

FOREIGN VISITORS AT GRAND CANYON
NATIONAL PARK: A PRELIMINARY STUDY

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INTRODUCTION

This report describes a preliminary study of foreign visitors to Grand Canyon National Park (GCNP). The study was conducted during the summer of 1981, in an effort to gain an understanding of this growing and important visitor public.

The report is divided into several sections. A Problem Statement overviews current trends in international tourism, particularly to the United States and its national parks. A brief Literature Review describes what is known about tourism and foreign visitors to American parks. Some of this material may be applicable to GCNP. A Theoretical Framework is then developed, out of which come the specific research objectives of the study.

Next, the Research Methodology is briefly explained; time-budget analysis, participant observation and a questionnaire were all used. The Results are presented in both tables and narrative. Finally, a set of general Recommendations are made: to the NPS, the concessionaires, and for future research. Several appendices provide details on the statistical tests, copies of the data collection forms, and the references cited.

This is a preliminary study, and its purpose was to learn about foreign visitors to the Grand Canyon. As a preliminary study, there are several limitations. The work focused on organized tour groups and specific locations within GCNP. Hence, it does not deal in detail with foreign visitors who independently visit the Park, nor does it provide a count or description of all foreign visitors to the Grand Canyon.

The study was conducted during the summer of 1981, and it is possible that foreign visitation during other seasons might be quite different. Tourism is a dynamic industry, and trends will undoubtedly change in future years.

Finally, several of the research techniques were relatively complex (the time-budget data collection, the five-language questionnaire); their specific limitations are discussed in the methodology section.

Acknowledgement

The National Park Service employees at GCNP and the staff of Fred Harvey Company were extremely helpful in the conduct of this study, particularly Ken Harrison of the National Park Service and Jan Cutler of the Fred Harvey Company. We greatly appreciate their assistance.

PROBLEM STATEMENT:

INTERNATIONAL TOURISM AND THE NATIONAL PARKS

International tourism is a major world industry. In 1979, an estimated 180 billion dollars was spent worldwide, almost half the estimated 400 billion spent on military defense that year. Between 1968 and 1978, the number of tourist arrivals worldwide doubled, from 140 million to 280 million per year (Waters 1979).

The United States has increasingly become a destination for some of these international travelers. In 1980, the U.S. received 21.5 million visitors; more than the number of Americans who traveled overseas (Koza 1980). Among the reasons for this trend are: 1) a decline in the value of the U.S. dollar, 2) America's relatively mild inflation rate, 3) lower air fares, and 4) an increasing marketing effort by the U.S. lodging industry (Burden 1978). We now find ourselves hosts to people from other lands.

Table 1 lists the major countries contributing to U.S. foreign visitation. Canada and Mexico are the most common origins, while the Japanese and British are the most common overseas visitors. The table also shows the dynamic nature of foreign visitation; while the number of Canadian tourists varied little from 1978 to 1980, other nationalities had large fluctuations. The number of Venezuelans visiting the U.S. grew 46% in 1978, 28% in 1979 and 35% in 1980 (in part due to that country's increased oil wealth). Hence, the mix of foreign visitors to the U.S. is difficult to forecast with great accuracy.

Table 2 shows that these visitors do not distribute themselves evenly throughout the United States -- for reasons of interest, knowledge, cost, or time, certain nationalities visit different regions. Seventy-two percent

Table 1. Arrivals to the USA, 1978-1980.

Country	1978		1979		1980	
	Number	% Chg.	Number	% Chg.	Number	% Chg.
Canada	11,938,839	- 1	11,840,000	- 1	12,000,000	+ 1
Mexico	2,142,420	+ 6	2,480,000	+16	2,900,000	+17
Japan	886,447	+18	1,000,000	+14	1,150,000	+15
United Kingdom	757,127	+42	1,000,000	+32	1,250,000	+25
Germany	485,784	+32	575,000	+19	675,000	+17
France	259,818	+21	310,000	+19	350,000	+13
Venezuela	303,948	+46	390,000	+28	525,000	+35
Australia	179,496	+16	220,000	+22	270,000	+23
Italy	153,002	+25	175,000	+14	200,000	+14
Netherlands	141,021	+36	170,000	+21	210,000	+24
Switzerland	122,178	+37	150,000	+23	185,000	+23
Sweden	98,518	+30	115,000	+17	135,000	+17
New Zealand	83,479	+27	100,000	+20	120,000	+20
Spain	67,825	+15	75,000	+11	85,000	+13
Belgium	61,492	+36	75,000	+22	90,000	+20
Sub-Total (15 countries)	17,678,394	+ 5	18,675,000	+ 6	20,145,000	+ 8
GRAND TOTAL (all countries)	19,842,182	+ 7	20,983,000	+ 6	22,635,000	+ 8

Source: USDC, 1980.

Table 2. Regional Destinations of Selected Tourist Markets, 1976.

U.S. Regional Destination ^a	Japanese % ^b	Mexican %	British %	W. German %	French %	Italian %	Dutch %	Australian %
New England	3	3	20	11	18	18	11	13
Eastern Gateway	15	10	50	53	65	80	41	36
George Washington Country	5	3	27	19	24	34	20	28
The South	5	12	18	22	29	19	18	22
Far West	36	43	34	40	38	37	45	83
Great Lakes Country	6	6	20	18	17	18	30	22
Mountain West	2	2	6	12	7	15	15	16
Frontier West	6	37	13	21	22	20	19	31
The Islands	72	6	2	5	3	2	3	47

Source: USDC, 1978.

^aThese regions are designated by the USDC Travel Service as tourist regions, and often encompass several states and federal administrative regions.

^bSince tourists often visit more than one region, the totals do not equal 100%.

of all 1976 Japanese visitors went to the Islands, while only 3% visited New England. The Frontier West (which includes Grand Canyon) drew 6% of the Japanese, 37% of the Mexican, and 31% of the Australian visitors. Each region of the country hosts a unique combination of foreign tourists.

Much less is known about foreign visitation to U.S. National Parks than about foreign visitation to the United States in general. Few reliable statistics exist, though a variety of authors note the increasing number of foreign park visitors. Grand Canyon National Park is a frequently mentioned destination. Goldberg (1980) describes a foreign tourist "circuit" that starts at Los Angeles, and includes Las Vegas and the Grand Canyon. GCNP is a "staple" on this circuit, especially for Japanese and Australian visitors. Steve Tedder of TWA Services estimates 30% of the summer visitors to Bryce, Zion and Grand Canyon National Parks are foreign (Tibbits 1980). O'Reilley (1979) adds that the Grand Canyon is on a list of U.S. attractions which "the French insist on seeing," and estimates that 20% of the Canyon's visitors are foreign. Beyond such estimates, little factual data is available.

Even though the Park Service is aware of the substantial visitation by foreign tourists, there is little descriptive data on the extent of such trends, or their impacts upon park management, visitor services and local populations. Hence, this report is an exploratory effort at dealing with an increasingly important issue for the National Park Service, and Grand Canyon National Park in particular.

LITERATURE REVIEW

Sociological material dealing with international tourism is relatively sparse, considering the importance of tourism as an industry, as a recreational activity, and as a cultural phenomenon. The rise of "mass tourism" (tourists traveling in large numbers to the same locale) has created a need to understand the impacts of tourism upon the tourist, the local population, and the environment.

One of the first sociological discussions dealing with tourism is by Forster (1964). Forster suggests that tourism is a powerful economic force, one that can significantly affect host societies. To him, "commercialization" has a broad meaning and influence.

One major effect of tourism is commercialization. The term has no precise definition, but its reference is clearly to taking money for something which under other conditions, would be given willingly. The moral nexus becomes a cash nexus as services, for handling baggage or giving information, become transformed from a normal exchange of courtesies... to a financial transaction.

(1964:220)

Case studies have supported Forster's argument, including studies of Kotzebue, Alaska (Smith 1977), rural Vermont (Jordan 1981), and Third World nations (deKadt 1979). Few communities near national parks have been examined.

Several studies have been made of tourism as a social activity. Sutton (1967) focused upon the social interaction inherent in tourism. He states:

...tourism may be seen to consist of a series of "encounters" in which one or more visitors, or outsiders, interact with one or more hosts, or insiders, in a network of supplementary goals and sets of expectations.

(1967:220)

Following Sutton, Smith (1977) suggests that the key variable in understanding the impact of tourism is the relationship between "hosts" and "guests." Anthropologists (Nash 1977; Urbanowicz 1977; Smith 1977) have described this relation in instances where modern tourists encounter more "primitive" peoples. These studies have found tourism to be a cause of significant social change.

A major effort has been made to develop typologies of tourism and tourists. Cohen (1972), stressing that tourism includes a continuum of familiar and novel experiences, defines tourist types according to their place along this continuum. Smith (1977) lists seven tourist types: explorer, elite, off-beat, unusual, incipient mass, mass and charter. While perhaps useful, these typologies have not been systematically tested.

Several efforts have been made to understand tourism in the context of modern society: tourism is treated as a product of modern cultures, and the tourist is seen as a metaphor for modern man. Most notable is MacCannell's (1976) The Tourist: A New Theory of the Leisure Class, which presents a model for studying tourist behavior.

The key relation in tourism, according to MacCannell, is between the tourist, the site (a mountain, monument, resort, etc.) and a marker which provides information about the site. His arguments have not been empirically tested. Several authors suggest that the available literature is fragmented, overabundant in case studies, and short in theory or predictive ability (deKadt 1979; Lanfant 1980).

Literature on foreign tourism and its relation to American parks is especially scarce. Several studies have examined the environmental implications of tourism development (Cohen 1978; Gunn 1972; Pigram 1981); surprisingly, national parks in industrialized countries are not significantly mentioned. Machlis (1979) reviewed much of the general literature and attempted to

outline key issues relevant to U.S. National Parks. These included 1) visitor services and host/guest relations, 2) the tourist industry's impact upon park operations, 3) the behavior of organized tour groups, and 4) the motivation of international tourists that visit U.S. National Parks.

Machlis *et al.* (1981b) summarized a range of secondary data on Japanese tourists, focusing on the importance of such information for Park Service interpretive programs. They argued that "the successful planning and conduct of interpretive programs may now require an understanding of visitor publics widely different from traditional users (1981b)."

The authors found that awareness of specific national parks is surprisingly high among Japanese international travelers, and their relative interest (the percentage of those aware of a place that are interested in visiting it) is also quite strong. Significantly, Table 3 shows that Grand Canyon generates the highest relative interest (63%).

Table 3. Awareness of and Interest in Specific Attractions, Among Japanese Travelers, 1972.

Attractions	Heard of (%)	Interested in Visiting (%)	Relative Interest ^a (%)
Niagara Falls	89	53	60
Disneyland	89	39	44
Statue of Liberty	86	28	33
Rocky Mountains	84	30	36
Cape Kennedy	80	25	31
Grand Canyon	70	44	63
New England	56	14	25
Yellowstone National Park	41	17	41
Banff National Park	20	11	55
Everglades National Park	16	5	31

Source: USDC, 1972.

^aComputed only among those aware of each attraction.

Other than these few studies, little empirical data is available on the number, kind and activities of international visitors to U.S. National Parks. Hence, this study explores a relatively unknown phenomenon.

THEORETICAL FRAMEWORK AND OBJECTIVES

National parks can be considered human ecosystems (Machlis et al. 1981a). Figure 1 illustrates that each park is a combination of biophysical environments (including plant and animal populations, ecosystem processes, structures and so forth), organizations (both formal ones like the NPS and informal ones like tour groups), and visitor populations. These interacting components — social as well as environmental — are what define parks as special places.

Machlis et al. stress the importance of considering visitors as part of each park.

Our view of the park ecosystem includes visitors. Publics vary in the content and expression of culture, i.e. they represent diverse subpopulations within the park ecosystem (Field and Wagar 1973). When visitors enter a park, they reflect certain socio-demographic characteristics such as age and family life cycle, and these factors may influence participation. Visitors depend upon a set of human institutions to help organize their recreational experiences -- transportation systems, tour operators, travel agents, clubs, associations and so forth. Finally, they rely upon key cultural elements to guide their individual action. Examples would include ethical systems, attitudes toward Nature, and norms for proper conduct.

(1981a:201)

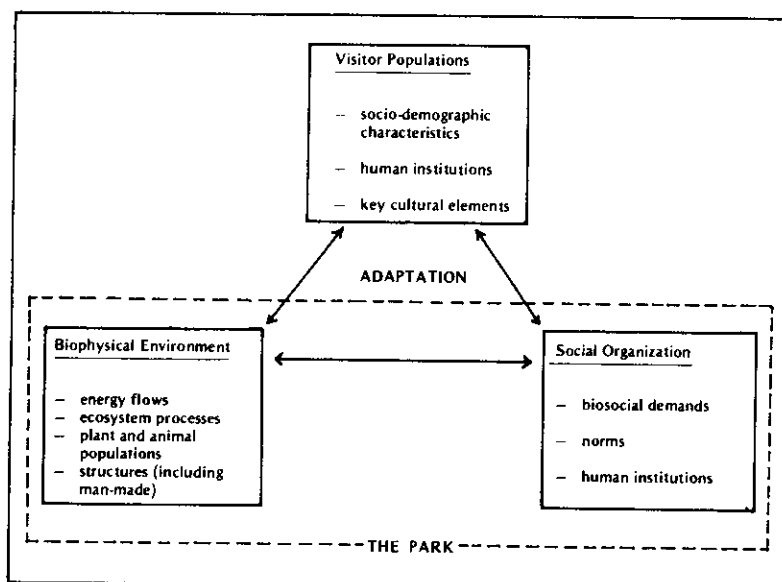


FIGURE 1. A view of the park ecosystem.

