encourage people coming up the west side to do it at 7 or 8 o'clock in the morning rather than in the afternoon. So I didn't really have any interference from cars at all.

Matt has some insights that elaborate on the complexities of the bicycle time restriction. His comments about addressing the growing traffic as opposed to restricting bicycles touches on the interrelatedness of several of these emergent managerial issues. In fact, the bicycle-time restriction, bicycle/car interactions, congestion, and road width all affect each other to some degree. For instance, reducing congestion is likely to reduce bicycle/car conflicts and may alleviate the need for an 11-4 time restriction on cyclists. Reducing congestion could be accomplished by following Matt's suggestion of implementing a carrying capacity system (limiting the number of cars in the park) and also by improving the shuttle services. Like Amory, Matt also talks about the 11-4 time restriction influencing the cycling experience. In this case, it's a potential stressful

situation of a cyclist not knowing if he or she will reach the top by 11 a.m. and wondering what the consequences might be. This could cause a cyclist to push harder than they would without a time restriction.

> Matt (c): I've been thinking a lot about the 11-4 time restriction. I can sort of understand, you know, maybe why, why it exists but had it ever been considered that maybe if there was a traffic congestion problem, of maybe limiting the number of cars on the road or limiting the size even more of the cars on the road. I think that, you know, just due to the populism, that there's probably always going to be people driving on these roads, but, you know, there is a carrying capacity you choose- it worked in Acadia National Park. And I'm there- and we've had to deal with that on the biking roads because we have two thousand people a day biking on the carriage roads. But that park is taking a stance of encouraging people to bike in the park. They don't charge fees for bikers coming in. They do for cars. So I think that I don't necessarily myself need to be catered to as a cyclist, but I think that bicycling should be encouraged. I certainly don't think that prohibitions on bicycling should be extended any more and I would actually seriously encourage their reconsideration of them. And I know there was a gentleman I passed that I don't see here yet, and I know I heard him say, you know, gosh, I hope they are not too strict about enforcing this cause I don't think I am going to get there by 11. So that was obviously having an impact on his experience because that was like foremost in his mind.

Peter's remark reflects happiness with an earlier start. It might be inferred that this happiness is not because he enjoys cycling early in the morning but because he likes cycling with less traffic.

> Peter (c): But I expected the traffic to be worse and with starting off earlier, it's definitely the way to go.

Tommy wonders how cyclists might be able to utilize the road during the middle of the day so "everybody could have fun." His comment about designing the road in such a way that would make restrictions unnecessary reflects the connection between the following EMI's: Bicycle Time Restriction, Bicycle Car Interactions, and Road Width.

> Tommy (c): It would be interesting to design the road so that bikers are not inhibited from using the full road between 11 and 4. There are certain parts where you are not allowed to go and I can appreciate that from a safety perspective.

> And if they were to change the road slightly, well, everybody could have fun all the time.

Restricting bicycle traffic on GTSR between 11-4 during the peak season is perceived to be unfair by several cyclists. They possibly see the problem as not bicyclists on the road, but too much traffic on the road.

As a mitigating measure for the bicycle time restriction, it is recommended that GNP consider encouraging, instead of forcing, early bicycling on GTSR, thus ending the bicycle time restrictions. It is also recommended that GNP convey the reason for encouraging early morning cycling (i.e. less traffic) and also present the pro's (less traffic, maybe more wildlife sightings, etc.) and con's (colder temperatures, etc.) of early morning cycling.

EMI #2: Bicycle/Car Interactions

The presence of motor vehicles is the primary danger faced by cyclists (Tolley, 1997). How bicycles and cars interact on GTSR is of prime importance for safety and comfort reasons. The following meaning units reflect some of the respondents' thoughts and experiences on the subject:

> Peter (c): I think one of the things that helps is that coming up, if you motion people around you, you know, you can see better than they can, 'cause the driver is sitting closer to the center line and we're off to the right. And so we can see what's up ahead so if you wave people on by you, I think that helps. They tend to go further out around you…

While the above meaning unit is related to bicycle/car interactions, it could also be considered as an information issue. The point Peter makes about the cyclist being further to the right and able to see further ahead, thus allowing a cyclist to wave waiting cars by, might be a good awareness piece to pass on to both cyclists and drivers. Yet, his

comments below reflect the challenge of waving cars by, especially when a cyclist is on the steeper upper sections and needs both hands on the handlebars and more attention on the road. This challenge of waving cars around to pass is compounded if there are 'more and more cars coming by.'

> Peter (c): To a degree, I mean, you have to be careful but there are quite a few places where you don't have to, you know, you're not having to peddle so hard that you're having to swerve around and whatever, and so you can watch, you know with gaps in traffic, especially earlier on. Once the traffic starts to pick up a little bit later as you get towards the top, as you get further up, it gets a little tougher to do that cause you have more and more cars coming by.

The following two meaning units by Matt show the connectedness between bicycle/car interactions and road width. Matt also addresses the differences between experienced and inexperienced cyclists in dealing with traffic. This may be another opportunity to provide information to both drivers and cyclists at the entrances to the park as to the appropriate passing behavior.

> Matt (c): It makes this very nice that the road is so narrow that the traffic speeds are so slow. Everyone was perfectly patient when they couldn't see around the corner. So, it was very, very positive.

> Matt (c): Well, if there is a stream of traffic coming, I mean the advantage of that road is it's narrow enough that even when you're staying on the right side, you're more or less commanding the lane, so cars really do have to wait until the lane's clear to pass. And, as it should be. I mean if there were a question, if there were a car that sounded like it was going too fast and was going to try to squeeze in between, especially when you're going up it, there's a drop up there, I'd move further into the road just to force a car to wait to pass until it was safe to do so. That's something again that not necessarily many lesser experienced cyclists would have the knowledge of that that's actually a safer thing to do or have the confidence to do. I think that just the narrow width of the road more or less makes that happen.

Mark addresses the width of vehicles. GNP has already implemented length and width restrictions, yet there may be a need to increase the width restrictions (including dual wheels) and/or provide stricter enforcement.

> Mark (c): It looked like everything was pretty well co-existing there, the bikes and the cars and things. Some of the cars are a bit scary, I mean the trucks, with the dual wheels on the back get a little wide I think at times. Those are kind of tricky to get by sometimes.

Mark's next comment again points to implementing carrying capacities. He talks about letting a line of cars pass and then appreciating the break in traffic. Without proactively managing traffic levels, breaks in the traffic may become less frequent.

> Mark (c): And then you'd have this big hoard of cars come by so we'd just pull off to the side for a while and let them go by and then it would be quiet for quite a while. So that was actually kind of nice.

With current traffic levels, and by cycling in the morning, Daniel did not have any major issues.

> Daniel (c): Actually, the traffic, you know, as far as the cars go, I felt that they were pretty good this morning, didn't feel like there was any major issues. Sometimes the really loud motorcycles kind of throw you off but, you know, not a big problem.

Seth, a passenger, has a concern about cars and bikes fitting within the same road space.

> Seth (p): … in the past couple years more and more bikes are coming in. It's not, the road is by no means, enough space for travel for bikes and cars so I think just one, maybe a couple feet to the side for the bikes is good enough.

