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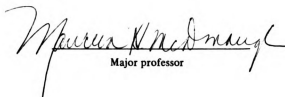
COMMUNICATION NETWORKS OF VISITORS TO RECREATION
LOCATION: LONG THE GREAT LAKES IMPLICATIONS
FOR INCREASING TOURISM

presented by

Cathlyn Eve Eckstein

has been accepted towards fulfillment
of the requirements for

Master of Science degree in Park and Recreation
Resources


Major professor

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COMMUNICATION NETWORKS OF VISITORS TO RECREATION LOCATIONS
ALONG THE GREAT LAKES: IMPLICATIONS FOR
INCREASING TOURISM

By

Cathlyn Eve Eckstein

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ABSTRACT

COMMUNICATION NETWORKS OF VISITORS TO RECREATION LOCATIONS ALONG THE GREAT LAKES: IMPLICATIONS FOR INCREASING TOURISM IN MICHIGAN

By

Cathlyn Eve Eckstein

This study examines communication networks of visitors in travelling groups to recreation locations. Kinds and sources of information are identified for before trip and upon arrival phases of vacation travel. Several variables possibly influencing information networking are examined.

Data was collected during summer 1982 at campgrounds and resorts in the Frankfort area on Lake Michigan and the Tawas area on Lake Huron in Michigan. Personal interviews and self-administered questionnaires were conducted to determine which format was best suited to collecting the data.

Results suggest information networking about recreation opportunities is highly informal. Interpersonal communication by visitors with their travelling group, family, friends and employees at the place they are staying represent most frequently used information sources. Kinds and sources of information are highly influenced by the variables phase of trip, location and number of visits. Implications for increasing tourism in Michigan are discussed.

In loving memory of my grandfather,
Jacob A. Gordon

)

ACKNOWLEDGMENTS

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My thanks to the members of my committee, including Dr. Maureen McDonough, Dr. Daniel Stynes, and Dr. Richard Farace for their ideas and assistance. A special thanks to Dr. McDonough, my major advisor, for her continued guidance and input.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	vi
LIST OF FIGURES	viii
INTRODUCTION	1
PROBLEM JUSTIFICATION	4
Information Sources in Outdoor Recreation Studies	5
Communication Network Research - An Overview	6
Marketing Communication and the Consumer	11
Communication Networks in Outdoor Recreation and Tourism	14
STUDY OBJECTIVES	18
METHODS AND PROCEDURES	19
Introduction	19
Study Design	20
Study Area	21
Site Selection	21
Site Description	23
Contact Locations	27
Research Instruments	30
Questionnaire Development	30
Pretesting the Questionnaires	33
Sampling Procedure	35
Administration of Questionnaires	36
Analysis Procedure for Questionnaires	39
Limitations and Contributions	39
RESULTS AND DISCUSSION	42
Introduction	42
Where Visitors First Learn	43
Kinds of Information	45
Kinds of Information Received Before Trip	46
Kinds of Information Received Upon Arrival	48
Comparisons Between Kinds of Information Received Before Trip and Upon Arrival	49
Kinds of Information Received by Repeat Visitors	50

Sources of Information	50
Sources of Information Before Trip	52
Sources of Information Upon Arrival	53
Comparisons Between Sources of Information Before Trip and Upon Arrival	56
Sources of Information Used by Repeat Visitors	57
Sources Used for Kinds of Information	59
Most Frequently Used Sources for Kinds of Information Before Trip	59
Most Frequently Used Sources for Kinds of Information Upon Arrival	62
Variables Influencing Information Networking	64
Sex	71
Location	73
Age Group	76
Number of Visits	76
Type of Group	80
Role in Group	81
Summary of Variable Influence on Information Networking	85
CONCLUSIONS AND SUGGESTIONS	87
Conclusions and Implications	87
Limitations and Research Directions	94
APPENDICES	
Appendix A	97
Appendix B	98
Appendix C	112
LITERATURE CITED	124