At least four variables may impact the behavior of foreign visitors to national parks. The first variable is time. Time is a crucial resource to most tourists; it is "fixed stock," and how individuals use it is an important behavioral measure (Burch et al. 1980). The organized tour group presents special time considerations, since individuals must cooperate and activities are often tightly controlled. The tourist in an organized tour group has transferred the problem of allocating his/her time to the tour organizers (Cohen 1972). How concessionaires manage tourists' time may have a great impact upon visitors' experience.

The second variable is space. Parks have a variety of spaces -- visitor centers, parking lots, hiking trails, and so forth. The distribution of visitors within parks often has distinct spatial patterns, with some visitors attracted to particular areas and in varying densities (Cheek and Burch 1976). Foreign tourists may congregate in certain areas of a park, and avoid or ignore others. This differential use of space may heavily influence park operations such as information services, interpretation and visitor protection.

The third variable is social organization. For groups of people to function and accomplish tasks, they must be organized. Informal rules, or norms, may help this process. The common courtesies of etiquette are universal examples. Formal rules, such as those that govern the military, bureaucracies and corporations, also are part of the organization process. For tour groups, both informal and formal rules may be operating: everyone may listen to the tour group leader (though they don't have to) and a regular itinerary may be closely followed.

The final variable is culture. Broadly defined, culture is the "learned repertory" of thoughts and actions of a group of individuals. Examples include technology, medicine, family structure, religious ideas, language and

so forth. Yet this definition is so wide that it is difficult to use in studying tourist behavior. Therefore, we have treated national origin (i.e. the culture that an individual was presumably socialized in) as an indicator of cultural differences.

Several authors have shown that cultural variations help shape behavior, and that people from different countries vary in their use of time (Szalai 1966; Cheek and Burch 1976; Gorman and Wessmann 1977). Others have illustrated that tourists of different nationalities may behave differently (Turner and Ash 1976; Noronha 1979). Hence, park managers need to understand the cultural differences that separate, for example, Japanese visitors to Grand Canyon, from French visitors.

These four variables — time, space, social organization and culture — seem to be key factors in determining how foreign visitors use national parks. And as illustrated in our discussion of parks as human ecosystems, how foreign visitors use national parks may have important management implications.

This preliminary study, then, had several objectives:

- 1) to learn how foreign visitors at GCNP use their time.
- 2) to learn how foreign visitors are distributed throughout GCNP.
- 3) to describe the social organization of foreign tour groups, and how such organization influences visitor experiences.
- 4) to describe the foreign visitors who participate in organized tours of GCNP.
- 5) to examine some differences between GCNP visitors of various nationalities.
- 6) to make recommendations regarding visitor services, both to the NPS and private concessionaires.
- 7) to make recommendations concerning future NPS research dealing with foreign tourists.

RESEARCH METHODOLOGY

For this preliminary study, four approaches to data collection were used:

- 1) a time-budget analysis of selected organized tour groups,
- 2) a questionnaire administered to individuals who participated in selected tour groups,
- 3) participant observation at selected locations within GCNP, and
- 4) informal interviews with concession and Park Service employees.

Each is briefly discussed below.

Time-Budget Analysis

Time-budgets tell us how much time people (or other units of analysis) allocated to certain activities during some standard time frame (Wilson 1975). Such studies have a long tradition in Eastern Europe, and in cross-cultural investigations (Burch et al. 1981).

Forty organized tour groups were sampled over the course of the summer. All were the "2-B" tours provided by the Fred Harvey Company. This was a convenience stratified sample: a sample because 40 days were randomly chosen between June 8 and August 17; stratified, because an attempt was made to choose predetermined numbers of tours from various countries; and convenient because a specific tour was purposely chosen on each sampling day to fulfill the sampling requirements.

Table 4 shows the objectives of the stratified sample, and the actual results. The reduction of the total sample and the number of French tours was a result of a slack season, the time required for data collection, and cancellation of several French tours.

Table 4. Objectives and Actual Results of Sampling Schedule, by Nationality.^a

	Japan	France	W. Germany	Switzerland	Spain	Mixed ^b	Total
Objective	20	20	← combined total 10 →				50
Actual Sample	20	7	3	1	1	8	40

^a A tour was considered Japanese or French, etc., if at least 75% of the tour members were of the same national origin, excluding concession employees and guides.

^b A mixed tour involves members of at least two nationalities, with less than 75% of the group belonging to any one nationality.

The procedure for gathering the time-budget data was the same for each tour. The same research assistant met each selected tour at the Grand Canyon Airport before the park tour began. As the tour bus left the parking lot, observations were begun, and recorded at regular five-minute intervals until the bus left the park to return to the airport. Over 1,440 observations were made during the summer.

For the observations, all group members were scanned and the activity of the majority was recorded. Hence, the observations reflect the most common behavior of each tour group, rather than a sum of each individual's behavior. Table 5 lists the activities recorded, and provides working definitions for each category. Each observation included:

- 1) the exact time of day,
- 2) the tour group's activity,
- 3) the location within GCNP,
- 4) whether the activity was initiated by the tour group (i.e. part of the official tour itinerary) or by the individual tourists,
- 5) whether the activity was "obligatory" (the tour itinerary required participation), "maintenance" (time spent in restrooms) or "free" (where the visitors were free to choose among several activities).

Table 5. Activity Categories and Definitions.

Activity	Definition
1. travel	Time spent going from points of departure to points of destination, on a moving bus
2. waiting	Time spent waiting for a specified activity (as a plane ride or interpretive talk) scheduled at a certain time
3. personal maintenance	Time spent in restrooms
4. eating and obtaining food	Time spent eating or sitting in a restaurant
5. shopping	Time spent inside gift shop, grocery store, etc., or examining purchasable items
6. viewing scenery	Time spent viewing scenery while out of bus or other conveyance and while visitor is physically outdoors
7. photography	The raising of a camera to the eye
8. visiting interpretive facility	Time spent within the confines of the museum
9. walking	Time spent traveling on foot. An example would be walking from the parked bus to the museum at Yavapai Point.
10. viewing scenery/ photography	Time spent photographing and viewing scenery simultaneously
11. other	Time spent on an activity not outlined in any of the previous activity categories.

Often additional notes (such as unusual circumstances, weather, and so forth) were recorded. Appendix I includes a copy of the data collection form.

Questionnaire

As each selected tour group left the park, a questionnaire was given to each tour member over 17 years of age. First, the tour guide introduced the research assistant. The research assistant then explained the purpose of the study (using the tour guide as a translator when necessary), and distributed the questionnaires. The questionnaires were collected as the bus arrived at the Grand Canyon Airport. Table 6 shows the response rates for each nationality; the total return (908 or 89.8%) is quite high. The "other" category had a somewhat lower response rate (78.4%). Non-response bias was not examined.

Table 6. Questionnaire Response Rates, by Tour Nationality.

Survey Response	Japanese		French		Other		Total	
	N	%	N	%	N	%	N	%
Yes	678	100	215	85.3	400	78.4	1293	89.8
No	0	0	37	14.7	110	21.6	147	10.2

The questionnaire contained eleven questions -- most required individuals to simply check appropriate categories (see Appendix I for a sample of the questionnaire). Some questions asked for basic demographic information such as nationality, age, occupation and sex. Other questions dealt with recreational activities, experience with U.S. National Parks, and so forth.

The questionnaires were prepared in five languages: Japanese, French, German, Spanish and English. Following standard practice for multi-language surveys, the questionnaire was first written in English, translated into the other languages by a professional translator, and then translated back into English by a second translator. Any discrepancies or errors of meaning were corrected by a third translator. The Japanese survey was then pretested on two tours, with minor changes in syntax and grammar.

Participant Observation

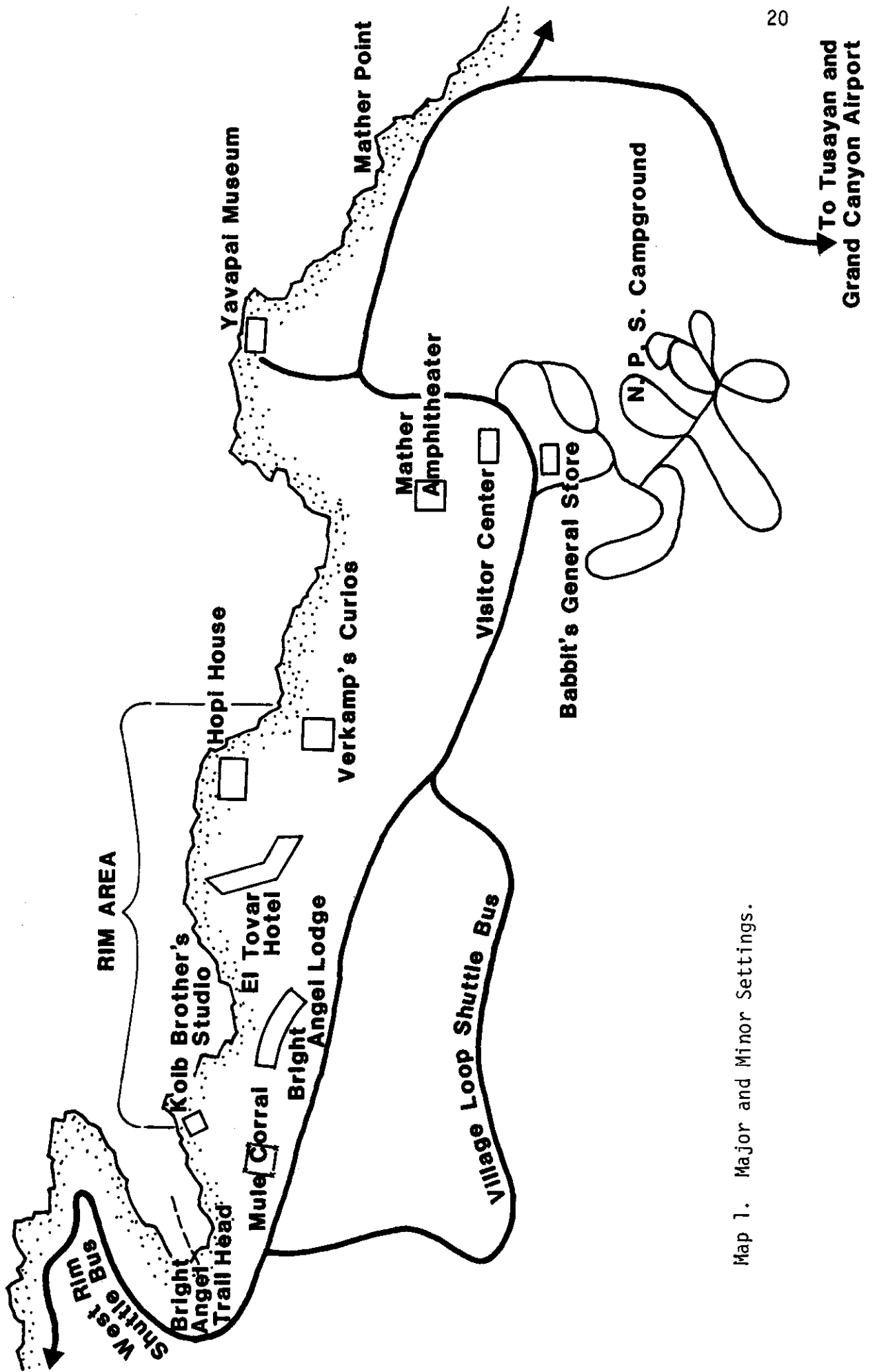
Participant observation is a method of data collection in which the researcher is a regular participant in the activities being observed (Bailey 1978). While this method was used to learn about the organized tours, its major use was to develop estimates of how foreign visitors were distributed throughout the South Rim Area and the activities they pursued.

Specific locations were divided into two categories: major settings and minor settings. Major settings were areas where large numbers of foreign visitors were thought to visit regularly. Minor settings were locations where foreign tourists were thought to visit regularly, but in lesser numbers. These decisions were based upon informal interviews and observations prior to the study. Table 7 lists the major and minor settings used and the number of observations made at each setting. Map 1 shows each setting's location: it is clear that the observations were limited to the developed South Rim Area and the Bright Angel Trail.

Table 7. Major and Minor Settings for Participant Observations.

Setting	Number of Observation Periods
<i>Major Settings</i>	
Mather Point	8
Visitor Center	9
Yavapai Museum	7
Park Service campground	7
Mather Amphitheater	8
Rim Area (between Verkamp's and Kolb Brother's Studio)	6
Mule corral	6
Bright Angel Trail	4
<i>Minor Settings</i>	
Village and West Rim Shuttle	4
Tusayan	2
Sites of various NPS interpretive programs	4
Babbitt's General Store	<u>3</u>
Total	68

The settings were randomly sampled during the summer according to a pre-determined schedule that varied which day of the week and time of day a particular setting was to be observed. Most observation periods were for two hours; some settings (the Rim Area, Bright Angel Trail, Tusayan) required approximately six-hour periods. The same research assistant conducted all observations. Observations on the number and percentage of foreign visitors as well as their activities were recorded. The percentage



Map 1. Major and Minor Settings.

of foreign visitors was also derived from Park Service and concessionaire employee estimates. In some settings (campground, mule corral, Visitor Center, and Mather Amphitheater), visitors were often asked their national origin.