Steve and Stan both seem to have some insights about creating some car-free space. Steve compares a potential experience to the Tour de France. This points to a possibly amazing opportunity for GNP. The park could designate one day per season (or per month) as a car-free day or even a motorized-free day. It is likely that this would create a cycling 'Mecca' with potentially thousands of cyclists coming to GNP from all over the world for that one special day. One suggestion would be closing GTSR to motorized traffic from 6 a.m. on the day of the July full moon to noon the next day. Special

attention would be needed on proper cycling behavior if it ever got to the point of thousands of cyclists utilizing GTSR at one time.

> Steve (c): Shut down the complete road to car traffic. That would totally improve it. You know, it was actually interesting because at one point I said to one of my friends, I go, you know, this would be like the Tour de France, you know, if it just didn't have any vehicles. There'd be people waving to you. I'd say shut it down. Instead of shutting it down to bike traffic, they ought to shut it down to car traffic and just let the bikes go down it and up it or whatever.

> Stan (c): Well, my friend and I were riding up and were talking about just limiting park accessibility a little bit, maybe closing the road, making only bike road kind of areas.

Amory talks about a 'share the road' philosophy and points to the need for bicycles and cars to co-exist no matter what the future of GTSR holds.

> Amory (c): I don't mind sharing the road with cars. They have a right to be here, too.

As a mitigating measure for bicycle/car interactions, it is recommended that GNP develop improved strategies to disseminate awareness information (such as 'rules of the road') to all entering drivers and cyclists, increase effective road width (EMI #5), and implement at least one car-free or motorized-free day per year on GTSR.

EMI #3: Congestion

As reflected in the *aspects* section of this study (especially Nature of Experience, Effect of Traffic Conditions on the Experience, and Effect of Behaviors of Others on Experience), congestion of cars on GTSR is perceived to adversely affect experience as a whole. Peter connects the problems of GNP to the other National Parks and also connects the utilization of a mandatory shuttle system with peak visitor times.

> Peter (c): Well, if they are not already considering shuttles, I think they should. I know there are some, but I mean as far as a mandatory bus shuttle for at least the

> peak times or something. It's just getting so that there's so many cars in all the parks these days that it's really a problem.

Jane speaks about traffic affecting almost all of the senses that are engaged while cycling. She also alludes to the possible dangers of a car coming too close to a cyclist.

> Jane (c): In my mind, riding, the less traffic while I'm riding in any situation I think is better for a number of reasons- noise, breathing exhaust, just the danger in general that somebody's going to come too close to you.

Matt talks about the experienced cyclist not having a problem with a moderate amount of traffic. A potential problem with putting too much emphasis on his statement is that a significant number of cyclists may never reach his level of experience and yet still have a desire to cycle GTSR. Also, traffic levels can go past the 'moderate' level.

> Matt (c): Well, certainly the more traffic there is, the less pleasurable but even with ...I would say it was a moderate amount of traffic. Not heavy and it wasn't at all a deterrent for me today, but I'm an experienced cyclist comfortable with the traffic.

Cynthia shares that traffic was not a problem for her (consistent with traffic not perceived as a problem for shuttle riders) but alludes to the possibility of creating a 'mess' if traffic grows too much.

> Cynthia (s): It hasn't today. This is sure a lot better than Yosemite. Yosemite is just a mess everywhere you go, even walking you have to watch where you walk.

Paul has an interesting comment in talking about how one person stopping can create a 'big backup.' This is consistent with emerging transportation research that suggests that traffic, as a whole, has special qualities not too unlike gas molecules floating in equilibrium in a sealed container. It does not take much of a 'disturbance' to the gas molecules (i.e. one car in traffic stopping) to set off a chain reaction that ripples throughout the container (i.e. GTSR). As mentioned in the aspect section, there are thresholds of traffic that need to be monitored. In general, roads are graded A to F

(called level of service, or LOS), with A being free flowing and F being stop and go. Usually, lanes are added to a road to improve the LOS. In GNP's case, adding lanes is practically impossible (because of the historic landmark designation and because the road is hanging on the side of a cliff in many sections). This means that one of the few choices for improving flow is to limit, or reduce, the amount of cars on GTSR.

> Paul (s): Well, yeah, people would stop for wildlife so there'd be a big backup. And one of the things I noticed this year that is so different than 7 years ago, there is a lot more traffic. So one person stops to look at a moose and you've got a quarter of a mile, a half-mile backup.
>
> John (d): I guess the biggest concern is the traffic but nothing can be done about that.
>
> Katy (p): Less traffic, I guess if there was less traffic.

To address congestion, it is recommended that GNP consider the following measures: develop a carrying capacity system to limit the number of motorized vehicles on GTSR, expand and promote the shuttle system, promote and allow for non-motorized travel, and network on a regional basis to promote and build bus and train systems so people can get to GNP without a car.

EMI #4: Information

The information that goes out to the public has an effect on experience (i.e. affecting perceptions and expectations). The following meaning units reflect some of the thoughts of respondents regarding information.

Fritz, who seemed very frustrated, talked about 'learning too late' that there were no available camping sites.

> Fritz (d): But, I think it was not a good idea (coming to GNP). We learn too late, I think it's better to go not to National Parks and to find campsites anywhere

> because now everything is already occupied. Next time, I will not go to any of the parks.

Adele talks about courtesy possibly being an important factor in the GTSR experience. GNP could promote the special characteristics of GTSR and how courteous behavior by all users can ensure that the experience remains positive.

> Adele (p): On a road like this, if there's not courtesy, than it's just a road. Flow in and out of sites, so that way everybody is safe.

Stan alludes to cyclists needing a little information about the design of the road, as he was expecting a shoulder.

> Stan (c): ..in general the cars seemed to have been very, very understanding. ...it was better than I was expecting since I got the idea that there was going to be a shoulder.

Peter, in response to a question that asks if it is hard to watch the road and wave people around at the same time, sheds some light on an important cycling tool- the rear view mirror. GNP might encourage use of cycling mirrors in any promotional material.

> Peter (c): Not really, I have a rearview mirror and I use it constantly. (That's key?) Yeah. That's pretty key and you know, so you can hear them coming up, too, and you know, you start to hear somebody coming and you start watching a little bit and it's just awareness.

Fritz and Neil expected more Glaciers. Promotional material or interpretive signs could talk about the park being <u>carved</u> by glaciers (and not being full of glaciers), if it is not being done so already.

> Fritz (d): I think the name, Glacier Park, this is just irritating, there are no glaciers. I mean, if you have ever seen glaciers...

> Neil (d): I thought there'd be more glaciers. I expected to see a lot more ice than what we have here. I thought it might be similar to the ice fields in Canada. But it's, that was somewhat of a disappointment.

Stan, in response to possible improvements to his experience, suggests signage at the bottom. One option could be one main sign, aimed at educating cyclists, placed in a strategic spot on both sides of the park near the entrances. Another option could be a smaller sign, with comprehensive cycling (and driving) information at several, if not all, pullouts. These signs could go beyond relaying information and be designed in a way that creates 'sense of place' in GNP. In other words, the signs themselves could become a part of the GTSR experience.

> Stan (c): Maybe some more information towards the bottom. I guess educating people.