LIST OF TABLES

Table	Page
1. Format Option and Color Coding Scheme for Type of Questionnaire	37
2. Where Visitors First Learn	44
3. Kinds of Information Received Before Trip, Combined Frankfort and Tawas Areas	47
4. Kinds of Information Received Upon Arrival, Combined Frankfort and Tawas Areas	48
5. Kinds of Information Received by Repeat Visitors, Combined Frankfort and Tawas Areas	51
6. Sources of Information Before Trip, Combined Frankfort and Tawas Areas	52
7. Sources of Information Upon Arrival, Combined Frankfort and Tawas Areas	54
8. Sources of Information Used by Repeat Visitors, Combined Frankfort and Tawas Areas	58
9. Most Frequently Used Sources, Ranked (1-3), for Kinds of Information Before Trip, Combined Frankfort and Tawas Areas	61
10. Most Frequently Used Sources, Ranked (1-3), for Kinds of Information Upon Arrival, Combined Frankfort and Tawas Areas	63
11. Summary of Variable Categories	65
12. Frequencies (%) of Respondents According to Variable Categories for Kinds of Information Received Before Trip	67
13. Frequencies (%) of Respondents According to Variable Categories for Sources of Information Before Trip . . .	68
14. Frequencies (%) of Respondents According to Variable Categories for Kinds of Information Received Upon Arrival	69

LIST OF TABLES (Continued)

Table	Page
15. Frequencies (%) of Respondents According to Variable Categories for Sources of Information Upon Arrival . . .	70
16. Summary of Variable Influence on Information Networking Before Trip and Upon Arrival	86

LIST OF FIGURES

Figure	Page
1. Time Line of Study Tasks	22
2. Location of Frankfort and Tawas	24
3. Frankfort Area	26
4. Tawas Area	28
5. Contact Locations in Frankfort Area	29
6. Contact Locations in Tawas Area	31

INTRODUCTION

Although water is an important factor in attracting visitors to an area for waterbased activities, it also provides a strong attraction for activities not physically related to the resource (Cheek and Field, 1977; McDonough, 1979). This would indicate that the Great Lakes have potential for increasing the amount of tourism and associated outdoor recreation occurring in Michigan. Maximizing the potential of the Great Lakes resource base for recreation and tourism has become increasingly important to Michigan with diversification of the state's economy. If the tourism and recreation industries in Michigan wish to encourage more use of the Great Lakes recreation resources as a viable economic alternative towards alleviating a depressed economy, then they need to become cognizant of where people are obtaining information about these resources. The problem becomes one of determining the best mechanism for encouragement of more recreational use of Michigan Great Lakes.

Both formal and informal communication channels are used to transmit information. Formal channels are mass media channels, which are all those means of transmitting messages involving a mass medium--such as radio, television, film, newspapers, magazines, and so on. Mass media channels enable a source of one or more individuals to reach a large audience. Informal communication channels are interpersonal channels, which are those that involve a face-to-face exchange between two or more individuals (Rogers and Shoemaker, 1971).

The Michigan tourism industry devotes much of its energy to

mass media types of communication to attract in-state and out-of-state tourists. An example of this is the present "Say Yes to Michigan" campaign--a ten million dollar investment in mass media communications by the Michigan Travel Bureau to promote more tourism in the state. However, the mass media approach to information accessing may not be the most effective approach available.

There is general agreement that tourist information needs to be targeted at the right markets or audiences. However, to effectively use information to generate and manage tourism, the information needs to be sent out through the channels that people use to get their information. In order to do this, one must first realize that different kinds of people respond to different channels as a result of different communication behavior. This means people are being selective in the channels they use for different situations. Therefore, it is necessary to understand the communication behavior of the particular audience that is targeted. Potential visitors to a recreation site are no exception. What channels are used by this group?

It seems that almost all people depend heavily on interpersonal communication channels to receive information that is needed in making important decisions. Knowing whom to obtain such information from becomes a critical quality for individual effectiveness in today's society (Rogers and Kincaid, 1981).

Communication networks are used by individuals for a wide range of informational needs. By definition, a communication network consists of inter-connected individuals who are linked by patterned flows of information (Rogers and Kincaid, 1981). There are indications that potential visitors to a recreation site, through interpersonal communication channels, use communication networks to find initial information

on recreation opportunities as well as to aid them in the decision-making process of choosing a recreation location. But it is presently unclear how these communication networks operate in the tourism/recreation area and how they tie into more formal communication systems.