Personal Interviews

Personal interviews were conducted informally at major and minor settings, and occasionally while observing tour groups. Approximately 96 interviews were completed. Park personnel, concessionaire employees, tour guides and individual foreign tourists were interviewed. The interviews lasted from a few minutes to 20 minutes.

Interviews with park and concessionaire employees dealt with their views on the number and origin of foreign visitors at particular settings, and what problems they encountered when dealing with foreign visitors. Foreign visitors were asked similar questions.

Limitations

The research methods used in this study have several limitations. As mentioned earlier, the study focused on the summer season, the South Rim, and organized tour groups. In the time-budget observations, the 5-minute intervals and recording of the most common activity means that only a general description of tourist behavior can be made. The presence of an observer on a tour bus was sometimes noticed, and in some cases, slightly altered the activity of the subjects. The small sample of observations at major and minor settings means that only rough estimates of where foreign visitors go within the South Rim Area are possible. The difficulty of observing foreign visitors in crowded areas compounds the problem.

RESULTS

This section of the report describes the results of the study. First, a description of a "typical" tour is given, based upon the observations. Second, we describe how foreign visitors on the "2-B" tours use their time, drawing on the time-budget data. Third, we profile the participants of these tours, using the survey data. Finally, we describe foreign visitor activities at both the major and minor settings, based upon the personal interviews and participant observation. The section concludes with a summary of the results, organized around the variables of time, space, social organization and culture. Appendix II provides a more detailed description of the statistical tests used in the analysis.

A Note on Statistical Significance

Throughout this section, the term "significance" will be used in a statistical sense. Only a portion of all tours and tourists to GCNP were sampled. The tests of significance attempt to determine whether observed relationships and differences (between nationalities, for example) are merely the result of chance, or whether they truly reflect differences in a wider population.

This "level of significance" refers to the probability that the results are due to chance. A significance level of .05 (common in such studies and used here) means that by chance alone we could get the same results five times out of a hundred. Hence, "significant differences" means that the differences are reasonably reliable. It does not necessarily mean that the differences are large: often a statistically significant difference is small in size.

The Typical Tour

A "typical" tour was conducted on July 15, 1981. The tour began in Las Vegas where 16 Japanese women boarded planes and flew to Grand Canyon Airport. When the planes arrived, the visitors disembarked and entered the airport terminal. They waited in the terminal for almost half an hour, during which time their Japanese tour guide¹ discussed arrangements with concessionaire personnel. Activities in the terminal included using rest-room facilities, eating, shopping, talking and resting.

The tour guide and driver then ushered the 16 Japanese women and one American man to the tour bus. As the bus prepared to leave the airport parking lot, the tour guide gave a brief introduction, introduced the driver, and told the participants about their tour.

The first stop was the restaurant, less than one mile from the airport. The tour broke into small groups which were seated in a dining area reserved for them. After eating, tour members left the dining area and patronized the gift shop. "Stragglers" were encouraged to hurry by the tour guide, and the group re-boarded the bus.

While waiting for all to board the bus, the tour guide distributed English language maps of the Grand Canyon. From the time the bus left the restaurant until the tour arrived at the first viewing point, the guide talked about the Grand Canyon, frequently referring to the map.

Mather Point was the first viewing point. The tour guide led the group to the viewing area where she discussed the Canyon for a few minutes. Tour members then had about 5 minutes to view the Canyon and take photographs. The guide stayed close to the group during this time. The group returned to the bus, waited for stragglers, and left for Yavapai Point.

¹72.6% of all tours had guides.

The guide led the tour group from the bus to the Yavapai Museum. She discussed the exhibits with them for a few minutes, and the tour members browsed the museum for another 5 minutes. Some wandered outside to view the Canyon and take photographs. After 5 more minutes, they boarded the bus and waited for stragglers.

The bus then headed for Trail View Point, while the guide talked about the Canyon during the 10-minute drive. At Trail View Point, the tour members disembarked, listened to the guide for a few minutes, and then took photographs. Again, they quickly boarded the bus and waited for stragglers.

Hopi Point was the last stop. The guide described this site during the short (3-4 minute) drive from Trail View Point. Tour members disembarked and asked the bus driver questions about the Canyon (this particular driver spoke Japanese). Many photographs were taken, including a group picture.

Finally, tour members boarded the bus for the last time, and headed for the airport. The research assistant was introduced, and the questionnaire distributed. After 15 minutes the tour bus arrived at Grand Canyon Airport. Tour members entered the terminal and purchased refreshments. They then quickly boarded their planes for the flight back to Las Vegas.

Figures 1-3 depict the above tour in a chronological sequence. Tour activities, activity types, and location types are displayed. Figure 1 shows most activities involved small periods of time during the tour. Thus, although about 25 minutes were spent waiting, this activity was broken into discontinuous segments of about 10 minutes or less. Eating and shopping, however, were done in larger blocks of time.

Figure 2 shows that activities alternated between "free" and "obligatory" throughout the tour. Finally, Figure 3 shows that the tour repeatedly alternated between location types (except restaurants).

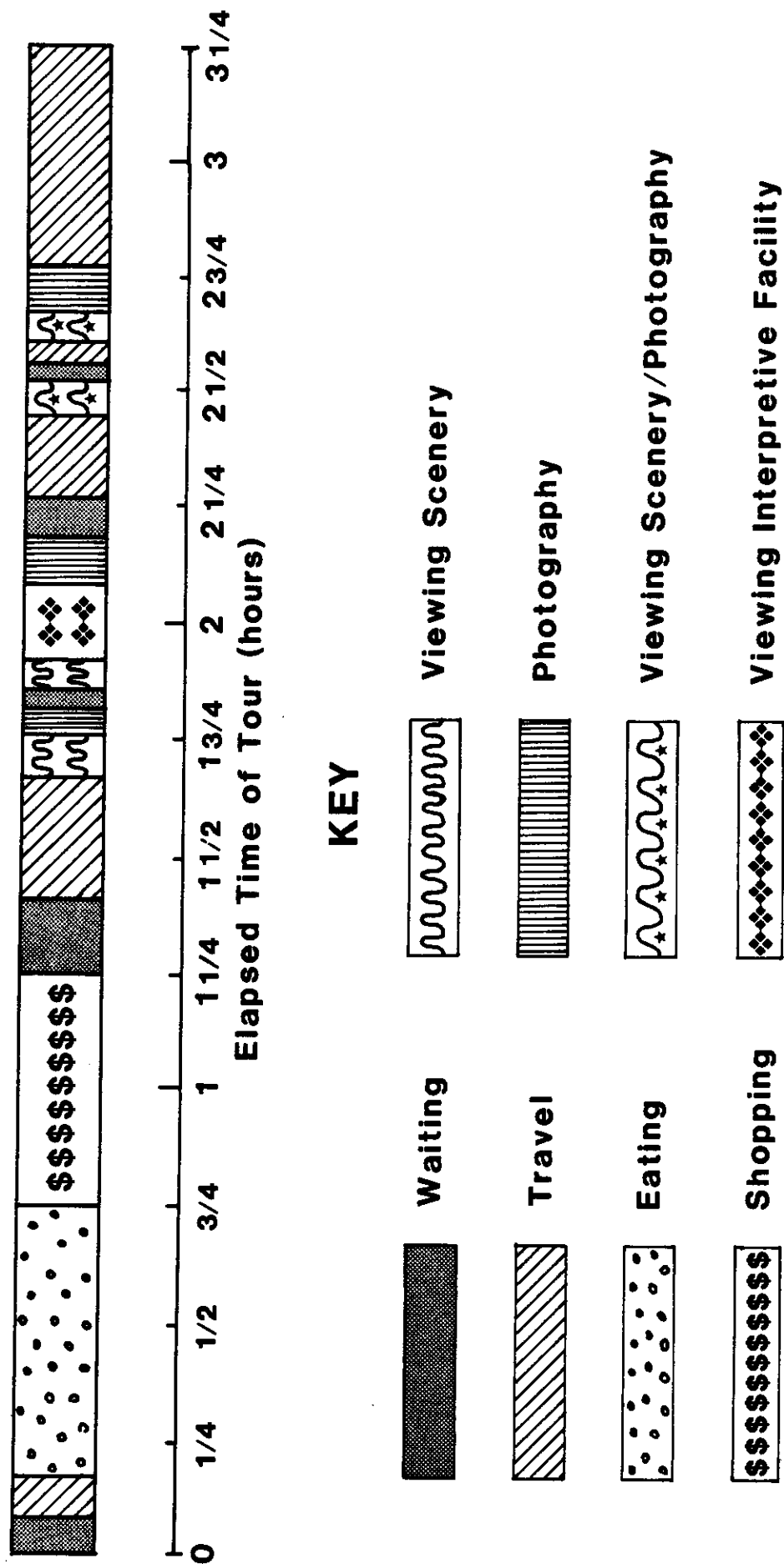


Figure 1. Chronological Sequence of Activities for Typical Tour.

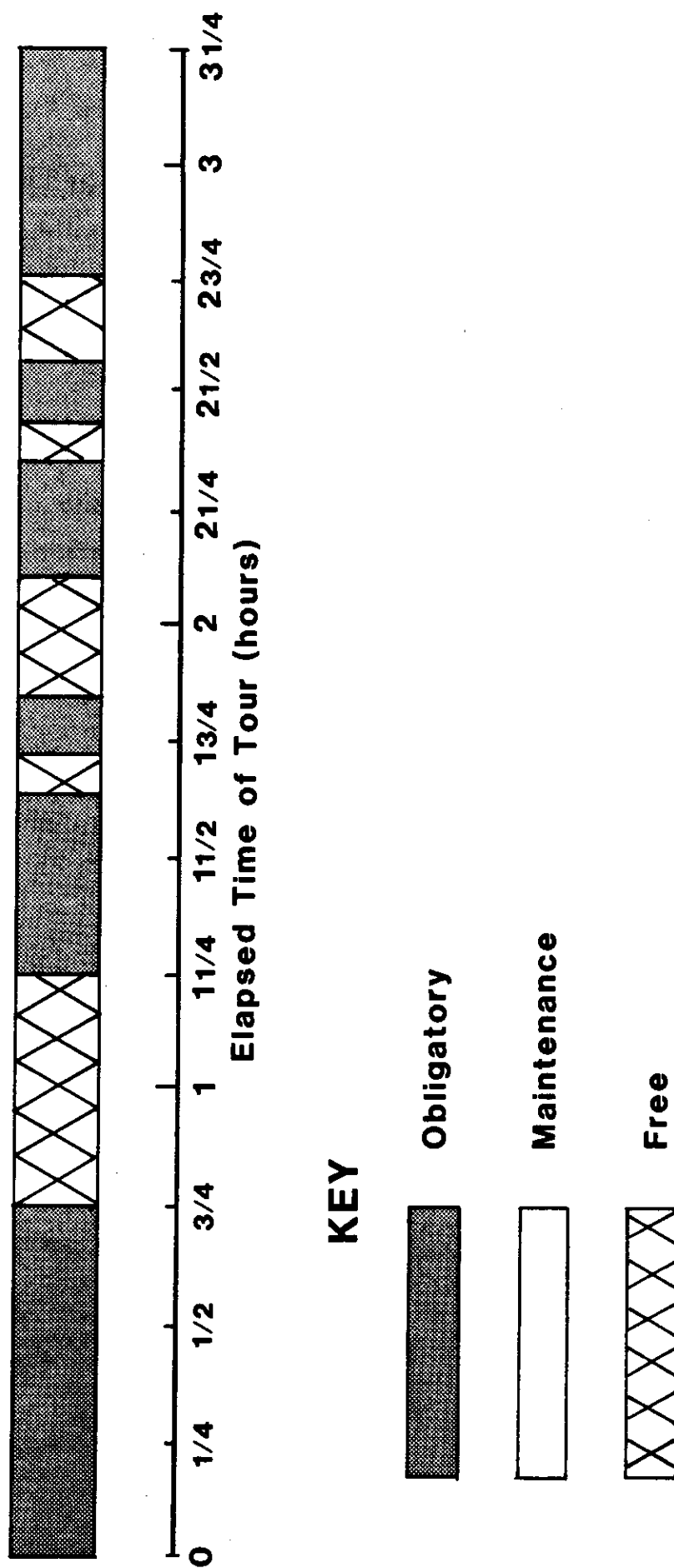


Figure 2. Chronological Sequence of Activity Types for Typical Tour.