David seems satisfied with the amount of information that is available to him. It is likely that different types of information reach different types of people. It may be important to diversify the ways that information is going out to the public.

> David (d): There's plenty of information and you have to take your time to study it out a little bit and see what you're going to be viewing.

Walt expresses a possible nervousness with the way the road looks in the 'very curvy, narrow sections.'

> Walt (d): I guess if there were some of the very curvy, narrow sections that didn't look like they were maybe about to collapse, it would give you a little more self-confidence.

Patty relays another point. By letting people know that it is going to take a while to experience the road, some of the drivers who tend to be in a hurry (and can create 'road rage') might be more at ease.

> Patty (p): Maybe signs. Maybe at the beginning, not only the distance, cause the distance is the same. You know it's only 40 miles to St. Mary's but you know the average speed is 20 miles per hour and in parentheses average time to Logan Pass, Logan Pass to St. Mary's, ok, this is a whole day affair, that would help.

Ashley talks about the possibility of more signage. This contrasts somewhat with Davis's statement about it being 'kind of nice' that there are not a lot of 'intrusive road signs.' This is a balancing act for GNP. Again, small informational signs that create sense of place, including maps, may help provide that balance.

> Ashley (p): I guess the one thing that I do have to say is, you know, is that I had heard so much about the Road but then I noticed that at the beginning or on either end, there's no marker, there's no sign or anything saying that this is it. Because yesterday when we were on it, it was like well we must be on it, I thought to myself after a while. I think it would be nice if at the beginning, you know, on both ends, if there was some kind of a sign saying, Going-to-the-Sun Road, because there is nothing there that actually, you know, says, this is it. So I guess that would be my only suggestion. I think it could use some kind of a marker. You know, if this is a big deal, then you might as well flaunt it.
>
> Davis (d): It actually doesn't have a lot of intrusive road signs. It's kind of nice in that way…

Matt talks about the possible need for a sign that promotes 'sharing the road.' These signs could replace the bicycle-time restriction signs.

> Matt (c): I think given the fact that the traffic is going so slow, I mean the only thing that I could think that would be really an enhancement would be more signage for motorists to share the road, you know, just in a positive encouragement like that rather than just the no biking signs for certain hours.

Nolan refers to one of the shuttle companies employing Blackfeet Indians as drivers as being a draw. GNP could look at other ways to promote the various shuttle systems.

> Nolan (s): I had a couple of guidebooks that my girlfriend had given me, so I had heard about the Going-to-the-Sun tours. And, I guess, also, one of the interesting things was that the drivers are Blackfeet so they can talk about the Blackfeet culture as well. (That was a draw?) Yeah. (Was that in the guidebook?) Yeah. So that's why I took this tour as opposed to one of the other tour buses, I guess.

As a mitigating measure for information, it is recommended that GNP consider reviewing all marketing procedures. This would include promotional brochures, information conveyed at park entrances, signage, and any regional and national efforts.

Attention might also be directed to the information that is going out from local businesses.

EMI #5: Road Width

The width of GTSR is an important part of its overall character. From 'nerve-wracking' to 'exhilarating', the skinniness of GTSR invokes a range of emotions and feelings from those who set out to travel along this cross-mountain route. As a historical landmark, the width of the road is not supposed to be changed. As a feat of engineering, the width of the road is impractical to be changed in the higher reaches. At the lower reaches, widening the road would have a negative impact on park resources. A wider road would likely facilitate higher driving speeds because of the extra 'wiggle' room. All of this is to say that the road width for GTSR, as skinny as sixteen feet in some places, is a complex matter when related to the safety and comfort of the traveling experience.

Al speaks about being nervous while driving on the side next to the mountain because of the potential for rocks to slide into his vehicle.

> Al (d): I drove it two days ago, too, the whole way, the whole way over. In general, it's the most nerve-wracking thing for me. It's a bit nerve-wracking going when you are on the rock side- on the cliff side doesn't bother me. On the side where the rocks are up there going to hit you, the side of your car, that's the part that keeps me most nervous.

Patty speaks about nervousness as a passenger next to the drop-off side because of being close to the edge.

> Patty (p): It's beautiful views, slow-moving, a little nerve-racking on the passenger side. The first trip up being right on the edge on a couple of the points was...I don't know if I would pull over in some sections cause it's really really close to the edge.

This element of being 'right next to the edge of the road' is 'exciting' for Will.

> Will (p): …going up the road is kind of fun, kind of exhilarating, especially if you go back that way as passengers. You're right next to the edge of the road; it's kind of exciting.

Seth, in responding to what would improve his experience, wondered about finding more room on the road so cars and bicycles could co-exist better.

> Seth (p): I would say bike trails. Bike paths, cause I noticed that… in the past couple years more and more bikes are coming in. It's not, the road is by no means, enough space for travel for bikes and cars so I think just one, maybe a couple feet to the side for the bikes is good enough.

Matt, in a scaled down meaning unit from the EMI Bicycle/Car Interactions, talks about the narrowness of the road being an advantage. He also suggests that cars should wait to pass only when the opposite lane is clear. With growing traffic, this may not be a long-term option.

> Matt (c): …the advantage of that road is it's narrow enough that even when you're staying on the right side, you're more or less commanding the lane, so cars really do have to wait until the lane's clear to pass. And, as it should be.

Jared, in conveying what might improve his experience, talks about the need for 'better concrete.' This brings up a very important point with regards to road width. While the <u>real</u> road width may not be able to be changed, the <u>effective</u> road width is a different story. This means that the way the road is maintained contributes to determining the usable road space. Unless it is desirable for cyclists to 'command a lane,' keeping the concrete/asphalt in good shape along the full width of the roadway may help alleviate cycling and driving stress.

> Jared (c): ...better concrete close to the guardrail. That's one of the reasons I rode in further into the lane because the concrete was broken up next to the guardrail.

Keeping extra wide vehicles off the road, as Mark suggests, is another way to increase the effective road width.

Mark (c): Maybe the trucks with the wide wheels… could be limited a little bit…

Both Stuart and Mary seem to like the idea of having more room to move, but they also understand the limitations.

> Stuart (c): But maybe a shoulder if anything but I don't think they're going to be able to do that. It was made quite a long time ago but other than that, yeah, it's pretty good.
>
> Mary (s): I wish it'd be wider. I wasn't so close to the edge but I understand it's kind of restricted by some park regulations, you can't change...

Joanne was 'amazed at the cloud,' but talked about these same clouds obscuring the road. This might be an unsafe situation for a cyclist who could not utilize the full road width. This relates back to the EMI Information, in that a sign signifying everyone to 'share the road' could raise awareness about bikes being on the road.

> Joanne (p): We were even amazed at the clouds. At some point, it was almost eerie. We were driving on the road through the clouds and we couldn′t see a foot ahead of us and that′s eerie. You know, it′s an eerie feeling. And you know the road′s there, you just can′t see it.

As a mitigating measure for road width, it is recommended that GNP maintain as wide as an effective road width as possible. This means regular sweeping up to the edges and regular repair of any broken asphalt or concrete. This also means continual evaluation of vehicle width restrictions. Keeping speeds as low as possible (which increases time for reaction in any potential hazardous situation) and conveying information about sharing the road and being courteous and aware might also help the situation.