Knowledge about communication networks concerning recreation opportunities along the Great Lakes is crucial to those interests concerned with disseminating information about these resources. This type of knowledge makes it possible to tie informal information sources into existing formal information systems, thus establishing a more complete picture of the various communication links involved in information dissemination. A study of information sources and communication networks of visitors to coastal areas Michigan will hopefully facilitate the means for more effective communication with users of the Great lakes by enabling government and commercial enterprises to target specific audiences with the type of recreation information they need or want to know.

PROBLEM JUSTIFICATION

When people choose a recreation vacation location they differentially distribute themselves across sites. Not everyone goes to the same place or even the same types of places. In the past two decades much research has focused on identifying variables that explain the way this self-distribution occurs. The traditional use of socioeconomic and demographic variables such as age, income, sex and race furnish incomplete explanations of the extremely diverse behavior possibilities in outdoor recreation participation (Stynes, Bevins and Brown, 1980; Burch, 1969). Travel distance to a recreation site is another factor which is used to explain recreation participation behavior. The gravity model has been used in numerous studies to relate use of a particular recreation site to distance traveled to the site, showing that use of a particular site decreases as the distance traveled to that site increases (Moeller and Echelberger, 1974). Yet these factors have only partially explained participation variation in recreation. Age of individuals and the social group with whom one participates have been better able to explain the variation (Field and O'Leary, 1973; Dottavio, O'Leary and Koth, 1980). Other literature recognizes that social interaction is an important motivation for recreation participation (Knopp, 1972; Crandall, 1979; Burch, 1969; Crompton, 1981). Still other factors found relevant in determining recreation participation behavior are differences in personality traits and perceptions of environmental elements of a site (Driver and Knopf, 1977; Knopp, 1972).

Another factor that would seem to be of some significance is information.

Information Sources in Outdoor Recreation Studies

Many recreation studies have included questions that ask where visitors learned about the site they visited. The results indicate that a majority of people receive information through interpersonal communication channels of friends or family. For example, in a visitor study of reservoir users of Coulee Dam National Recreation Area in Washington, 50.7% learned about the site from family and friends (McDonough, 1979). In another study on park familiarity of Lansing Michigan residents about their city park system, approximately 42% learned about six different parks through interpersonal channels of friends, family or acquaintances (Spotts and Stynes, 1982a). A study evaluating off-road vehicle (ORV) information and education programs in Michigan National Forests found that 39% of ORV users received information through interpersonal channels (Dorman and Fridgen, 1980). And finally, a 1980 visitor survey on Michigan Travel Information Center users found that 45% used friends and relatives as sources of information for trip planning.

These studies and others dealing with information use among tourists have tended to only list different sources used. No systematic inquiry was used to determine why tourists tend to rely more heavily on some sources than others. As a step in this direction, Nolan (1976) explored the use of the travel information system from the tourist's point of view. Results of the study were based on a sample of resort visitors and state visitors in Tennessee. In an overall ranking of travel information sources used by resort and state visitors, the advice of friends and relatives ranked highest, guidebooks ranked second, and commercial tourist information and promotional publications ranked

third. The study goes beyond mere listing of information sources used by tourists by investigating the credibility of these sources in the tourist's point of view. Results of an overall ranking of travel information source credibility by resort and state visitors indicated that guidebooks ranked highest, official state or other government tourist information ranked second and Automobile Club trip planning services ranked third. The discrepancy between information use and credibility indicates that those sources used most frequently by tourists are not the most credible ones. Nolan attributes this lack of consistency to the idea that people are likely to select their travel information sources beyond personal communication on the basis of perceived utility, not attributed credibility. In short, the tourist recognizes the bias and promotional distortions in some travel information sources while finding information offered by those sources to be useful.

These studies suggest that an important informal communication network exists with respect to outdoor recreation. However, it is unclear how these informal channels operate and how they tie into the formal systems such as mass media and tourism literature. Although these informal communication networks are unclear with respect to recreation and tourism, their importance is reflected in voluminous amounts of research from areas outside this field.

Communication Network Research - An Overview

The theoretical significance of networks in affecting behavior had its historical roots in literature of the German sociologist, George Simmel in 1922 (1964). Simmel's concern was with how an individual's "group affiliations" (links) in "social circles" (networks) affect the individual's behavior. It was not until 1934 that Moreno provided

methodological tools to measure network variables. He pioneered the concept of sociometry, the means by which quantitative data about communication patterns among individuals in a system are obtained. In his book, "Who Shall Survive?" (1934), Moreno applied sociometry in studies of small groups and laid the groundwork for present-day network analysis. Sociometric data was used to provide sociograms, which are graphic presentations of communication patterns of individuals in a system.