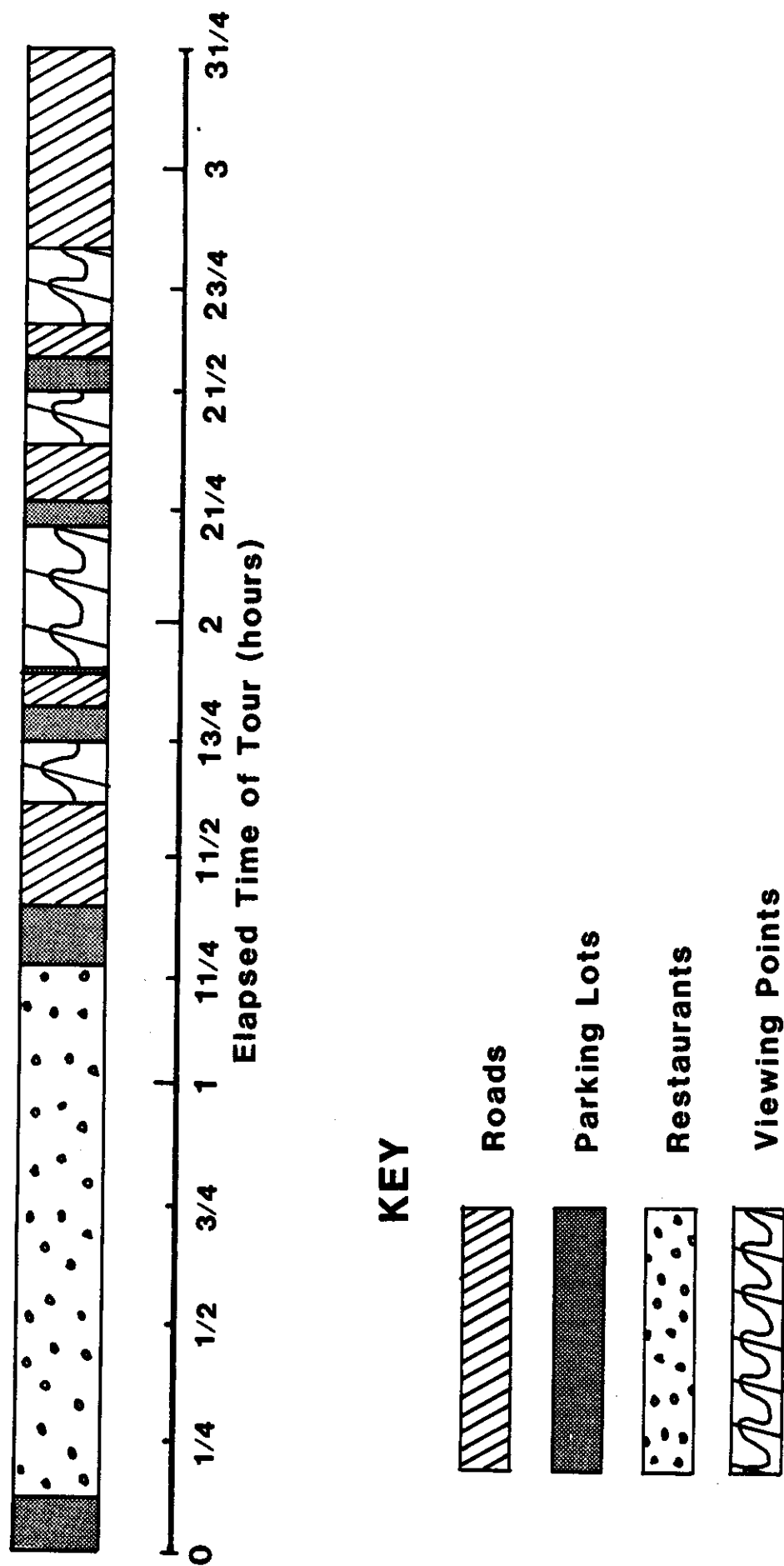


Figure 3. Chronological Sequence for Location Types for Typical Tour.

Hence, this typical tour involved short amounts of time spent doing a particular activity, and being at a particular location. The exceptions to this discontinuous format were eating and shopping.

Time Budget Data

The tour groups' use of time while at GCNP was highly restricted by the tour itinerary. Table 8 shows the number of minutes and percentage of time spent on activities initiated by the tour company, and by the tourists on their own. Over 70% of the time involved organized activities, and this did not vary significantly by nationality. (The Kruskal-Wallis H test was used; a detailed discussion is provided in Appendix II). Hence, the tour company has a tremendous potential to impact these visitors' experience.

Table 8. Activity Initiator for Tour Group Activities, by Nationality.

Activity Initiator	Tour Groups (average minutes and % of tour time budget) ^a									
	Japanese		French		Mixed		Other		All Tours	
	min.	%	min.	%	min.	%	min.	%	min.	%
Tour	126	70.6	129	71.8	146	72.1	110	72.4	128	71.4
Self	52	29.4	51	28.2	56	27.9	42	27.6	52	28.6

^aKruskal-Wallis H test revealed no significant differences at .05 level.

Two of the ways the tour company can influence visitor behavior is by controlling where the tours go in the park, and by structuring certain activities such as eating, shopping, viewing scenery and so forth.

The tours spent over 99% of their time in the park at four kinds of places -- roads, parking lots, restaurants and viewing points. Table 9 shows that the percentage of time spent at viewing points was an average of 41 minutes

per tour. The largest amount of time was spent at restaurants (32.4% or 58 minutes per tour). This pattern did not vary significantly by nationality.

Table 9. Time Spent at Major Types of Location, by Nationality.

Location Types	Tour Groups (average minutes and % of tour time budget) ^a									
	Japanese		French		Mixed		Other		All Tours	
	min.	% ^b	min.	%	min.	%	min.	%	min.	%
Roads	54	30.2	58	32.1	71	35.0	49	32.0	57	31.8
Parking Lots	24	13.2	26	14.4	24	12.0	15	10.0	23	12.7
Restaurants ^c	59	33.1	60	33.4	60	29.7	51	33.3	58	32.4
Viewing Points ^d	42	23.3	33	20.3	47	23.3	38	24.9	41	22.8

^aKruskal-Wallis H test revealed no significant differences at .05 level.

^bTotals do not equal 100 due to rounding errors.

^cIncludes Bright Angel Gift Shop and Hopi House.

^dIncludes Bright Angel Rim area.

Table 10 details the locations frequented by the tour groups. The most time was spent on the road (57 minutes or 31.8%), followed by the Squire Inn area (34 minutes or 19.1%) and the Red Feather Inn area (22 minutes or 11.9%). These locations reflect the travel and eating requirements of the tour.

Of some interest is the amount of time spent at viewing points within the park. An average of 7 minutes (3.7%) was spent at the Mather Point Area; Trail View Point was visited for an average of 11 minutes (6.2% of the tour).

For almost all locations, no significant differences were found between nationalities. However, the Kruskal-Wallis H test revealed significant differences between nationalities in the time spent at Yavapai Point and Bright Angel Lodge.

Another statistical test called Mann-Whitney U was used to discover which nationalities differed from the others. An explanation of the Mann-Whitney U and the results are provided in Appendix II and III. The test revealed that the French significantly differed from all other groups in visiting Yavapai Point. (Drivers often claimed French tourists easily became lost in the crowd, and were difficult to get back on the bus. Hence, they sometimes avoided Yavapai Point.)

Table 10. Time Spent at Major Location Areas, by Nationality.

Location	Tour Groups (average minutes and % of tour time budgets) ^a									
	Japanese		French		Mixed		Other		All Tours	
	min.	% ^b	min.	%	min.	%	min.	%	min.	%
Grand Canyon Airport Parking Lot	6	3.4	6	3.6	8	3.7	4	2.6	6	3.4
Road	54	30.2	58	32.1	71	35.0	49	32.0	57	31.8
Mather Point Area	7	3.9	11	6.0	6	2.8	2	1.4	7	3.7
Yavapai Point Area ^c	19	10.4	8	4.4	23	11.5	20	13.1	18	9.8
Trail View Point Area	11	5.9	11	6.0	14	6.8	11	7.2	11	6.2
Hopi Point Area	14	7.7	15	8.3	14	7.1	12	7.9	14	7.7
Squire Inn Area	31	17.5	36	19.9	45	22.2	28	18.3	34	19.1
Red Feather Inn Area	21	11.8	19	10.3	22	10.9	27	17.7	22	11.9
Bright Angel Lodge Area ^d	16	9.0	13	7.2	0	0.0	0	0.0	10	5.7
Hopi House Area	0	0.0	4	2.4	0	0.0	0	0.0	0.7	0.4

^a Except where noted, Kruskal-Wallis tests revealed no significant differences at 0.5 level.

^b Totals do not equal 100 due to rounding errors.

^c Kruskal-Wallis chi-square = 11.48 $p < .05$.

^d Kruskal-Wallis chi-square = 44.81 $p < .05$.

A variety of activities took place during the tours -- sightseeing, eating, shopping and so forth. Some of the activities were obligatory; the tour itinerary required all members to participate. Other activities were mostly observed during "free time," when visitors could do what they wished. Some time was spent on personal maintenance.

Table 11 shows the general pattern of activity types. Obligatory activities were most common, on average 122 minutes or 67.6% of the tour. Fifty-six minutes or 31.3% of the tour was spent on free time activities.

Table 11. Time Spent in Three Activity Types, by Nationality.

Activity Type	Tour Groups (average minutes and % of tour time budget) ^a									
	Japanese		French		Mixed		Other		All Tours	
	min.	% ^b	min.	%	min.	%	min.	%	min.	%
Obligatory	117	65.4	128	71.0	141	69.7	104	68.0	122	67.6
Maintenance	3	1.7	0	0.0	1	0.6	1	0.7	2	1.0
Free	59	32.9	52	29.0	60	29.7	48	31.4	56	31.3

^aKruskal-Wallis H test revealed no significant differences at .05 level.

^bTotals do not equal 100 due to rounding errors.

Eleven major activities were examined (a description of each was provided earlier in Table 5). Table 12 reports the time-budget data for these activities, both in average minutes per tour and percent of tour time. There are several important findings:

- 1) Travel: An average of 58 minutes was spent by each tour on traveling between locations. This was 33% of the tour; no significant differences were found between nationalities.
- 2) Eating: After travel, the most time was spent eating. Forty-one minutes or 23% of the tour was, on the average, used this way; no significant differences were found between nationalities.

- 3) Waiting: An average of 26 minutes or 15% was spent on each tour waiting for other activities. No significant differences were found between nationalities.
- 4) Shopping: Shopping was an important activity, but relatively little time of the tour was devoted to this purpose. The average for all tours was 16 minutes or 8.8% of the tour. The Kruskal-Wallis H test revealed significant differences between nationalities, though the differences seem fairly moderate. The Mann-Whitney U test showed that the significant difference was between the Japanese and all other groups (see Appendix III). The Japanese spent 11.7% of their time shopping, compared to the French with 5.8%.
- 5) Viewing Scenery: An average of 11 minutes (6.4% of the tour) were spent simply viewing scenery at GCNP. (This does not include views from the bus while traveling). There were significant differences between the Japanese and all other groups; Japanese tour groups spent an average of 4 minutes viewing scenery, somewhat less than the other nationalities.
- 6) Photography: Again, significant differences were found between tours of different nationalities. The Japanese differed from all other groups, spending 5% of their tour time on photography; by contrast, the French spent 1.2%.
- 7) Viewing Interpretive Facilities: Little time was spent viewing interpretive facilities -- an average of 5 minutes or 2.6% of the tour. No significant differences were found between nationalities.
- 8) Viewing Scenery/Photography: This combined activity was a common one; an average of 7.1% of each tour was devoted to viewing scenery while taking pictures. No significant differences were found between nationalities.

Table 12. Time Spent in Various Activities, by Nationality.

Activities	Tour Groups (average minutes and % of tour time budget) ^a									
	Japanese		French		Mixed		Other		All Tours	
	min.	% ^b	min.	%	min.	%	min.	%	min.	%
Travel	55	31.0	60	34.6	72	36.3	48	31.8	58	32.9
Eating	38	21.6	43	24.7	44	22.4	42	27.8	41	23.0
Waiting	28	15.6	29	16.9	26	12.9	18	11.9	26	14.9
Walking	1	0.7	0.7	0.4	1	0.6	0	0.0	1	0.6
Maintenance	1	0.6	0	0.0	1	0.6	1	0.7	0.8	0.5
Shopping ^c	21	11.7	10	5.8	12	6.0	9	6.0	16	8.8
Viewing Scenery ^d	4	2.1	16	9.5	24	12.3	14	9.3	11	6.4
Photography ^e	9	5.0	2	1.2	2	0.9	0	0.0	5	2.9
Viewing Interpretive Facility	5	2.7	0.7	0.4	6	3.2	7	4.6	5	2.6
Viewing Scenery/ Photography	15	8.7	11	6.2	8	4.1	12	7.9	13	7.1
Other	0.5	0.1	0.7	0.4	1	0.6	0	0.0	0.6	0.4

^aExcept where noted, Kruskal-Wallis H tests revealed no significant differences at 0.5 level.

^bTotals do not equal 100 due to rounding errors.

^cKruskal-Wallis chi-square = 13.97 p<.05.

^dKruskal-Wallis chi-square = 45.94 p<.05.

^eKruskal-Wallis chi-square = 20.5 p<.05.

If viewing scenery, photography, viewing interpretive facilities and viewing scenery while taking pictures are all combined, these "park-oriented" activities account for an average of 34 minutes or 19.0% of the tour. In contrast, waiting accounted for an average of 26 minutes or 14.9%.

Questionnaire Data

As described earlier, a brief questionnaire was used to gather background information on the foreign visitors who participated in the day tours to GCNP. Table 13 illustrates the range of occupations that the visitors held -- most were professionals (37.1%) and clerical workers (21.0%). Statistical tests of the data (Chi-square and Lambda were used; see Appendix II for a detailed explanation) found significant differences between nationalities. Clerical workers were common on Japanese tours (30.5%) and rare on French tours (.6%). Six-tenths percent of the Japanese tourists were farmers, compared to 14.8% of the French visitors. For some occupational categories (professionals, laborers, students and homemakers), there appeared little difference between nationalities. Overall, the low Lambda (.01 out of a possible 1.0) suggests that the differences between nationalities are fairly small.

Table 13. Occupation of Tour Group Members, by Nationality.