EMI #6: Shuttle Service

Providing the best possible shuttle service helps to reduce congestion and gives people more options for traveling on GTSR. This might be considered essential because some people do not want to drive on GTSR (as noted in the aspect, *Importance of Mode Choice*) and some vehicles are not allowed on GTSR.

Brian talks about the cost and the frequency of the shuttle influencing his experience as a rider.

> Brian (s): The only reason we're not going to continue on is just the cost of the van is kind of absurd for what you're getting. (How much is it?) $16.00 to come from here and back. So if I want to go to St. Mary's, and back to here, it would cost me $32.00. Well, between me and my wife, that's $64 bucks. Kind of crazy. I'm just disappointed in the Park Service for gouging like that….I think it's a national park; it should be more like Yosemite where the tram's more frequently. You see, I've only got the option of returning at 12:45 or 6 o'clock. That's a real big gap.

Ashley, a car passenger, was surprised at how fast the shuttles were moving, alluding to a safety issue. It must be noted that none of the shuttle riders themselves mentioned the speed of the shuttles as a concern. Still, this might be an issue worth addressing by park management.

> Ashley (p): The one thing that surprised us though is how the white vans that are shuttling people around really, they really move, you know, they go fast and they really move around people like they're on the flatland but obviously they are not causing any accidents but they really, they really move it out.

Jason acknowledges that he might take a shuttle if they were more frequent, but also acknowledges the challenges of providing a shuttle for people who are continuing on through the park. Of the ten drivers interviewed, seven were returning to the side of the park from which they came while three were continuing to the other side.

> Jason (d): I wouldn't mind it if there were shuttles. My problem is, like tomorrow when we leave I want to bisect the park and keep on going so there are clearly

> people for whom this is a thru-put rather than someone like me who is staying at a lodge here and could have taken the shuttle. And I might have, you know, if there was one that just got me up here and they ran routinely, I would have done that.

Jenny speaks about being in a convertible as a possible improvement to her experience. This speaks to the open-topped red jammers making a welcome return to GNP when they are finally restored.

> Jenny (p): Being in an open-top car, a convertible, that would be nice- a nice view. (Why a convertible?) Well, besides being a really nice car, you know, being out in the wind- that'd be neat instead of being closed up in the car.

Jane, a cyclist, talks about shuttles relieving congestion. It might be inferred that a wonderful shuttle system would help create wonderful cycling experiences.

> Jane (c): Shuttles at peak times because there'd be less traffic.

Paul relates a possible need for shuttle reservations and also brings up the frequency issue.

> Paul (s): Well, what would have improved it is if we could have made reservations. Because, you know, we planned this trip three months, four months in advance. We had reservations at the hotel, reservations at the chalet, but we couldn't make reservations on the shuttle and it would also potentially improve it if you had obviously, if you had more traffic it would help it, if there were more choices. We only had one choice coming out of Many Glacier Hotel and that was a 7:45 shuttle if we really wanted to be able to get to the chalet. They've got another one that leaves in the afternoon but you get in here at 6:00 and not realistic with kids.

Nolan and Rick speak about the connectedness of the shuttle system with congestion.

> Nolan (s): …when you're in a tour bus versus driving yourself you have the benefit of not having to watch the road but you also give up some of the flexibility of being able to stop wherever you want, for however long, so I guess that's a benefit of driving yourself. Of course, on the other hand, since there's so many people that do drive on their own, you've got pull-offs that get full, so that's probably a downside of all the individual traffic.

> Rick (d): …and I think they need… more transportation buses that help out the situation.

As a mitigating measure for shuttle services, it is recommended that GNP continue with plans to bring back the red jammers, address issues such as cost, frequency, reliability (i.e. reservations), and marketing, evaluate the information set forth in the 1990 Glacier National Park Transportation Plan and also evaluate the comprehensive proposals set forth in J.A. Eisner's 1973 study, Public Transportation in Glacier National Park. This latter document details the inner workings of a stellar shuttle system and deserves review, especially the specific proposal on pages 81-88.

EMI #7: Parking

One of the challenges with making a transportation system work is building and maintaining an appropriate number of parking spaces for private vehicles. In the case of GTSR, this means addressing the larger parking lots at major stopping points like Lake McDonald and Logan Pass, and also the smaller parking lots at trailheads and points of interest (including the numerous pullouts). In general, the more cars that enter GNP the more parking spaces are needed. This presents a problem in that paving over land causes degradation of resources. This degradation occurs in several forms. Direct loss of habitat, increase of impervious surface (which prevents groundwater recharging), and induced demand of driving are some examples of the results of paving. The last example, induced demand of driving, is an emerging topic in transportation literature. This concept is not too unlike the business adage that supply creates its own demand. The more supply (parking) there is, the more the demand (driving) will grow. A growing realization from around the world is that adding travel lanes and parking spaces is not a long-term solution to congestion. What needs to be figured out for GTSR is an appropriate level of supply for parking.

Darlene, Rick, Penny, and John reflect on this challenge by implying that more parking/turnouts would be 'nice'. Penny takes on an attitude of first come, first serve. Rick would like to be able to pass people and both John and Jim realize that space in the park is limited. As pointed out in the aspect section *nature of experience*, Davis talks about people walking along the road creating a situation 'which seemed to be very unsafe.'

> Darlene (p): Well, right in here if I had more parking space.
>
> Rick (d): Well, I think they should have more pullouts for people that are going slow.
>
> Penny (p): I guess, just to be able to park at some of the places we wanted to take pictures. But that's just a part of the experience, you know, first come, first serve…
>
> John (p): More turnouts would be nice, almost impossible to do.
>
> Jim (s): I mean again personally, the more wheelchair accessible things are, the better it would be. But, you know, you can't do it every place, there's simply not ground space even available so...they've done a lot already.
>
> Davis (d): There were also people I noticed this time up, there were people who would just stop their cars and they were walking on the road, which seemed to be very unsafe.

As a mitigating measure for parking, it is recommended that GNP consider the implementation of a carrying capacity system to limit the numbers of cars needing parking spaces, continue to develop and promote shuttle services, promote and allow for non-motorized travel, network on a regional basis to develop bus and train systems, and explain to visitors that parking is limited and is on a first come, first serve basis. GNP could also explore the use of permeable parking surfaces that allow water to percolate through. Another strategy would be to follow the lead of other national parks such as

Yosemite and Zion and establish partnerships with surrounding communities to provide gateway parking facilities that connect with shuttle services.

EMI #8: Road Surface Features

The last emergent managerial issue, road surface features, considers two issues brought up by cyclists that may pose a hazard. Mark talks about the first one, the steel gratings across the road, as being 'treacherous.' Peter talks about the second hazard, the gap in one style of drainage grate, as being a 'real tire grabber.'