The sociogram proved most useful for illustrating the structure of a small system and tended to become chaotic when analyzing larger systems. Methodological advances were made with the development of the sociomatrix by Forsyth and Katz (1946) in order to make possible a more detailed and orderly analysis of sociometric data. Another methodological approach to complex network representation was devised by Levine (1972) to depict interlocking directorates of major banks. Unidimensional unfolded scaling was used to compress network information into a spherical map.

Considerable progress was made with the techniques of sociometry in the 1960's. The advent of computer-based analysis of behavioral data made possible the use of large-scale surveys. In the 1970's, a theoretical interest in communication structure or process involved in networking brought a resurgence to network analysis research when specific computer programs, such as NEGOPY and CONCOR, were developed (See Rogers and Kincaid, 1981, Ch. 4).

Meanwhile, in the early 1950's, research was pioneered by Jacobson and Seashore (1951) to analyze communications in formal organizations. In this investigation and others following it, a major thrust was to analyze the interpersonal communication flows among the members of an organization in order to identify such things as dyads, cliques,

liaisons and bridges linking cliques, as well as other aspects of communication structure (Weiss and Jacobson, 1955; Davis, 1953; Blau, 1962; Schwartz, 1968; Amend, 1971).

Another type of research concentrated on the concept of opinion leadership, the degree to which an individual is able to informally influence other peoples' attitudes or behavior. The opinion leader concept was originated by Lazarsfeld and others (1948) in their study of a presidential campaign in Erie, Ohio. They postulated a "two-step flow of communications" in which information is transmitted from the media to opinion leaders and from them to their followers. This supported the idea that people rarely act on mass media information unless it is also transmitted through interpersonal channels (Katz and Lazarsfeld, 1955; Rogers, 1962). In fact, further research has shown that the more personal the communication, the more persuasive it is (Rogers and Shoemaker, 1971).

Early studies of opinion leaders concentrated on identifying their traits, as distinctive from those of their followers. A synthesis of several hundred opinion leadership studies was done by Rogers and Shoemaker (1971) in which the following generalizations were made:

"Compared to followers, opinion leaders have greater mass media exposure, more cosmopolitaness, greater change agent contact, greater social participation, higher social status and more innovativeness. Opinion leaders conform more closely to a system's norms than their followers. When the system's norms favor change, opinion leaders are more innovative. . . "

In these studies, opinion leadership was measured by the number of sociometric choices received directly by an individual in a system.

These studies established who opinion leaders were and how they differed from nonleaders, but were limited in scope because they told nothing about the process through which ideas flowed from opinion leaders

to their followers. Breakthroughs occurred when scholars started plotting sociograms of communication among members of a system in a "whom to whom" matrix (Forsyth and Katz, 1946). This facilitated identification of cliques (subgroups) within the total system and of specialized communication roles of individuals linking two or more cliques. The focus of research shifted from the individual as the unit of analysis to the network itself.

Results of network studies have shown that the most fundamental principal of human communication is that the exchange of ideas most frequently occurs between transceivers who are homophilous (similar) (Rogers and Kincaid, 1981). This is because more effective communication occurs when transceivers share similar characteristics, common meanings and mutual value position. For new ideas to diffuse, dyadic communication must connect individuals who are somewhat heterophilous (different) (Lauman, 1973). This concept can be referred to as the "strength of weak ties", the basic proposition being that the information exchange potential of dyadic communication is related to the degree of heterophily between transceivers (Granovetter, 1973). In other words, a new idea is communicated to more individuals when passed through heterophilous (weak) links rather than homophilous (strong) links. Granovetter relates the following example to clarify this statement:

"If one tells a rumor to all his close friends, and they do likewise, many will hear the rumor a second and third time, since those linked by strong ties tend to share friends. If motivation to spread the rumor is dampened a bit on each wave of retelling, then the rumor moving through strong ties is much more likely to be limited. . . than that going via weak ones."