Occupation	Japanese		French		Mixed		Other		All Tours ^a	
	N	%	N	%	N	%	N	%	N	%
Professional	132	28.3	60	33.3	44	40.0	29	36.7	265	31.7
Clerical	142	30.5	1	0.6	19	17.3	13	16.5	175	21.0
Craftsman	39	8.4	8	4.4	7	6.4	10	12.7	64	7.7
Farmer	3	0.6	14	7.8	1	0.9	1	1.3	19	2.3
Laborer	3	0.6	1	0.6	2	1.8	1	1.3	7	0.8
Student	20	4.3	4	2.2	5	4.5	3	3.8	32	3.8
Retired	19	4.1	16	8.9	9	8.2	0	0.0	44	5.3
Unemployed	2	0.4	4	2.2	0	0.0	0	0.0	6	0.7
Homemaker	65	13.9	31	17.2	13	11.8	9	11.4	118	14.1
Other	41	8.8	41	22.8	10	9.1	13	16.5	105	12.6

^a835 visitors answered the question; 73 did not.
 Chi-square = 145.32, $p < .05$.
 Lambda = .01

The tours included a wide range of age groups, from young adults to senior citizens. For all tours combined, most visitors were 26-65 years old (75.8%). The statistical tests found significant differences between nationalities: while 22.8% of Japanese visitors were young adults, only 3.8% of the French visitors were in that age category. Similarly, a large portion of the French were 46-65 years old (50.8%), compared to nearly half that total for Japanese tours (28.8%). The low Lambda score (.04) suggests that the overall differences are fairly small.

Table 14. Age of Tour Group Members, by Nationality.

Age in Years	Japanese		French		Mixed		Other		All Tours ^a	
	N	%	N	%	N	%	N	%	N	%
18-25	110	22.8	7	3.8	19	15.6	10	11.9	146	16.7
26-45	191	39.5	70	37.8	51	41.8	38	45.2	350	40.0
46-65	139	28.8	94	50.8	46	37.7	34	40.5	313	35.8
Over 65	43	8.9	14	7.6	6	4.9	2	2.4	65	7.4

^a874 visitors answered the question; 34 did not.

Chi-square = 55.56 $p < .05$.

Lambda = .04.

The tours included both males and females, and for all tours combined, there was a slight majority of females (53.1%). No significant differences between nationalities were found (see Table 15). Similarly, no difference was found in their experience with the Grand Canyon; almost all (96.1%) had never before visited Grand Canyon National Park (see Table 16).

Table 15. Gender of Tour Group Members, by Nationality.

Gender	<u>Japanese</u>		<u>French</u>		<u>Mixed</u>		<u>Other</u>		<u>All Tours^a</u>	
	N	%	N	%	N	%	N	%	N	%
Male	216	44.4	86	46.5	64	54.2	43	51.8	409	46.9
Female	270	55.6	99	53.5	54	45.8	40	48.2	463	53.1

^a872 visitors answered the question; 36 did not.
 Chi square = not significant at $p < .05$.

Table 16. Tour Group Member's Experience at Grand Canyon, by Nationality.

Experience	<u>Japanese</u>		<u>French</u>		<u>Mixed</u>		<u>Other</u>		<u>All Tours^a</u>	
	N	%	N	%	N	%	N	%	N	%
First Visit	478	96.0	185	95.9	118	94.4	84	100.0	865	96.1
Been to Grand Canyon before	20	4.0	8	4.1	7	5.6	0	0.0	35	3.9

^a900 visitors answered the question; 8 did not.
 Chi-square = not significant at $p < .05$.

The members of these tours came to the United States for several different reasons, as Table 17 shows. The most common was for vacation (62.2%). Since respondents could select more than one reason, a different statistic (the Friedman test) was used to compare nationalities. The statistic is based on the relative ranking of each response, and the ranks are provided in parentheses (a more detailed discussion of the Friedman test is in Appendix II).

Table 17. Reason for Visiting the United States, by Nationality.

Reason	Japanese			French			Mixed			Other			All Tours ^a		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Vacation	243	48.4	(1)	128	66.3	(1)	111	90.2	(1)	79	94.0	(1)	561	62.2	(1)
Visit Relatives	22	4.4	(4)	4	2.1	(6)	3	2.4	(6)	4	4.8	(3)	33	3.7	(5)
Visit Friends	17	3.4	(5)	6	3.1	(5)	5	4.1	(4)	1	1.2	(5)	29	3.2	(6)
Business	94	18.7	(3)	33	17.1	(3)	8	6.5	(3)	4	4.8	(3)	139	15.4	(3)
Study/Formal Schooling	2	0.4	(6)	44	22.8	(2)	4	3.3	(5)	6	7.1	(2)	56	6.2	(4)
Other	175	34.9	(2)	20	10.4	(4)	14	11.4	(2)	2	2.4	(4)	211	23.4	(2)

^a902 visitors answered the question; 6 did not. As each respondent could answer more than once, 1029 responses were recorded.

Friedman's test: Chi-square = 18.06 $p < .05$.

The relative ranking for each reason did not significantly differ between nationalities. Percentage differences did appear: the mixed and other tour groups came largely for vacation (90.2% and 94.0% respectively); less than half the Japanese (48.4%) came for that reason. Business travel was important for the Japanese (18.7%) and French (17.1%). A high percentage of French visitors were here for study or formal schooling (22.8%).

Of some interest is the process by which foreign visitors learn about national parks and park tours prior to their visit. Tour members were asked, "From what sources did you receive information of this Grand Canyon tour?". A majority cited information from travel agencies (52.9%); books and magazines were sources to 40.4% of the participants. Again, respondents could provide more than one answer; the Friedman test revealed no significant differences between nationalities in the relative ranking of sources (see Table 18).

Some percentage differences appeared: the French relied quite heavily on travel agencies; the Japanese on print media. Friends and relatives played a moderate role (17.9% for all tour members), and government offices were not commonly used (only .4% gained information from that source).

While all of the surveyed visitors came to the park as part of an organized tour, within the tour they often traveled with friends, relatives, and fellow workers. Table 19 displays this data. While family groups were most common (30.4%), a significant portion came with friends (30.4%) and fellow workers (21.3%).

The Friedman test revealed no significant differences between nationalities in the relative ranking of each group type; for each nationality, family groups ranked either first or second. Large percentage differences appeared: the mixed tours displayed a very different pattern than the others, and the French had a high number of visitors traveling with fellow workers (35.2%).

Table 18. Source of Information on Grand Canyon Tour.

Source	Japanese			French			Mixed			Other			All Tours ^a		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Friends/ Relatives	81	16.2	(3)	27	14.1	(3)	38	30.2	(3)	15	18.3	(3)	161	17.9	(3)
Travel Agency	205	40.9	(2)	141	73.8	(1)	66	52.4	(1)	64	78.0	(1)	476	52.9	(1)
Airline Company Offices	18	3.6	(5)	2	1.0	(5)	6	4.8	(5)	2	2.4	(6)	28	3.1	(5)
Place of Employment	17	3.4	(6)	2	1.0	(5)	3	2.4	(6)	4	4.9	(5)	26	2.9	(6)
Government Offices	1	0.2	(7)	1	0.5	(6)	2	1.6	(7)	0	0.0	(7)	4	0.4	(7)
Books/Magazines/ Newspapers	262	72.0	(1)	39	20.4	(2)	45	35.7	(2)	18	22.0	(2)	364	40.4	(2)
Other	29	5.8	(4)	6	3.1	(4)	17	13.5	(4)	6	7.3	(4)	58	6.4	(4)

^a900 visitors answered the question; 8 did not. As each respondent could answer more than once, 1117 responses were recorded.

Friedman's test: Chi-square = 29.20 $p < .05$.

Table 19. Traveling Companions While on the Tour, by Nationality.

Type	Japanese			French			Mixed			Other			All Tours ^a		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Came Alone	38	7.6	(5)	10	5.2	(6)	17	13.5	(3)	9	10.7	(6)	74	8.2	(5)
With Family	131	26.1	(2)	52	26.9	(2)	73	57.9	(1)	19	22.6	(2)	275	30.4	(1)
With Friends	150	29.9	(1)	42	21.8	(3)	18	14.3	(2)	24	28.6	(1)	234	25.9	(2)
With Family and Friends	13	2.6	(6)	24	12.4	(5)	9	7.1	(4)	15	17.9	(3)	61	6.7	(6)
With Fellow Workers	112	22.3	(3)	68	35.2	(1)	0	0.0	(5)	13	15.5	(5)	193	21.3	(3)
Other	78	15.5	(4)	31	16.1	(4)	17	13.5	(3)	14	16.7	(4)	140	15.5	(4)

^a 905 visitors answered the question; 3 did not. As respondents could answer more than once, 977 responses were recorded.

Friedman's test: Chi-square = 16.40 $p < .05$.

The foreign visitors on these tours of Grand Canyon had a high level of experience with other U.S. National Parks (see Table 20). Less than half (45.7%) replied that they had not visited any other national park. Prior visits to eight western parks varied considerably: Yosemite had the highest visitation (22.1%) and Petrified Forest the lowest (.5%).

The Friedman test revealed no significant differences between nationalities in the rank order of parks visited. Percentage differences did appear. More of the Japanese visitors had visited Hawaii Volcanoes (19.4%) than any other nationality. Yet other differences were found: the French had relatively higher visitation to Sequoia and Kings Canyon parks (26.4%) when compared to the Japanese (4.7%). A significant portion of all tourists replied that they had visited other national parks (18.2%); in some instances this may reflect visits to non-NPS areas such as Niagara Falls.

The survey examined the recreational backgrounds of the tour members. Focus was placed upon activities similar to that which is available at Grand Canyon: the question read, "Which of the following recreational activities do you participate in at your home?". Potential responses included photography, hiking, camping, fishing, nature study, mountaineering, horse-back riding, rafting, driving for pleasure and visiting scenic or historic sites. Tour members could choose more than one activity, and many did (885 visitors answered the question; they gave 1,675 responses).

Table 21 illustrates the variety of recreational activities pursued at home by the tour members. Visiting places of scenic or historic interest (57.5%) and driving for pleasure (42.9%) were the most common activities, while horseback riding (21.1%) and rafting (1.4%) were rarely mentioned. No significant differences separated the rank order of activities by different nationalities. Percentage differences were apparent: the French participated in photography

Table 20. Visitation to Other U.S. National Parks, by Nationality.

Park	Japanese			French			Mixed			Other			All Tours ^a		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Hawaii Volcanoes National Park	87	19.4	(3)	1	0.6	(9)	17	15.0	(4)	1	1.3	(6)	106	13.3	(4)
Haleakala National Park	13	2.9	(7)	1	0.6	(9)	8	7.1	(6)	0	0.0	(7)	22	2.8	(7)
Yosemite National Park	109	24.3	(2)	44	27.7	(2)	18	15.9	(3)	5	6.6	(4)	176	22.1	(2)
Petrified Forest National Park	0	0.0	(9)	3	1.9	(7)	1	0.9	(9)	0	0.0	(7)	4	0.5	(10)
Sequoia and Kings Canyon National Parks	21	4.7	(6)	42	26.4	(3)	13	11.5	(5)	16	21.1	(3)	92	11.5	(5)
Bryce Canyon National Park	22	4.9	(5)	8	5.0	(6)	6	5.3	(7)	5	6.6	(4)	41	5.1	(6)
Mesa Verde National Park	0	0.0	(9)	11	6.9	(5)	6	5.3	(7)	0	0.0	(7)	17	2.1	(8)
Zion National Park	1	0.2	(8)	3	1.9	(8)	3	2.7	(8)	2	2.6	(5)	9	1.1	(9)
Other National Parks	55	12.2	(4)	29	18.2	(4)	25	22.1	(2)	36	47.4	(1)	145	18.2	(3)
No American National Parks	222	49.4	(1)	54	34.0	(1)	58	51.3	(1)	30	39.5	(2)	364	45.7	(1)

^a 797 visitors answered this question; 111 did not. As each respondent could answer more than once, 976 responses were recorded.

Friedman's test: Chi-square = 35.18, $p < .05$.

Table 21. Recreational Activities Participated in at Home, by Nationality.

Activities	Japanese			French			Mixed			Other			All Tours ^a		
	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank	N	%	Rank
Photography	45	9.7	(6)	70	37.6	(3)	51	41.8	(2)	37	44.6	(2)	203	23.7	(4)
Hiking/Walking	84	18.1	(3)	68	36.6	(4)	40	32.8	(3)	23	27.7	(3)	215	25.1	(3)
Camping	36	7.8	(7)	14	7.5	(6)	17	13.9	(6)	6	7.2	(6)	73	8.5	(6)
Hunting and Fishing	20	4.3	(9)	22	11.8	(5)	16	13.1	(7)	6	7.2	(6)	64	7.5	(8)
Nature Study	64	13.8	(4)	11	5.9	(8)	21	17.2	(5)	16	19.3	(4)	112	13.1	(5)
Mountaineering	47	10.1	(5)	13	7.0	(7)	6	4.9	(9)	1	1.2	(8)	67	7.8	(7)
Horse-back riding	5	1.1	(10)	11	5.9	(8)	1	0.8	(11)	1	1.2	(8)	18	2.1	(10)
Canoeing and Rafting	1	0.2	(11)	5	2.7	(10)	4	3.3	(10)	2	2.4	(7)	12	1.4	(11)
Driving for Pleasure	224	48.3	(2)	92	49.5	(2)	38	31.1	(4)	13	15.7	(5)	367	42.9	(2)
Visiting Places of Scenic and Historic Interest	260	56.0	(1)	98	52.7	(1)	78	63.9	(1)	56	67.5	(1)	492	57.5	(1)
None of these Activities	29	6.3	(8)	10	5.4	(9)	12	9.8	(8)	1	1.2	(8)	52	6.1	(9)

^a855 visitors answered the question; 53 did not. As visitors could respond more than once, 1,675 responses were recorded.