> Mark (c): We came all the way up and the only thing that was bad was every time you hit one of those steel gratings that goes across the road, they're real slippery and your tires slide all over the place. So, it would be real dangerous to go down. So, luckily, the family came up and they met us up here actually we planned to do that so we got a ride back down. I don't think you could ride down it very safely. (If it was wet?) When it's wet, yeah. The grating steel is really slippery and your tires just slide on it. Treacherous.
>
> Peter (c):....there is one hazard along the way. I don't know if this is the time to talk about that. There's three different grates. Most of the grates have a grid pattern on them and that's not a problem for the bicycle; but there's three different sets of grates as you come up that when you're riding along, they've got a gap of maybe an inch and a half and they're going with you and the hole is maybe a foot long. That's a real tire grabber. They don't come very far out into the lane but if you're trying to stay far right to avoid the cars, that could really grab a wheel pretty easy. I don't know if anybody's ever done that before or not, but it seems like that could be something that would be a little bit of a hazard that would be pretty easy to fix.

As a mitigating measure for road surface features, it is recommended that GNP find an engineering fix for the steel grating so bike tires do not slip, and turn the drainage grates 90 degrees so bike tires cannot get caught (or install a different style grate).

Summary of Emergent Managerial Issues

Bicycle Time Restrictions, Bicycle/Car Interactions, Congestion, Information, Road Width, Shuttle Services, Parking, and Road Surface Features have been identified

as eight emergent managerial issues that seem to have played a large role in the forty visitor experiences on GTSR analyzed for this study. These issues may have significant implications for management choices, both present and future, in the park. These issues are both distinct, specific components of the traveling experience, worthy of individual discussion, and also related pieces to a particularly large transportation puzzle known as 'travel on Going-to-the-Sun Road.' This dynamic of the relatedness between small, specific fixes and the 'big picture' is reflected in several of the issues having similar, if not identical, mitigation measures recommended in order to improve the GTSR experience.

It would not be appropriate to 'boil down' the mitigation measures to one laundry list of recommendations. The reason is that it is crucial to keep the different, appropriate perspectives for each one of the managerial issues. For example, in addressing the mitigation measure, *improve shuttle services*, for the EMI Congestion, it is important to keep a perspective, or focus, on <u>increasing the number of people</u> who choose to take the shuttle. This is different from the perspective of improving shuttle services for the intrinsic value of <u>improving experience for existing users</u> of the system. In other words, improving the shuttle system to attract more riders is different from improving the shuttle system to enhance existing experience and therefore results in different management approaches.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

This study focused on three main areas of inquiry concerning visitors' experiences on Going-to-the-Sun Road (GTSR). First, the general nature of the overall experience was examined. Second, the effects of mode choice on experience were looked at. Lastly, this study offered ways to improve the GTSR experience. This chapter provides a concluding summary for each of these three areas of research, a discussion of implications for management, and suggestions for future study.

Experiences on GTSR

An examination of the range of experiences on GTSR, through the process of performing and analyzing forty in-depth interviews, reveals that visitors perceive to be tantalized by the scenery and panoramic views, rejuvenated by the mountains and wildlife, and inspired by the knowledge that such a place as Glacier National Park exists. For the most part, expectations are being met and everyone is satisfied with their GTSR experience. These positive attributes of the traveling experience relate to both the process of moving along the road corridor (a *movement* experience), and also the product of arriving at individual stopping points and taking in the surroundings within the road corridor (a *nature* experience).

However, the movement experience seems to be affecting the nature experience. In other words, what is happening on the road seems to be adversely affecting the part of the visitor experience that aims to take in the natural surroundings. Al's description of his driving experience as somewhat 'nerve-wracking' and Peter talking about waving

traffic around his slow-moving bicycle while peddling up the steep climb to Logan Pass are examples of the road as a facilitator of movement interfering with the road as a facilitator for experiencing nature.

It is hard to imagine anyone not having an overall positive experience in the heart of a premier national park wild land setting while traveling on a rolled out red carpet that extends to the continental divide, especially on a picture perfect Montana summer day in early August. Indeed, the nature of humans is to want a positive experience, perhaps even blocking out that which might interfere with the heart's desires. For these reasons, it may be all the more telling when problems do arise and are expressed.

This study has found that traffic, in the form of congestion, is perceived by travelers on GTSR to be a detractor from positive experience. This may not be a startling discovery. But it does document, in a scientific manner, what has until now been expressed in mostly anecdotal terms.

The greater discovery of this study may be two fold. The first might be in the subtle hinting of respondents about types of experiences to come. The language used by respondents in the forty interviews suggests that traffic levels, today, are tolerable. But this same language also suggests that traffic levels, tomorrow, might be a significant detractor from positive experience on GTSR. Examples of this language include, 'as it's more crowded, it gets a little hairier,' 'takes away from the scenery and beauty of the park when you see so many cars going up and down all over the place,' and 'certainly the more traffic there is, the less pleasurable.'

The second discovery of this study might be found in the myriad of details about the traveling experience expressed throughout the analysis and discussion in chapter four.

Examples include Mark saying he would not feel completely safe biking down from Logan Pass because of the 'slippery steel grates,' Penny, with her 'first come, first serve' attitude, conveying that full pullouts did not bother her, Nolan saying that having a Blackfeet Indian drive the shuttle was a draw and Jim, confined to a wheelchair, being OK with not having every pullout handicap accessible as long as some were accessible.

Effect of Mode Choice

From the results of this study, three distinct experiences seem to be prevalent on GTSR: the driving experience, the passenger/shuttle riding experience, and the cycling experience. Each of these experiences is unique, results in diverse needs and desires, and requires different management approaches. By interviewing ten people in four different categories of travelers, special characteristics were able to emerge.

The most telling differences between drivers and other types of travelers included the expression of non-importance of mode choice (and thus a willingness to use a shuttle system if an exceptional one were available) and also the way utilizing their mode of transportation interfered with enjoying the scenery. The most important difference between cyclists and the other travelers seemed to be the immense desire to be on a bike and engage the senses. Passengers and shuttle riders seemed fairly similar in types of experiences being felt on the road. Both were free to take in the surroundings of the park while leaving the driving to someone else. A subtle difference between the two might be that the shuttle riders seemed to be more sensitive to external (or upfront) factors such as the price of the ride, the place of departure, and the reliability of obtaining a ride, while the passengers of cars seemed to be more sensitive to internal (or on-going) factors such

as helping the driver navigate and helping the driver interpret the nature part of the experience.

Implications for Management

By building on the current experiences of travelers on GTSR, with consideration for the differences mode choice makes, a series of recommendations can be made. A summary of the eight emergent managerial issues (EMI) from this study, with corresponding mitigation measures listed below each EMI, provides a basis for future decision-making and issue identification in improving the GTSR traveling experience (a flow chart showing one possible relationship between all eight emergent managerial issues and two specific mitigating measures- implementation of a carrying capacity system and initiation of a car-free or motorized-free day- can be found in Appendix C).