The importance of heterophilous links in information transfer is supported by a study done by Erbe (1962). He researched the diffusion of information among a national sample of graduate students by

looking at the influence of the range of social contacts and membership in an informal group. Results indicated that information is more diffused in departments whose students possess a wide range of social contacts and membership in informal groups. In a more recent study on how people find jobs, Granovetter (1974) found that the majority of job information is passed through weak ties. Fifty-six percent found jobs through personal contacts, and of this group 31% indicated the contact was a family or social one and 69% named a work contact. Furthermore, only 17% of those who found jobs through personal contacts had frequent interaction with their contacts. Such is the strength of weak ties.

Other communication network studies have shown significant findings in the role of information transfer. Kincaid (1972) found that sources of family planning information was one of the factors directly affecting family planning knowledge among migrants on the periphery of Mexico City. He also found that the majority of migrants (83%) relied upon their friends for information, while mass media played an insignificant role in disseminating family planning information. Coleman, Katz and Menzel (1966) studied the adoption rate of a new drug among physicians. They found that early adopters tend to be greatly influenced by media originating outside the community while late adopters are more likely influenced by interpersonal source. Furthermore, they found that information must be carried through commercial channels and legitimization through colleagues and friends must take place before doctors who were late adopters accepted the new drug. This study was instrumental in pointing out that different communication channels and information sources are utilized according to adopter categories in the innovation process.

Marketing Communication and the Consumer

Another relevant field deals with consumer purchasing decisions. Studying consumer behavior involves the behavioral concept of information seeking. Information-seeking receives a great deal of attention from marketing researchers because consumers may be active rather than passive participants in the marketing communication process. The amount of perceived conflict (anxiety, risk, uncertainty, etc.) associated with purchasing a product together with the attractiveness of the available information sources will determine the extensiveness of the search (Hansen, 1972). These factors are also important determinants of what information the consumer will select when making purchasing decisions. The attractiveness of the available information alternatives is particularly important and is influenced by three major factors: 1) the effort needed to obtain the information; 2) the time pressure resulting from postponing the choice; and 3) the likelihood that the information will prove useful (Hansen, 1972).

Jefferson (1972) describes a study concerned with the extent to which consumers search for information about consumer products through interpersonal communication channels. Product ownership was found to be a stimulus to buyers who use word-of-mouth communication. In other words, those individuals owning a particular product may be sought by a potential buyer for information needed in the decision to purchase that product. The study also concluded that consumers often volunteer product information to potential buyers through interpersonal communication channels. In this study, it is also shown that the trustworthiness and expertise of the communicator are particularly important.

Information selectivity is another important topic in communication theory of marketing. Studies of media habits, advertising

recognition and recall have found selectivity occurs in exposure to mass media, and studies dealing with personal influence have reported selectivity in exposure to personal communication (Arndt, 1967). Selectivity implies that people are biased in the material to which they become exposed, read and understand and also in what they learn and remember (Hansen, 1972). Bias in the material to which they become exposed may also result from limited availability of informational material, and this may be one of the major reasons for apparent consumer selectivity in recreational opportunities.

Another area of research in the marketing field is concerned with family consumption behavior. Most of this research has focused on the family decision-making behavior, centering on the role structure of the family and thus on husband/wife influence of power (Cox, 1975). Some studies have indicated that power is fairly equally divided, though generally slightly in favor of the husband, while other studies have suggested that influence is not uniformly distributed throughout all areas of family decision-making (Cox, 1975). A study done by Jenkins (1978) supports the idea that dominance is not uniformly distributed in the family vacation decision-making process. Results of the study indicated that the dominance of either spouse in vacation decision-making depended entirely upon the particular decision. Wives perceived husbands to be dominant in decisions regarding information collection about the trip, length of vacation, date of vacation, and amount of money to spend. The wife and husband had equal influence in whether to take the children, mode of transportation, kinds of activities, and a selection of lodging and destination points. This study also explored the influence of children in the vacation decision-making as perceived by the parents. Children are perceived to exert considerable influence

in vacation decision-making, with greatest influence exerted in deciding upon the kinds of vacation activities for the family. Children also exerted considerable influence in deciding upon destination points, whether they would go on vacation and actual date of vacation. Both spouses felt children had relatively little influence in deciding on information collection about the trip. When asked to rank different sources of information as to their importance in the family's vacation planning, respondents (husband and wife teams) indicated either members of the immediate family or close relatives as being the most important sources of information about vacation alternatives. Friends of the family and the American Automobile Association were also used frequently in collecting various aspects of information on vacation possibilities.