Friedman's test: Chi-square = 43.09 $p < .05$.

at home much more than the Japanese (37.6% for the French; 9.7% for the Japanese). The French were more frequently involved in hiking (36.6%); the Japanese more frequent mountaineers (10.1%). Only 6.1% of the tour members did not claim to participate in at least one of the potential activities.

Observation and Interview Estimates

Not all settings within the South Rim Area had equal numbers of foreign visitors, and the percent of visitors that were foreign varied from place to place. Table 22 lists the major and minor settings, and provides an average percentage estimate of foreign visitors for each setting. Since these estimates are based on both informal interviews and observation (see Methods section), no statistical significance levels can be given. They are in effect, "best guesses."

Table 22. Foreign Visitors at Major and Minor Settings, Estimates.

Setting	Estimated Percent of all Visitors That Were Foreign
Mather Point	50-80
Visitor Center	30-50
NPS Campground	20-30
Mather Amphitheater	5-10
Rim Area	30-80
Mule Corral	30-50
Bright Angel Trail	40-60
Village Shuttle	40-60
West Rim Shuttle	60-80
NPS Interpretive Programs	0-15
Babbitt's General Store	55-75
Tusayan	5-90

The settings differ in the percentage of visitors that are foreign. NPS interpretive programs had the lowest percentage of foreign visitors (0-15%); Mather Point had a much higher set of estimates (50-80%). For some settings, the estimates suggest a relatively high number of foreigners: visitors to the Bright Angel Trail were estimated to be 40-60 percent foreign.

The estimates for Tusayan and the Rim Area had extremely wide ranges (5-90% and 30-80%, respectively). Table 23 provides estimates for specific locations within these two settings. For the Rim Area, Lookout Studio and Bright Angel Lodge had similar estimates; the El Tovar Hotel, Hopi House and Verkamp's had somewhat lower percentages. The Tusayan data show wide variation: while Grand Canyon Helicopters had 80-90% foreign visitors, the gasoline station had 5-15% foreign customers. The private Grand Canyon Tourist Center had estimates of 35% foreign visitation.

Table 23. Foreign Visitors at Rim Area and Tusayan Locations, Estimates.

Location	Estimated Percent of all Visitors That Were Foreign
<i>Rim Area</i>	
Lookout Studio	50-70
Bright Angel Lodge	50-80
El Tovar Hotel	30-50
Hopi House	40-60
Verkamp's Curios	50
<i>Tusayan</i>	
Gas Station	5-15
McDonald's	25-30
Grand Canyon Tourist Center	35
Grocery Store	50
Madison Helicopters	72
Baskin-Robbins	75
Motels	75
Grand Canyon Helicopters	80-90

Finally, we asked two questions from which we hoped to gain an understanding of foreign visitors' proficiency with the English language. Each question was printed in English, and directions asked for the answer to be written in English. The surveys were coded such that an answer was either appropriate (was a logical response to the question and was written in English), inappropriate (answer was either illogical and/or was written in a language other than English), or absent. (Thus there were no missing cases for these two questions.)

Table 24 portrays the answers to the English proficiency questions. Significant Chi-squares in both cases suggest a relationship between the respondent's nationality and English proficiency. Few responses were inappropriate; the majority of foreign visitors did not respond at all. However, these data have several limitations. The first is that we cannot separate those people who had no fluency in English from those who did not answer the question for various other reasons. Second, it was observed that visitors who did understand English sometimes told their friends how to answer the questions. Thus, the data may not be reliable.

A Summary of the Results

The data presented in this section suggest that the variables of time, space, organization and culture may significantly influence foreign visitors' experiences at Grand Canyon National Park.

For the organized tours, time was a crucial resource. Other than eating and shopping, all other activities were undertaken in short, fragmented periods, often no more than a few minutes. Travel, eating and waiting took a majority of the tour's time, and less than one-fifth of the tour involved "park-oriented activities."

Table 24. English Proficiency Indicators, by Nationality.

Do you enjoy hiking/walking?

	Japanese		French		Mixed		Other		All Tours	
	N	%	N	%	N	%	N	%	N	%
Appropriate answer	167	33.1	79	40.9	73	57.9	33	39.3	352	38.8
Inappropriate answer	6	1.2	13	6.7	6	4.8	7	8.3	32	3.5
No Answer	332	65.7	101	52.3	47	37.3	44	52.4	524	57.7

Chi-square = 52.06 $p < .05$.*If so, where do you like to hike (walk)?*

	Japanese		French		Mixed		Other		All Tours	
	N	%	N	%	N	%	N	%	N	%
Appropriate answer	68	13.5	49	25.4	52	41.3	16	19.0	185	20.4
Inappropriate answer	35	6.9	19	9.8	11	8.7	11	13.1	76	8.4
No answer	402	79.6	125	64.8	63	50.0	57	67.9	647	71.3

Chi-square = 59.50 $p < .05$

The distribution of foreign visitors throughout the study area supports the argument that space is an important variable. Ninety-nine percent of the tours took place at viewing points, restaurants, roads and parking lots. The percentage of foreign visitors at locations throughout the South Rim Area varied considerably, and the lowest percentages were for NPS interpretive programs. Beyond GCNP, at least half the visitors had visited other U.S. National Parks, and 22% had visited Yosemite.

For the tours, certain organizational factors were influential -- an average three-fourths of the tour was spent on activities initiated by the concessionaires. Most participants were professionals or clerical workers, 26-65 years old, and almost all were visiting GCNP for the first time. Because many of the tours had professional guides, organized activities and interpretive experiences were common. It is also possible that the presence of guides influenced the way tour members used their free time -- directing them to shops or scenic views. The itinerary of the tour was the most important organizational factor -- it determined the sequence, location and duration of most activities.

Culture, measured by national origin, was found to be significant in several instances. For free time activities (shopping, viewing scenery and photography), the nationalities differed in how they allocated their time. They also significantly differed by occupation and age. The nationalities ranked reasons for visiting, sources of information, type of group and recreational pursuits in roughly the same order; however, percentage differences were apparent.

RECOMMENDATIONS

For this preliminary study, a great deal of data were collected concerning the behavior of foreign visitors at GCNP. Some of the information points toward ways that the NPS and GC concessionaires could increase or improve services to this visitor public. Yet recommendations for action must always reflect policy, something outside the bounds of this study.

The following recommendations are therefore only suggestions for consideration by decision-makers. All reflect three general objectives: protection of the resource, provision of a quality "park experience," and a fair return on concessionaires' investment.

Not all the recommendations are derived directly from the time-budget or questionnaire data. In many cases, the informal interviews provided suggestions for improved services, and these suggestions have been included. The source for each recommendation is provided in parentheses.

I. Recommendations to Grand Canyon National Park

A. Information Services

- 1) Overall awareness among foreign visitors of special visitor services (foreign-language booklets, special interpretive programs, bilingual employees, and so forth) could be increased by providing a brief description in the GC newspaper, at the entrance stations, and at the GC Airport Terminal (Observation, Informal Interviews).
- 2) Foreign language information at major trailheads (Bright Angel, North Kaibab and South Kaibab Trails) would provide important information and increase visitor safety (Observation, Informal Interviews).

- 3) Bilingual employees, or training for present employees, would allow for better communication with visitors. Key locations for bilingual employees would be the Visitor Center, front desk, Backcountry Office, Yavapai Museum and Bright Angel Trail (Observation, Informal Interviews, Questionnaire).
- 4) International road signs may help minimize traffic problems, especially at the Rim Area and at Park entrances (Observation, Time-Budget Analysis).

B. Interpretation

- 1) Interpretive programs in foreign languages could increase foreign visitors' understanding of the Grand Canyon, and enrich their visit. If carefully scheduled, they could be cost-effective. Key locations would be the Visitor Center, Yavapai Museum, Airport Terminal, Mather Point, the Rim Area and Bright Angel Trail. A roving interpretive program could be especially effective and allow needed flexibility (Observation, Informal Interviews, Time-Budget Analysis).
- 2) Foreign language interpretive exhibits at the Grand Canyon Airport Terminal and Mather Point could increase foreign visitors' understanding of the "national park idea," would orient them to the park, and enrich their visit (Observation, Informal Interviews).
- 3) Additional foreign language publications at the Visitor Center Bookstore could increase foreign visitors' opportunities to learn about the Grand Canyon, and increase sales (Informal Interviews).
- 4) In cooperation with the Grand Canyon Natural History Association, the Park could commission foreign authors to write short, topical

pamphlets. Again, in cooperation with the NHA, a literature search of foreign language publications could be prepared, which may reveal appropriate material already available (Informal Interviews).

- 5) The Park should consider preparing a coordinated program of interpretation for foreign visitors. The first step would be the development of a special interpretive plan. Its purpose would be to guide a program of interpretation that is cost-effective, tailored to visitors' needs and Grand Canyon's special qualities, and feasible, given budget and employee limitations (Observation, Informal Interviews, Time-Budget Analysis).
- 6) A modest program of inter-cultural communication training could help interpreters sharpen their skills in working with foreign visitors. This program could be widened for all employees, if needed (Observation, Informal Interviews, Questionnaire).

C. Visitor Protection

- 1) For foreign visitors, the language barrier, unfamiliarity with American Park systems, and novelty of the desert environment may lead to ignorance of regulations and safety requirements. A general program of posting important regulations and safety messages in foreign languages (or in international signs) should result in less safety problems as the number of foreign visitors increases. Key locations could be at the entrance stations, campground, Rim Area, Visitor Center, Backcountry Office and major trailheads (Observation, Informal Interviews).
- 2) Special attention should be paid to safety signs at the trailhead for Bright Angel Trail. Partly because of easy access, the trail

has high use by foreigners. Foreign language signs at the rest shelters should also be considered (Observation, Informal Interviews).

- 3) The feeding of animals is acceptable in many cultures, and is a prominent activity along the Rim Area. Foreign language signs might help reduce this activity (Observation).
- 4) While data are not available, backcountry use by foreign visitors may be substantial. Language barriers may require special precautions, especially for medical aid services (Informal Interviews).
- 5) The Park should consider compiling a list of all bilingual employees and residents, by language, to be used in case of emergencies involving foreign-speaking visitors (Informal Interviews, Questionnaire).
- 6) The bus tours add to the congestion at parking lots along the Rim Area and at viewing points. Blocked cars and buses are often a problem at Mather Point and Yavapai. This could lead to:
 - a) difficulties in bringing official vehicles to the scene of emergencies, and b) general traffic problems. The Park might consider reserved parking for buses or other ways of improving the situation (Observation, Time-Budget Analysis).

II. Recommendations to Concessionaires

A. General Visitor Services

- 1) Certain basic information could be provided to foreign visitors to increase their awareness of visitor services and park opportunities. Included could be a listing of foreign language services, concessionaire policies and regulations, medical

information and lodging alternatives in several languages. A key location for providing information on accommodations would be the Grand Canyon Airport Terminal (Observation, Informal Interviews).

- 2) Foreign language menus could be posted outside restaurants, and at the cafeteria area of the Babbitt's Grocery Store (Observation).
- 3) Gift shops could somewhat increase their stock of foreign language books (Observation).
- 4) Bilingual employees or language training for current employees could be provided. Key locations for bilingual employees would be the Bright Angel Lodge transportation desk, the Airport Terminal hospitality desk, and on the Village Shuttle, West Rim Shuttle, and 2-B tour buses (Observation, Informal Interviews, Time-Budget Analysis).

B. The "2-B" Tour

- 1) Efforts could be made to improve the "startup" of the tour. New procedures for tour arrangements could be considered, to avoid long delays at the airport (Observation, Time-Budget Analysis).
- 2) Tours unaccompanied by guides should utilize bilingual drivers as much as possible (Observation).
- 3) The itinerary of the tour should be evaluated. An itinerary that increases the visitors' opportunity for "park-oriented" activities should be considered. Fewer stops might mean less time spent traveling and waiting, yet enrich visitors' experience (Observation, Informal Interviews, Time-Budget Analysis).

- 4) Dispersal of tours from Yavapai Museum may benefit the tour company, visitors, and the resource (Observation, Informal Interviews, Time-Budget Analysis).

C. Marketing

- 1) The data suggest that national tourist markets differ. While travel agencies and print media remain the main sources of information, increasing the knowledge of government tourist offices in foreign countries may be cost-effective (Questionnaire).
- 2) The occupation, age and recreation data suggest that the Grand Canyon is attractive to a general clientele. Special promotions to certain market segments may be cost-effective, i.e. outdoor recreation-oriented magazines in host countries (Questionnaire).

III. Recommendations for Future Research

- 1) The limitations of this preliminary study are significant. The Research could be expanded to include other areas of the park (the North Rim, Inner Canyon and so forth), other seasons, and overnight tours. Of special need is to examine available data on foreign visitor use of the back country, since language barriers and unfamiliarity with harsh environments may pose safety problems (Observation, Informal Interviews).
- 2) The study should be replicated at another park, so as to discover if foreign visitors differ significantly from park to park. Yosemite might be an excellent choice (Time-Budget Analysis, Questionnaire).