EMI #1: Bicycle Time Restriction

* Encourage, instead of force, early bicycling on GTSR
* Implement a carrying capacity system and improve shuttle systems to reduce congestion

EMI #2: Bicycle/Car Interactions

* Develop improved strategies to disseminate awareness information (such as 'rules of the road') to all entering drivers and cyclists
* Increase <u>effective</u> road width
* Implement at least one car-free or motorized-free day per year on GTSR

EMI #3: Congestion

* Develop a carrying capacity system to determine the maximum number of vehicles GTSR should handle
* Expand and promote the shuttle system
* Promote and allow for non-motorized travel
* Network on a regional basis to promote and build bus and train systems so people can get to GNP without a car

EMI #4: Information

* Consider a 'sense of place' sign system with comprehensive cycling and driving information at pullouts (without being intrusive)
* Replace 'Bike Restriction' signs with 'Share the Road' signs
* Work with business interests to market multi-modal travel options of GNP, as the different options grow and develop

EMI #5: Road Width

* Perform regular sweeping of GTSR up to the edges (thus increasing *effective* road width)
* Perform regular repair of any broken asphalt or concrete, especially at the edges
* Continually evaluate vehicle width restrictions
* Keep vehicle speeds as low as possible

EMI #6: Shuttle Services

* Continue with plans to bring back the red jammers
* Address issues such as cost, frequency, reliability (i.e. reservations), and marketing of shuttle systems

EMI #7: Parking

* Implement a carrying capacity system to limit the numbers of cars needing parking spaces
* Continue to develop and promote shuttle services
* Explain to visitors that parking is limited and is 'first come, first serve'

EMI #8: Road Surface Features

* Find a fix for the 'slippery when wet' steel gratings so bike tires do not slip
* Turn drainage grates 90 degrees so bike tires cannot get caught

It is recommended that GNP evaluate the desirability and feasibility of implementing the above mitigating measures for improving traveling experiences on GTSR. These mitigating measures are intended to compliment any efforts for improving experience that are already underway.

In addition to consideration of the above listed mitigation measures, it is suggested that the following four *framework scenarios* be examined for additional guidance. These scenarios, in combination with addressing the mitigation measures, are an attempt to take the GTSR stories that have been relayed by the forty interviewed travelers and build a foundation for *improved* stories that have yet to be told. While most of the mitigating measures suggested in this study relate to the details and inner workings of GTSR (primarily technical), the following framework scenarios are intended to be more like long-range planning tools, or flexible 'green prints' for development in the big picture sense.

Scenario #1: Implement A Carrying Capacity System

Although this framework scenario is listed as a specific mitigating measure under several emergent managerial issues, the magnitude, complexity and potential benefits of implementing actions that revolve around the concepts of carrying capacity warrant a deeper discussion. Carrying capacity means limiting the number of cars in Glacier National Park. This might ensure the preservation of positive experiences being felt on GTSR. Understanding carrying capacity means understanding that park resources are not unlimited and that there are natural limits/thresholds to growth. There are several reasons that point toward the establishment of carrying capacity policies in GNP.

Traffic is perceived to take away from the driving and cycling experience. If these experiences are to be preserved or maintained, measures need to be examined that will not allow traffic (i.e. congestion) to overrun the experience. Limiting the numbers of cars in the park is one possible solution.

Another reason for implementing a carrying capacity system is that parking space is limited throughout the park. As noted at the end of each interview on tape, the Logan Pass parking lot was full for three straight days (the complete time frame of sampling). A carrying capacity system would alleviate the need to build more parking in the fragile continental divide ecosystem at Logan Pass.

A challenge that exists in implementing a carrying capacity system is providing parking spaces for the cars that cannot get into the park. Spaces may or may not be available at park entrances in existing lots. Following the Yosemite, Acadia and Zion models, gateway parking lots might be an option. This speaks to the need of regional and even national transportation cooperation. The more people who can arrive to GNP without their car the fewer problems there will be with congestion. For instance, flying into Glacier International Airport in Kalispell, Montana (about 30 miles from the park) should not mean automatically renting a car. Similarly, visitors from cities like Missoula need transportation alternatives to move throughout the region. A seamless, sustainable transportation system would be one appropriate vision.

An exceptional shuttle system would need to compliment any kind of carrying capacity system. GNP's initiative to restore and operate the red jammers seems to be a wonderful step in the right direction. Although one consideration might be a mandatory shuttle system, following in the footsteps of Denali National Park and Zion National Park, the same (or close to the same) results might be accomplished by having a goal to build a shuttle system so flexible, reliable, and affordable that everyone <u>wants</u> to take it. The system might pay for itself just by reducing the number of accidents that would normally occur by letting traffic increase on its own accord.

The 1990 Transportation Plan for Glacier National Park (National Park Service, 1990) further addresses the issue of carrying capacity by providing some of the logistics:

> In addition to vehicle length restrictions, as traffic increases the number of vehicles driving over Logan Pass will be limited between 10 a.m. and 4:00 p.m. on high use summer days; if congested conditions continue, use will be limited throughout the summer. The park staff will monitor traffic for breakdowns (stop-an-go traffic with unacceptable delays, increased adverse effects on natural resources from overuse, and serious increases in accident rates on the pass). When traffic breakdowns occur on a regular basis, the volume of traffic in both directions will be noted. When the hourly volume approaches the breakdown value (level of service F), the staff at Logan Pass will notify park personnel at two checkpoints to initiate a traffic-volume control process. The checkpoints will be at Lake McDonald Lodge on the west and Rising Sun on the east. As one vehicle leaves the Lake McDonald checkpoint traveling west, an eastbound vehicle will be permitted to enter from Lake McDonald toward the pass; similarly, as one vehicle leaves the Rising Sun checkpoint traveling east, a west bound vehicle will be permitted to enter toward the pass. This traffic metering method will allow one vehicle per designated period to enter the pass (for example, one vehicle per 10 seconds from each checkpoint). Metering can be done by a staff person at each site. Traffic metering will be initiated when breakdown volumes are approached, based on the capacity of the roadway west of Logan Pass where the worst congestion occurs. The highest peak hour volume recorded to date along this road section had been 460 vehicles per hour, with the roadway operating at level of service E. It is estimated that the capacity of this section (level of service F) is 685 vehicles per hour. When hourly volumes reach 550 to 600 vehicles per hour, the vehicle length restrictions should be operational. If hourly volumes continue to increase, the number of vehicles driving over Logan Pass should be limited though traffic metering. A traffic management plan will be prepared to detail these traffic management methods and times for implementation (p.72).

It is beyond the scope of this thesis to analyze the detailed traffic management plan referenced at the end of the above passage. Yet, it is assumed that this information is available and could play a role in the future of GTSR.

It is therefore recommended that GNP consider, if they are not already doing so, implementing a carrying capacity system for GTSR, as suggested in the 1990 Transportation Plan. A comprehensive carrying capacity system would quite possibly enrich everyone's experience.

Scenario #2: A Car-Free GTSR

Another option for a future transportation system on GTSR in Glacier National Park would be a system based on shuttles and bicycles, with no private automobiles allowed. It is possible that this scenario would best meet the park mandate of allowing for positive visitor experience while protecting cultural and natural resources.

Of the ten drivers interviewed for this study, most said it was not important to drive on GTSR. Instead of focusing on the drivers that said it was 'not important', it may be more useful to analyze the responses of the four drivers who said, in one form or another, that it was 'important' to drive on GTSR.

> David: I would much prefer to drive. Cause then I have control of where we go and when we stop and so forth.
>
> Neil: I′d say, important because I like to take my time, pull-off, prefer not to be with a guided tour buses, you′re always on the move. This gives us time to linger and take our time.
>
> Song: How important? You mean, without a car? I don′t think I come up.
>
> Rick: Well, that′s a hard one to answer. I think it′s good because I can get from point A to point B fairly quickly normally; but I can see drawbacks involving the traffic problems occur at times.