A similar study by Myers (1974) on decision-making patterns of travel consumers in the midwest supports Jenkin's study. The major findings of Myer's research were that destination and lodging decisions were found to most frequently be democratic between spouses. Myers also found that patterns of decision-making between parents and children are largely a function of age of the children, with increasing age corresponding to greater influence in family decision-making. Close to one half of the respondent families did allow children a full voice in reaching the decision, but only six percent allowed children to dominate the decision.

Another relatively "new" research field closely related to family decision-making patterns is that of communication networks about recreation opportunities in outdoor recreation and tourism.

Communication Networks in Outdoor Recreation and Tourism

Hodgson (1979) proposed a model of communication processes in outdoor recreation experiences in which the ideas of innovation diffusion of Rogers and Shoemaker (1971) are combined with Clawson and Knetch's (1966) description of a recreation experience. Innovation diffusion research has identified several steps in the innovation decision process that may apply to recreation as well. These steps are knowledge, during which the consumer becomes aware of the alternatives; persuasion, during which the consumer forms attitudes about the alternatives; decision, during which the consumer makes a choice among alternatives; and confirmation, when the consumer seeks reinforcement for the choice made (Rogers and Shoemaker, 1971). Different communication channels and information sources function at different stages in the receiver's innovation decision process. Mass media channels are relatively more important at the knowledge function whereas interpersonal channels are relatively more important at the persuasion function. Continued information seeking often occurs throughout the confirmation function because the individual seeks to reinforce his/her decision. The outdoor recreation experience is described by Clawson and Knetch as a series of stages: anticipation; travel to; on site experiences; travel from; and recollection. Since consumer activities are different at each stage, one would expect information needs to be different. In addition, the anticipation stage presumes some sort of decision has already been made. Therefore, these five stages should be preceded by a decision stage during which the consumer makes choices among the alternative recreational opportunities available.

Hodgson suggests that people use different information sources at various phases in their recreation experiences similar to innovation

diffusion. Both interpersonal and mass media sources operate at the knowledge stage; mostly interpersonal sources are used at the decision stage; and at the anticipation stage mass media sources become important. It is unclear which communication channels are being used during the time of travel to a location. During the onsite experience in interpersonal sources are most important.

In addition to the use of interpersonal and mass media sources in the various phases of the recreation experience, a recent study by Cockrell (1981) on wild river recreationists suggests that personal experience can also be an information source. It was found that social influences determined variations in information sources of experienced and inexperienced river runners. As individuals gained experience as river runners, there is a shift in reliance on friends, family and working companions as important information sources to personal experiences and other experienced individuals.

Another study supporting personal experience as an information source outside the recreation field was done by Jefferson (1972) on new-car buyers. He found that buyers of new cars with no previous new-car buying experience relied more heavily on printed media than did new-car buyers who had previous buying experience. Jefferson attributes this to the observation that the consumer purchasing a new car for the first time does not have information from personal experience and must seek information from other sources to reduce uncertainty that accompanies the decision to buy a car.

Information sources may vary not only according to the phase of the recreational experience but also in terms of the type of person engaged in that experience. In the tourism advertising area, the major concern is at whom should the promotional effort be aimed and what and

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how it should be said to the prospective tourist. Several target markets or segments emerge at which various promotional or advertising strategies are aimed. In a study on advertising messages, Calantone and others (1980) have identified five segments of the tourism market: 1) frequent visitors; 2) sightseers; 3) sports and relaxation; 4) young nature buffs; and 5) representative subgroups (which are those individuals who could not be categorized into one of the other segments). These segments were categorized according to principal benefits sought, purpose of trip, and demographic and socioeconomic characteristics. Each of these segments use different media sources and therefore require different advertising and promotional tactics. The study found that communication behavior of frequent visitors was such that this group showed little interest in radio and magazines; the sports and relaxation segment are heavy radio and T.V. users and will also get travel ideas from newspapers and magazines; the communication behavior of young nature buffs are unclear, and self-selective magazine or T.V. ads about parks and nature are recommended as most effective for this group; and finally, magazines are the common medium of the representative subgroup. The study concludes by recommending that governmental agencies and private enterprises interested in more effective use of tourism marketing dollars should focus marketing and advertising programs at the "sightseers" and "sports and relaxation" segments. Also, the implications of this study are that mass media communication strategies should be used to target appropriate tourist segments for tourism promotion. Although mass media plays a role in tourism promotion, the literature reviewed in this section points out that its role is perhaps overestimated and that interpersonal or informal communication channels represent potentially more effective means for tourism promotion.