- 3) A region-wide study could be initiated, focusing on foreign visitors who go to more than one park. Data might reveal a pattern or "circuit" which could effectively be used in coordinating information services and interpretation (Questionnaire).
- 4) International tourism impacts the Grand Canyon community. An economic impact study could reveal the dollar value of such tourism, the interdependencies that tie the Grand Canyon community to the tourist industry, and the secondary benefits and costs of such activity. This could be useful in coordinating long-range development, investment, and resource management plans (Observation, Informal Interviews, Time-Budget Analysis).
- 5) More could be learned about foreign visitors' behavior and experiences. Visitors could be interviewed in depth on questions related to information services, interpretation, concessions and so forth. This might result in valuable suggestions for improvement of services to foreign visitors. Special emphasis should be placed on visitors not affiliated with organized tours (Observation, Informal Interviews, Questionnaire).

IV. Recommendations for Cooperation Between National Park Service and Concessionaires.

- 1) The NPS and concessionaires should consider the sharing of expenses on publications that enrich the visitors' park experience, yet are used to improve the tour's quality. Both might commission the Natural History Association to provide such material, which could be designed for use on the tour yet reflect the park's interpretive potential (Observation).

- 2) The tour itinerary could be re-evaluated by both the NPS and concessionaire, with changes aimed at improving the tour and protecting the resource (Observation, Time-Budget Analysis).
- 3) A joint NPS-concessionaire language training program could be cost-effective, helpful to both organizations, and useful to employees. A side benefit would be improved relations among NPS and concessionaire employees (Informal Interviews).
- 4) A joint NPS-concessionaire training program dealing with inter-cultural communications could be beneficial for reasons mentioned above (Informal Interviews).
- 5) Coordination of shuttle bus scheduling and NPS interpretive programs could improve visitors' opportunities to experience the Park. Since foreign visitors often depend on the shuttle system, they stand to directly benefit (Observation, Time-Budget Analysis).
- 6) The NPS and concessionaire should consider joint funding of future research projects that directly benefit both organizations. This would equitably distribute the costs, increase the funds available for necessary research, and increase the potential application of research results (Informal Interviews).

APPENDICES

APPENDIX I
DATA COLLECTION FORMS

ID _____

Grand Canyon Visitor Study

Hello! I hope you've enjoyed your visit to the Grand Canyon. I am conducting a study on Grand Canyon visitors and would greatly appreciate your thoughts. This study is being conducted by the University of Idaho. The results of this study will be used to help improve the services available to Grand Canyon's visitors.

Q-1. *What is the reason for your visit to the United States?*
(please circle as many as apply)

- | | |
|--------------------|---------------------------|
| 1. VACATION | 4. BUSINESS |
| 2. VISIT RELATIVES | 5. STUDY/FORMAL SCHOOLING |
| 3. VISIT FRIENDS | 6. OTHER |

Q-2. *From what sources did you receive information of this Grand Canyon tour?* (please circle as many as apply)

- | | |
|----------------------------|-------------------------------|
| 1. FRIENDS/RELATIVES | 4. PLACE OF EMPLOYMENT |
| 2. TRAVEL AGENCY | 5. GOVERNMENT OFFICES |
| 3. AIRLINE COMPANY OFFICES | 6. BOOKS/MAGAZINES/NEWSPAPERS |
| | 7. OTHER |

Q-3. *Whom did you come with on your Grand Canyon tour?* (please circle as many as apply)

- | | |
|-----------------|----------------------------|
| 1. CAME ALONE | 4. WITH FAMILY AND FRIENDS |
| 2. WITH FAMILY | 5. WITH FELLOW WORKERS |
| 3. WITH FRIENDS | 6. OTHER |

Q-4. *Was this your first visit to the Grand Canyon?* (please circle one response).

- | | |
|--------|-------|
| 1. YES | 2. NO |
|--------|-------|

Q-5. *Which of the following American national parks have you visited?* (please circle as many as apply)

- | | |
|---|--------------------------------|
| 1. HAWAII VOLCANOES NATIONAL PARK | 6. BRYCE CANYON NATIONAL PARK |
| 2. HALEAKALA NATIONAL PARK | 7. MESA VERDE NATIONAL PARK |
| 3. YOSEMITE NATIONAL PARK | 8. ZION NATIONAL PARK |
| 4. PETRIFIED FOREST NATIONAL PARK | 9. OTHER NATIONAL PARKS |
| 5. SEQUOIA NATIONAL PARK AND KINGS CANYON NATIONAL PARK | 10. NO AMERICAN NATIONAL PARKS |

Grand Canyon Visitor Study

Q-6. Which of the following recreational activities do you participate in at your home? (please circle as many as apply)

- | | |
|------------------------|---|
| 1. PHOTOGRAPHY | 6. MOUNTAINEERING |
| 2. HIKING/WALKING | 7. HORSE-BACK RIDING |
| 3. CAMPING | 8. CANOEING AND RAFTING |
| 4. HUNTING AND FISHING | 9. DRIVING FOR PLEASURE |
| 5. NATURE STUDY | 10. VISITING PLACES OF SCENIC AND HISTORIC INTEREST |
| | 11. NONE OF THESE ACTIVITIES |

Q-7. Do you enjoy hiking/walking? (please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. What country are you from? (please write in the name of your country)

Q-9. What is your occupation? (please circle the occupation that best describes what you do)

- | | |
|-----------------|---------------|
| 1. PROFESSIONAL | 6. STUDENT |
| 2. CLERICAL | 7. RETIRED |
| 3. CRAFTSMAN | 8. UNEMPLOYED |
| 4. FARMER | 9. HOMEMAKER |
| 5. LABORER | 10. OTHER |

Q-10. What was your age on your last birthday? (please circle one age category)

- | | |
|----------|------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. OVER 65 |

Q-11. Are you male or female? (please circle one response)

- | | |
|---------|-----------|
| 1. MALE | 2. FEMALE |
|---------|-----------|

Thank you very much for your help in this study.

ID _____

Besucherstudie für das Grand Canyon

Guten Tag! Ich hoffe, Sie haben Ihren Besuch des Grand Canyons genossen. Ich führe eine Studie der Besucher des Grand Canyons durch und lege grossen Wert auf Ihre Eindrücke. Diese Studie wird von der Universität von Idaho (University of Idaho) geleitet. Die Ergebnisse dieser Studie sollen der Verbesserung der im Grand Canyon verfügbaren Dienstleistungen dienen.

Q-1. Was ist der Anlass Ihres Besuches der USA? (Bitte kreuzen Sie alles Zutreffende an)

- | | |
|--------------------------|-----------------------|
| 1. URLAUB | 4. GESCHÄFT |
| 2. BESUCH VON VERWANDTEN | 5. STUDIUM/AUSBILDUNG |
| 3. BESUCH VON FREUNDEN | 6. ANDERE |

Q-2. Von welcher Stelle erhielten Sie Auskunft über diese Grand Canyon Tour? (Bitte kreuzen Sie alles Zutreffende an)

- | | |
|----------------------------|-----------------------------------|
| 1. FREUNDE/VERWANDTE | 4. FIRMA/ARBEITSPLATZ |
| 2. REISEBÜRO | 5. REGIERUNGSSTELLE |
| 3. LUFTFAHRTGESELLSCHAFTEN | 6. BÜCHER/ZEITSCHRIFTEN/ZEITUNGEN |
| | 7. ANDERE |

Q-3. Wer begleitet Sie auf Ihrer Grand Canyon Tour? (Bitte kreuzen Sie alles Zutreffende an)

- | | |
|----------------------------|---|
| 1. KAM ALLEINE | 4. MIT FAMILIENANGEHÖRIGEN UND FREUNDEN |
| 2. MIT FAMILIENANGEHÖRIGEN | 5. MIT MITARBEITERN |
| 3. MIT FREUNDEN | 6. ANDERE |

Q-4. War dies Ihr erster Besuch des Grand Canyons? (Bitte kreuzen Sie eine Antwort an)

- | | |
|-------|---------|
| 1. JA | 2. NEIN |
|-------|---------|

Q-5. Welche der folgenden amerikanischen National parks haben Sie besucht? (Bitte kreuzen Sie alle an, die in Frage kommen)

- | | |
|---|---|
| 1. HAWAII VOLCANOES NATIONAL PARK | 6. BRYCE CANYON NATIONAL PARK |
| 2. HALEAKALA NATIONAL PARK | 7. MESA VERDE NATIONAL PARK |
| 3. YOSEMITE NATIONAL PARK | 8. ZION NATIONAL PARK |
| 4. PETRIFIED FOREST NATIONAL PARK | 9. ANDERE NATIONAL PARKS |
| 5. SEQUOIA NATIONAL PARK UND KINGS CANYON NATIONAL PARK | 10. KEINE AMERIKANISCHEN NATIONAL PARKS |

Grand Canyon Visitor Study

Q-6. Was sind Ihre Hobbies? (Bitte kreuzen Sie alles Zutreffende an)

- | | |
|-----------------------------|--|
| 1. FOTOGRAFIE | 6. BERGSTEIGEN |
| 2. WANDERN/SPAZIERENGEGEHEN | 7. REITEN |
| 3. ZELTEN | 8. KANUFAHREN, FLOSSFAHREN |
| 4. JAGEN, FISCHEN | 9. AUTOFAHREN |
| 5. NATURBEOBACHTUNG | 10. BILDUNGSREISEN (NATUR- UND KULTURSEHENSWÜRDIGKEITEN) |
| | 11. KEINE DIESER HOBBIES |

Q-7. Do you enjoy hiking/walking? (please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. Von welchem Land kommen Sie? (Bitte schreiben Sie den Namen Ihres Heimatlandes nieder)

Q-9. Was ist Ihr Beruf? (Bitte kreuzen Sie den Beruf an, der Ihre Tätigkeit am besten beschreibt)

- | | |
|-----------------|------------------|
| 1. AKADEMIKER | 6. STUDENT |
| 2. ANGESTELLTER | 7. RENTNER/-IN |
| 3. HANDWERKER | 8. UNBESCHÄFTIGT |
| 4. LANDWIRT | 9. HAUSFRAU |
| 5. ARBEITER | 10. ANDERE |

Q-10. Wie alt wurden Sie an Ihrem letzten Geburtstag? (Bitte kreuzen Sie eine Altersgruppe an)

- | | |
|----------|------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. ÜBER 65 |

Q-11. Was ist Ihr Geschlecht? (Bitte kreuzen Sie eine Antwort an)

- | | |
|-------------|-------------|
| 1. MÄNNLICH | 2. WEIBLICH |
|-------------|-------------|

Herzlichen Dank für Ihre Hilfe bei dieser Studie.

ID _____

Études sur les visiteurs du Grand Canyon

Bonjour! J'espère que vous avez aimé votre visite au Grand Canyon. Je dirige une étude sur les visiteurs du Grand Canyon et apprécierais grandement vos idées à ce sujet. Cette étude est sanctionnée par l'Université d'Idaho. Les résultats de cette étude seront utilisés dans le but d'améliorer les services disponibles aux visiteurs du Grand Canyon.

Q-1. *Quelle est la raison de votre visite aux Etats-Unis? (Veuillez encercler toute réponse applicable)*

- | | |
|------------------------|----------------------|
| 1. VOYAGE d'AGRÈMENT | 4. VOYAGE d'AFFAIRES |
| 2. VISITE À LA PARENTÉ | 5. ÉTUDES |
| 3. VISITE À DES AMIS | 6. AUTRE |

Q-2. *D'où avez-vous obtenu des renseignements sur cette visite au Grand Canyon? (Veuillez encercler toute réponse applicable)*

- | | |
|----------------------|-----------------------------|
| 1. AMIS/PARENTÉ | 4. LIEU d'EMPLOI |
| 2. AGENCE DE VOYAGES | 5. AGENCES GOUVERNEMENTALES |
| 3. LIGNE AÉRIENNE | 6. LIVRES/REVUES/JOURNAUX |
| | 7. AUTRE |

Q-3. *Avec qui êtes-vous venu au Grand Canyon? (Veuillez encercler toute réponse applicable)*

- | | |
|--------------------|--------------------------------|
| 1. SEUL | 4. AVEC LA FAMILLE ET DES AMIS |
| 2. AVEC LA FAMILLE | 5. AVEC DES COLLÈGUES |
| 3. AVEC DES AMIS | 6. AUTRE |

Q-4. *Était-ce votre première visite au Grand Canyon? (Veuillez n'encercler qu'une seule réponse)*

- | | |
|--------|--------|
| 1. OUI | 2. NON |
|--------|--------|

Q-5. *Le(s)quel(s) des parcs nationaux suivants avez-vous déjà visités? (Veuillez encercler toute réponse applicable)*

- | | |
|--|-----------------------------------|
| 1. PARC NATIONAL HAWAII VOLCANOES | 6. PARC NATIONAL BRYCE CANYON |
| 2. PARC NATIONAL HALEAKALA | 7. PARC NATIONAL MESA VERDE |
| 3. PARC NATIONAL YOSEMITE | 8. PARC NATIONAL ZION |
| 4. PARC NATIONAL PETRIFIED FOREST | 9. TOUT AUTRE PARC NATIONAL |
| 5. PARC NATIONAL SEQUOIA ET PARC NATIONAL KINGS CANYON | 10. AUCUN PARC NATIONAL AMÉRICAIN |

Grand Canyon Visitor Study

Q-6. A laquelle/lesquelles des activités suivantes prenez-vous part a la maison? (Veuillez encercler toute réponse applicable)

- | | |
|------------------------|---|
| 1. PHOTOGRAPHIE | 6. ALPINISME |
| 2. EXCURSION/MARCHE | 7. EQUITATION |
| 3. "CAMPING" | 8. CANOE/RADEAU |
| 4. CHASSE ET PÊCHE | 9. PROMENADE EN VOITURE |
| 5. SCIENCES NATURELLES | 10. VISITE DE SITES d'INTÉRÊT HISTORIQUE ET PANORAMIQUE |
| | 11. AUCUNE DE CES ACTIVITÉS |

Q-7. Do you enjoy hiking/walking? (Please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. Quel est votre pays d'origine? (Veuillez indiquer le nom de ce pays)

Q-9. Quelle est votre profession? (Veuillez encercler la profession qui décrit le mieux votre situation)

- | | |
|------------------|------------------------|
| 1. PROFESSIONNEL | 6. ÉTUDIANT |
| 2. COMMIS | 7. RETRAITÉ |
| 3. ARTISAN | 8. SANS EMPLOI |
| 4. AGRICULTEUR | 9. MAÎTRESSE DE MAISON |
| 5. OUVRIER | 10. AUTRE |

Q-10. Quel âge avez-vous? (Veuillez n'encercler qu'une seule catégorie)

- | | |
|----------|---------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. 66 ET PLUS |

Q-11. Êtes-vous mâle ou femelle? (Veuillez n'encercler qu'une seule réponse)

- | | |
|---------|------------|
| 1. MÂLE | 2. FEMELLE |
|---------|------------|

Merci pour votre participation à cette étude.