It is interesting to note that the reasons these drivers site for driving importance relate not necessarily to the act of driving, but more to the external benefits of driving (it is not known why Song thinks he would not 'come up'- he was from a different country and communication was difficult). In other words, no one said they liked having their hands on the steering wheel, pushing their own gas peddle, staring at their own style of windshield, paying for their own gas, etc. Instead, it seems to be more about the flexibility of stopping, the camaraderie of being with family or friends, or being able to

keep moving through the park. An excellent shuttle system can provide all of these same benefits except one: a shuttle system does not allow a visitor to continue on with his or her journey to the other side of the park. The only way a visitor could continue on would be to have their car waiting for them at the other side. This might be possible in the form of a train carrying cars or hired drivers bringing the car along highway 2 to meet the owner on the other side (Eisner, 1973, also makes these suggestions). Barring these possibilities, under a car-free GTSR transportation system, a driver of a private automobile arriving at GNP (and any riders) would have to return to his or her vehicle at the point of shuttle departure. This situation would result in the following shuttle routing scenarios: going to Logan Pass and then turning around and heading back to the same entrance/side of the park, going all the way over Logan Pass and then turning around and heading back over Logan Pass, or going all the way over Logan Pass and then returning to the shuttle departure point via Highway 2. Each of these three scenarios involves some sort of 'doubling back.' In other words, visitors would have to experience either GTSR twice, or Highway 2 twice. It could be argued that it would be less stressful to drive one of these segments on the second crossing since the scenery will already have been experienced. The important issue might be more about the willingness of the visitor to spend more time in traveling, rather than making the logistics of a car-free situation feasible. The results of this study convey that there might be a strong overall willingness to spend more time in traveling the area, if it could mean a more positive traveling experience on GTSR. One scenario that would not involve any doubling back would be a group arriving to the park, taking a shuttle over Logan Pass, looping back along Highway 2 to the beginning shuttle departure point and then heading back in the direction from

which they originally came. A review of travel patterns in appendix B sheds more light on this situation.

Another issue with a car-free GTSR transportation system would be the increased loading on Highway 2. This would have to be analyzed more carefully. It is very possible that Highway 2 could easily handle the increased traffic load for many years to come.

Initial negative reaction by a minority of drivers might be another issue to address with a car-free GTSR. This is a complex issue. The park has said that they want to provide experience for everyone. It could be argued that everyone would still be allowed to experience GTSR, albeit in a different way. From the results of this study, it is likely that all the benefits of moving along GTSR could still be retained in a shuttle/bicycle only scenario. Studying the experiences of both Denali and Zion National Park may prove beneficial in learning how to implement a car-free system. These two parks seem to have been successful in their car-free operations.

Scenario #3: One-way Motorized Traffic

One scenario for the future of GTSR is likely to happen on its own accord: a one-way routing for motorized traffic. This may result from the approaching onset of major construction projects for needed repair to GTSR. Instead of being seen as a hindrance, park officials, businesses, and visitors may want to embrace this change as an opportunity. While the major construction will prevent a 'true read' of the situation, none-the-less the logistical challenges of creating a one-way motorized routing scenario may be solved. By sending motorized vehicles in only one direction along GTSR in order to perform roadwork on the unused side, a different interpretation of a 'share the

road' philosophy may emerge. In other words, sometime in the future, cars, motorcycles, and shuttles could utilize one side of GTSR while bicycles, walkers, hikers, runners, in-line skaters, rickshaws (a peddle powered taxi), and wheelchairs could utilize the other side of GTSR.

Since most of the pullouts are on the 'cliff' side, that might be the logical side for motorized vehicles. The 'next-to-the-mountain' side could then be a bi-directional, non-motorized 'pathway' (possibly including small, slow, quiet, and non-polluting alternatively-fueled vehicles such as electric wheelchairs, electric bikes, and segways). There would probably be no need for a physical barrier down the middle of the road, as the double yellow line would just as well suffice to keep uses segregated. As a subtle reminder to non-motorized users that their side is a 2-way pathway, every thirty feet or so there could be a small white dot in the middle of their side. One hitch with this arrangement is that it is quite possible that cyclists, hikers, etc. might have a strong desire to be on the cliff side of the road. A reason might be that since non-motorize users are able to engage the senses in the surroundings better than motorized users, they might be able to feel the open spaces of the park better on the cliff side more so than if 'trapped' between motor vehicles and the side of a steep slope. This issue needs more dialogue.

Scenario #4: A Combined Approach

The first three scenarios could be joined in any number of combinations to form a flexible, comprehensive plan for the future transportation system of GTSR in Glacier National Park. To address increasing congestion, a carrying capacity system could be implemented. To address the conflicts between non-motorized and motorized vehicles, several car-free or motor-free days per season could be implemented and/or a one-way

motor vehicle loop could be initiated. Through consistent and detailed monitoring, an ideal transportation system that protects and preserves the GTSR traveling experience would likely evolve.

Overall, today's GTSR experience seems to be 'good.' This study shows some proactive ways to continue and/or improve this good experience.

Suggestions For Further Study

To build on the insights gained from this study, it would be helpful to interview travelers after they had come down from Logan Pass, instead of having just arrived at the top. It is likely that new insights into the traveling experience would be gained. A meaning unit expressed by Steve, a cyclist, highlights this possible need. In response to one of the questions he says, "talk to me when I get down, I′ ll be able to tell you."

Another study that might prove beneficial for GNP management would be an examination of bicycle/car interactions on roads that have widths similar to GTSR. A case study could be undertaken that finds roads of similar width, traffic volume, and setting and then looks at corresponding management. High mountain roads in other American National Parks, as well as in the international arena, may provide insight into resolving conflict and enhancing experience.

To explore one of the specific mitigating measures outlined in this study, a pilot project could be undertaken that designates one or more motorized-free days in 2003 or 2004. Sufficient time would be needed to properly market the day throughout the world as a cycling and walking 'Mecca.' GTSR was already named America's top bicycle touring road by a prominent cycling magazine almost a decade ago. A 'day for feet' would allow Glacier National Park to build on this image and offer a unique experience

to the walking and cycling public. A motorized-free day differs from a car-free day in that shuttles would not be allowed. This is an important concept that needs further investigation. The premise is that even one motorized vehicle can drastically change a walking or cycling experience when compared to a completely motorized-free scenario. To experience GTSR knowing that there would be no fumes, noise, intrusion, or danger from any kind of motorized vehicle would be an amazing occurrence. The integrity of this feeling would be lost with on-going shuttles. For this kind of event to be successful, the involvement of local businesses from the beginning would be key.

Other suggestions for future research include repeating the interviews and analysis performed for this study on an on-going basis in GNP, perhaps yearly, to provide benchmarks, feedback, and goals for improvements to GTSR. Another suggestion would be to follow the lead of some of the other studies on experience, cited in chapter two, and seek to understand the GTSR experience as it unfolds. It would also be interesting to undertake studies of this nature in other national parks, both in America and abroad.

Finally, this type of study may be beneficial for urban settings. Interviewing everyday users of transportation systems in cities throughout the United States may bring to light methods to accelerate the task of creating local and regional transportation systems that are safe, affordable, fair, and environmentally sound. Indeed, many of the findings and ideas in this thesis, from improving information to expanding transit to resolving conflicts between bicycles and cars, point towards the need for networking and cooperation on <u>all</u> jurisdictional levels to retain or create the best possible traveling experience.

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APPENDIX A: Interview Guide

Date/ time/ weather/ traffic conditions

1) Did you drive, ride in a car, take a shuttle, or bike to Logan Pass?
2) Did you come from the East or West and why?
3) Which way are you heading down?

4) Why did you come to Glacier National Park?

5) Can you tell me about your experience on the GTSR?

6) What did you see?
7) What didn't you see that you had expected to see?
8) How has your GTSR experience met or not met your expectations?

9) How important is it for you to drive/ ride/ bus/ bike GTSR?
10) How did different traffic conditions on this road affect your experience?

11) How familiar are you with GTSR?
12) Have you been on the road before?
13) What mode?

14) Can you tell me about any favorite segments?

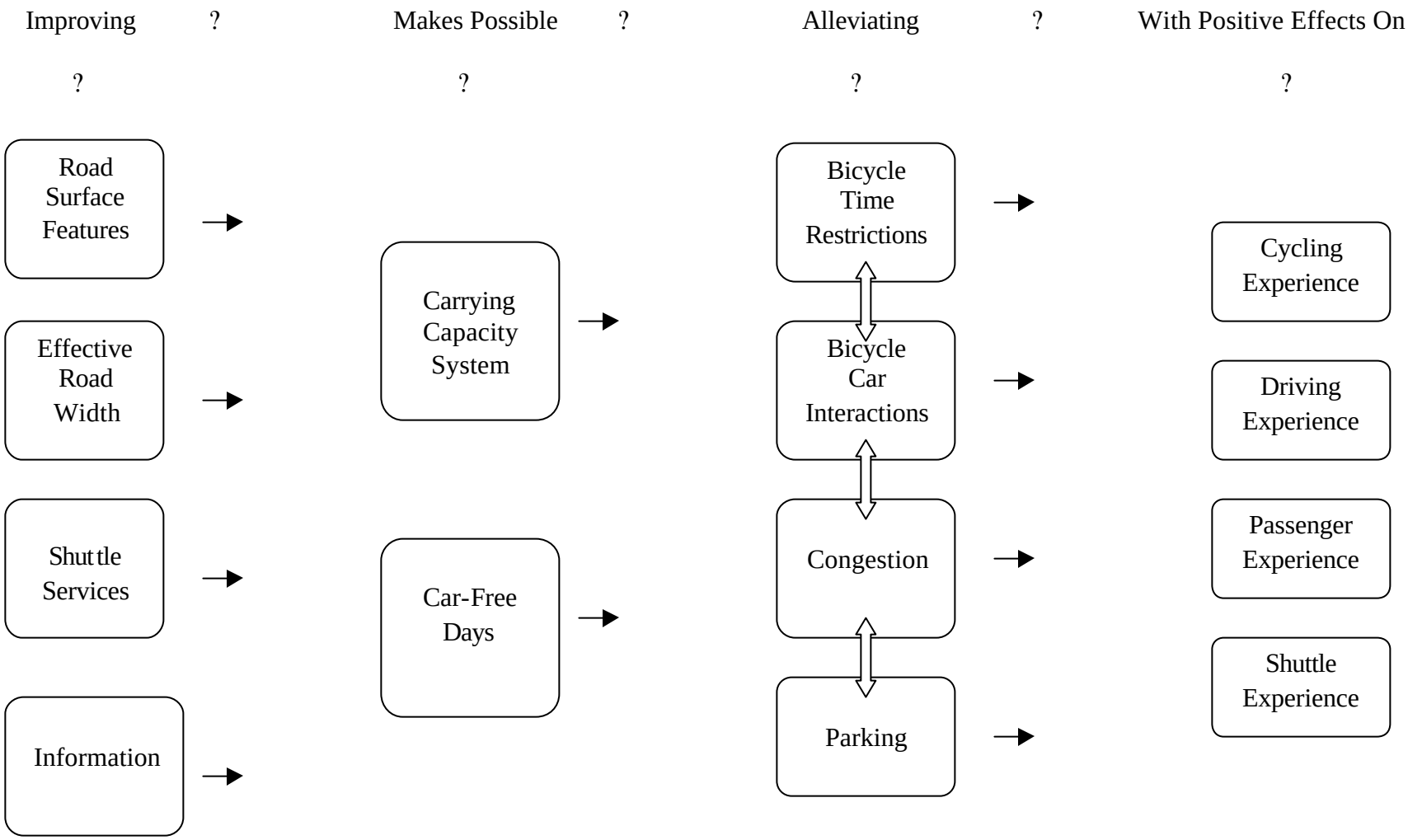
15) Please describe the behaviors of other people along the road?
16) How did their behaviors affect your experience?

17) If your friends were coming to GNP, what would you tell them about GTSR?

18) Describe the social atmosphere among your traveling companions while on GTSR?

19) What would improve your experience on GTSR?

APPENDIX B: Demographic Data

Interview #	Primary Respondent	Approximate Age	Travel Mode	Travel Pattern
1	Jason	44	Driver	East to East
2	Davis	34	Driver	West to West
3	Joanne	57	Passenger	West to East
4	Cynthia	54	Shuttle Rider	East to East
5	Steve	40	Cyclist	East to East
6	Fred	88	Passenger	West to West
7	Penny	44	Passenger	West to East
8	Ashley	42	Passenger	East to West
9	Francis	50	Passenger	East to West
10	Jack	57	Passenger	East to West
11	David	40	Driver	West to West
12	Tim	44	Shuttle Rider	East to East
13	Fritz	48	Driver	West to West
14	Jared	31	Cyclist	West to East
15	Mark	47	Cyclist	West to West
16	Stuart	17	Cyclist	West to West
17	Amory	57	Cyclist	West to West
18	Daniel	28	Cyclist	East to West
19	Stan	32	Cyclist	West to East
20	Tommy	57	Cyclist	East to West
21	Adele	70	Passenger	West to East
22	Walt	75	Driver	West to East
23	Brian	46	Shuttle Rider	West to West
24	Paul	42	Shuttle Rider	East to East
25	Neil	67	Driver	East to East
26	Rick	40	Driver	East to East
27	Ella	74	Driver	West to East
28	Will	17	Passenger	East to West
29	Song	42	Driver	West to East
30	Darlene	84	Passenger	East to East
31	Linda	76	Shuttle Rider	East to East
32	Larry	69	Shuttle Rider	East to East
33	Nolan	31	Shuttle Rider	East to East
34	Troy	82	Shuttle Rider	East to East
35	Jenny	16	Passenger	East to West
36	Peter	37	Cyclist	West to East
37	Matt	35	Cyclist	West to East
38	Al	54	Driver	East to East
39	Susan	53	Shuttle Rider	East to East
40	Jim	50	Shuttle Rider	West to West

APPENDIX C: Flow Chart of Emergent Managerial Issues