ID _____

Encuesta a Visitantes al "Grand Canyon"

¡Hola! Espero que estén disfrutando su estadía en el Grand Canyon. Yo estoy llevando a cabo un estudio aquí en el Grand Canyon y agradecería muchísimo sus opiniones sobre su visita. Este estudio es dirigido por la Universidad de Idaho. Los resultados de este estudio serán empleados para mejorar los servicios disponibles a los visitantes del Grand Canyon.

Q-1. ¿Cuál son las razones de su visita a los Estados Unidos? (Por favor marque con círculo las respuestas que sean necesarias)

- | | |
|-----------------------|------------------------|
| 1. VACACIONES | 4. NEGOCIOS |
| 2. VISITAR FAMILIARES | 5. ESTUDIOS ACADÉMICOS |
| 3. VISITAR AMIGOS | 6. OTRAS RAZONES |

Q-2. ¿A través de qué fuentes recibió la información de la gira al "Grand Canyon"? (Por favor marque con círculo las respuestas que sean necesarias)

- | | |
|--------------------------|-------------------------------|
| 1. AMIGOS/FAMILIARES | 4. LUGAR DE EMPLEO |
| 2. AGENCIAS DE VIAJE | 5. OFICINAS GUBERNAMENTALES |
| 3. AEROLÍNEAS (OFICINAS) | 6. LIBROS/REVISTAS/PERIÓDICOS |
| | 7. OTROS |

Q-3. ¿Quién lo acompaña en esta gira al "Grand Canyon"? (Por favor marque con círculo las respuestas que sean necesarias)

- | | |
|-------------------|------------------------------|
| 1. VINE SOLO | 4. CON AMIGOS Y FAMILIARES |
| 2. CON FAMILIARES | 5. CON COMPAÑEROS DE TRABAJO |
| 3. CON AMIGOS | 6. OTROS |

Q-4. ¿Es ésta su primera visita al "Grand Canyon"? (Por favor marque con círculo una respuesta)

- | | |
|-------|-------|
| 1. SÍ | 2. NO |
|-------|-------|

Q-5. ¿Cuál de los siguientes Parques Nacionales Norteamericanos la Ud. visitado? (Por favor marque con círculo las respuestas que le sean necesarias)

- | | |
|---|---|
| 1. "HAWAII VOLCANOES NATIONAL PARK" | 6. "BRYCE CANYON NATIONAL PARK" |
| 2. "HALEAKALA NATIONAL PARK" | 7. "MESA VERDE NATIONAL PARK" |
| 3. "YOSEMITE NATIONAL PARK" | 8. "ZION NATIONAL PARK" |
| 4. "PETRIFIED FOREST NATIONAL PARK" | 9. OTROS PARQUES NACIONALES |
| 5. "SEQUOIA NATIONAL PARK AND KINGS CANYON NATIONAL PARK" | 10. NINGÚN PARQUE NACIONAL NORTEAMERICANO |

Grand Canyon Visitor Study

Q-6. ¿En cuál de las siguientes actividades participa Ud. en su país. (Por favor marque con círculo más de una actividad si le es necesaria).

- | | |
|------------------------------|--|
| 1. FOTOGRAFÍA | 6. ALPINISMO |
| 2. CAMINATAS | 7. EQUITACION |
| 3. ACAMPAR | 8. REMA O FLOTA EN CANOA O Balsa |
| 4. CAZA Y PESCO | 9. MANEA POR DIVERSIÓN |
| 5. ESTUDIOS DE LA NATURALEZA | 10. VISITAS A LUGARES DE PAISAJES E INTERÉS HISTÓRICOS |
| | 11. NINGUNA DE LAS ACTIVIDADES ANTERIORES |

Q-7. Do you enjoy hiking/walking? (please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. ¿En qué país reside Ud.? (Por favor escriba el nombre de su país)

Q-9. ¿Cuál es su ocupación? (Por favor marque con círculo la ocupación que mejor describa su oficio).

- | | |
|-------------------------------------|----------------|
| 1. PROFESIONAL | 6. ESTUDIANTE |
| 2. EMPLEADO DE OFICINA O DE ALMACEN | 7. JUBILADO |
| 3. ARTESANO | 8. DESEMPLEADO |
| 4. AGRICULTOR | 9. AMA DE CASA |
| 5. TRABAJADOR | 10. OTRA |

Q-10. ¿Qué edad cumplió en su último cumpleaños? (Por favor marque con círculo solamente una categoría)

- | | |
|----------|--------------|
| 1. 18-25 | 3. 46-65 |
| 2. 26-45 | 4. MÁS DE 65 |

Q-11. ¿Es Ud. hombre o mujer? (Por favor marque con círculo)

- | | |
|--------------|-------------|
| 1. MASCULINO | 2. FEMENINO |
|--------------|-------------|

Muchas gracias por su participación.

グランドキャニオン旅行者アンケート ID _____

ようこそ。皆様グランドキャニオンを お楽しみになっ
ていていることと思ひます。

アイダホ大学では、今、グランドキャニオン旅行
者のアンケート調査を行つております。このアン
ケートは これからの旅行者へのサービス向上の為
資料として使用されます。調査に、ご協力お願い致
します。

(以下の質問に当てはまる 答えの番号を、○で囲っ
て下さい。答えは二つ以上でもかまいません。)

Q-1 渡米の目的。

- | | |
|------------|----------|
| 1. 休暇。 | 4. ビジネス。 |
| 2. 親戚を訪ねる。 | 5. 留学。 |
| 3. 友人を訪ねる。 | 6. その他。 |

Q-2. どこでグランドキャニオンのインフォメーション
を得ましたか。

- | | |
|-----------|-------------|
| 1. 友人、親戚。 | 4. 職場。 |
| 2. 旅行代理者。 | 5. 政府機関。 |
| 3. 航空会社。 | 6. 本、雑誌、新聞。 |
| | 7. その他。 |

Q-3 誰とグランドキャニオンに来ましたか。

- | | |
|--------|-----------|
| 1. 個人。 | 4. 家族と友人。 |
| 2. 家族。 | 5. 職場の同僚。 |
| 3. 友人。 | 6. その他。 |

Q-4 グランドキャニオンに来たのは初めてですか。

- | | |
|--------|---------|
| 1. はい。 | 2. いいえ。 |
|--------|---------|

Q-5 次のどの公園に行きましたか。

- | | |
|----------------------------------|-------------------|
| 1. ハワイ火山国立公園。 | 6. グライスキャニオン国立公園。 |
| 2. ハレアカラ国立公園。 | 7. メサベルデ国立公園。 |
| 3. ヨセミテ国立公園。 | 8. ザイオン国立公園。 |
| 4. ゲトリフォイ フォレスト
国立公園。 | 9. 上記以外の国立公園。 |
| 5. セコイヤ 国立公園と
キングス キャニオン国立公園。 | 10. 訪問していない。 |

Q-6 日本では 休暇に次のどの活動を楽しみますか。

- | | |
|------------|-------------------|
| 1. 写真. | 6. 登山. |
| 2. ハイキング. | 7. 乗馬. |
| 3. キャンプ. | 8. カヌー. イカダ下り. |
| 4. 狩猟. 釣り. | 9. ドライブ. |
| 5. 自然観察. | 10. 名所旧跡めぐり. |
| | 11. 上記の活動には経験がない. |

Q-7. Do you enjoy hiking/walking? (please write your answer)

If so, where do you like to hike (walk)? (please write your answer)

Q-8. 国籍. (国名を書いて下さい)

Q-9. 職業.

- | | |
|---------|----------|
| 1. 専門職. | 6. 学生. |
| 2. 事務職. | 7. 退職者. |
| 3. 技術職. | 8. 失業中. |
| 4. 農業. | 9. 主婦. |
| 5. 労務. | 10. その他. |

Q-10. 年齢.

- | | |
|-----------|-----------|
| 1. 18-25. | 3. 46-65. |
| 2. 26-45. | 4. 65歳以上. |

Q-11. 性別.

- | | |
|--------|--------|
| 1. 男性. | 2. 女性. |
|--------|--------|

(ご協力有難うございました。)

**TIME BUDGETS FOR SPECIFIC ACTIVITIES
OF VISITORS IN ORGANIZED TOUR GROUPS**

Date _____

Nationality _____

Weather _____

Time of Day	Activity	Initiator	Obligatory Maintenance or Free	Location	Additional Comments
:00					
:05					
:10					
:15					
:20					
:25					

APPENDIX II

A NOTE ON THE STATISTICS USED IN THIS STUDY

This study used a variety of statistical techniques. The following paragraphs describe these in some detail. Non-parametric statistics were used for both the time budget (N=40) and questionnaire (N=908) data for two reasons. The low number of tours and lack of knowledge concerning the distribution of the population required that "distribution-free" tests be used. This was especially true for the questionnaire data, where a normal distribution was not expected due to the stratified sample. The SPSS computer program and its update 7-9 were used for all computations.

For the time-budget data, the Kruskal-Wallis H test (one-way analysis of variance) was used. The Kruskal-Wallis H test is helpful in determining whether differences between several samples (in this case the nationalities) are statistically significant or merely due to chance variations. It is based on a substitution of ranks for the original observations, and the H statistic was corrected for ties.

When the Kruskal-Wallis H test revealed significant differences, the Mann-Whitney U was used to better specify the location of such differences. Mann-Whitney U tests whether two samples are from the same population. Ranks are substituted for observed values, the scores are corrected for ties, and a two-tailed probability is computed.

With the questionnaire data, two approaches were taken, depending on the independence of each observation. If the question allowed only one response per visitor, the Chi-square was used to test for statistically significant differences between nationalities, and Lambda was used to measure the strength of the association between independent and dependent variables. For the Chi-square analysis, the SPSS program automatically controls for degrees of freedom and provides a significance level. The

asymmetric Lambda was used, since the dependent variable was known in each analysis.

For those questions that allowed repeated measures, i.e. visitors were able to answer in several ways, the Friedman test was used. It provides an analysis of variance based on ranks, without the assumption of independent observations. The Friedman Chi-square, degrees of freedom and significance level were all computed by the SPSS program. Its interpretation slightly differs from other Chi-square tests, since the null hypothesis is that the rank order for K variables is the same for each sample. A significant Chi-square implies that the order for K variable is statistically significant; the test ignores differences in the actual observations.

Readers are referred to Nie et al. (1975) and Hull and Nie (1981) for details on the SPSS program, and to Marascuilo and McSweeney (1977) for details on the non-parametric tests.

APPENDIX III

MANN-WHITNEY U RESULTS FOR SELECTED CROSS TABULATIONS

This appendix provides the results of the Mann-Whitney U tests conducted for all cross-tabulations that had significant Kruskal-Wallis H tests.

Table A1. Mann-Whitney U Z Scores for Time Spent Photographing, by Nationality.^a

Tour Groups	Japanese	French	Mixed	Other
Japanese	--	--	--	--
French	-2.27	--	--	--
Mixed	-3.15	NS	--	--
Other	-2.80	NS	NS	--

^aSignificant at $p < .05$ level.

Table A2. Mann-Whitney U Z Scores for Time Spent Shopping, by Nationality.^a

Tour Groups	Japanese	French	Mixed	Other
Japanese	--	--	--	--
French	-2.47	--	--	--
Mixed	-2.80	NS	--	--
Other	-2.06	NS	NS	--

^aSignificant at $p < .05$ level.Table A3. Mann-Whitney U Z Scores for Time Spent Viewing Scenery, by Nationality.^a

Tour Groups	Japanese	French	Mixed	Other
Japanese	--	--	--	--
French	-5.21	--	--	--
Mixed	-6.71	NS	--	--
Other	-4.39	NS	NS	--

^aSignificant at $p < .05$ level.

Table A4. Mann-Whitney U Z Scores for Time Spent at Yavapai, by Nationality.^a

Tour Groups	Japanese	French	Mixed	Other
Japanese	--	--	--	--
French	-2.90	--	--	--
Mixed	NS	-3.05	--	--
Other	NS	-3.19	NS	--

^aSignificant at $p < .05$ level.Table A5. Mann-Whitney U Z Scores for Time Spent at Bright Angel Lodge, by Nationality.^a

Tour Groups	Japanese	French	Mixed	Other
Japanese	--	--	--	--
French	NS	--	--	--
Mixed	-5.61	-4.88	--	--
Other	-3.88	-3.38	NS	--

^aSignificant at $p < .05$ level.