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Past research has concentrated on mass media effects on behavior while neglecting investigation into interpersonal communication channels. This can partially be explained by the fact that mass media studies are easily set up and carried out, complete with measurable and "tidy" results. Methodologies for analyzing interpersonal communication channels have yet to be fully developed. It is hoped that this study will function as a methodological contribution in terms of effects of interpersonal communication networking on behavior.

STUDY OBJECTIVES

1. To identify the kinds and sources of information about recreation opportunities most frequently used by visitors to coastal areas in Michigan. This includes both information received prior to the trip and upon arrival in a coastal community.
2. To examine the influence of several variables (sex, recreation location, age, number of visits, type of travelling group, role of individual in the travelling group, and phase of trip) on the relationship between kinds and sources of information used in communication networks of visitors.
3. To perform a pilot study in which a variety of research instruments are tested in order to determine the best method for yielding data on communication networks and information sources of visitors to Michigan coastal areas.

METHODS AND PROCEDURES

Introduction

The study of communication networks requires approaches that differ from traditional models of communication research. Traditional models of communication rely on a source-to-receiver, or linear process of communication. The results of this approach have been to break up the communication process into a set of isolated variables which proved useful for studying the effects of messages from the source on the behavior of receivers (Rogers and Kincaid, 1981).

Recent theorizing and research in communication literature suggest that actual communication processes are more complex than outlined by the component approach (linear model) to communication effects on individuals. A network model is proposed by Rogers and Kincaid (1981) in which the unit of analysis becomes the information-exchange relationship that occurs in communication links rather than communication effects. Communication network analysis is an appropriate method of research for identifying communication structure in a system, in which relational data about communication flows are analyzed by using some type of interpersonal relationships as the unit of analysis (Rogers and Kincaid, 1981). As interpersonal communication flows become patterned over time, a communication structure or network forms that can be used to predict behavior. An important part of communication research using network analysis is to identify this communication structure in order to more fully understand the bigger picture of human interaction

in a system.

Although communication networks are useful in some respects in thinking about mass media effects, they are particularly pertinent when dealing with the communication of new ideas and communication through informal channels (Rogers and Kincaid, 1981; Darley and Beniger, 1982). Given the way we think in general that people get information about recreation opportunities through informal channels, network analysis seems to be an appropriate approach to studying this problem. However, the methods of network analysis with respect to informal communication channels are still developmental in nature and can vary with the type of network being studied (Rogers and Kincaid, 1981). Therefore, it will be necessary to test a variety of methods and variables in the study in order to best approach the study of communication networks in the recreation/tourism area.

Study Design

This study was designed to research the communication networking of visitors to shoreline areas of Michigan. A combination of personal interviews and self-administered questionnaires were distributed to individuals in travelling groups in order to determine the kinds and source of information used by the groups both before the trip and upon arrival to the recreation site. The travelling group can be considered a type of small group, which is defined by Berelson and Steiner (1964) as an aggregate of people (from 2-20) who associate together in face-to-face relations over an extended period of time, and who are mutually aware of their membership in the group. The travelling group, then, is defined in this study as a small group of people who travel together from a starting point to a recreation location and who continue to

associate as a group upon arrival at that location. Thus, a travelling group can incorporate people of various ages and relations to one another (such as family or friends).

A pretest was conducted at one campground in both Frankfort and Tawas during July, and a total of 47 questionnaires representing 13 travelling groups were administered. The questions from the pretest were refined and a revised draft of the questionnaire was administered during August. A total of 77 questionnaires representing 32 groups was administered to campers and resorters at three contact locations in the Frankfort area and four contact locations in the Tawas area. All revised questionnaires were administered by the researcher and one aid during a one week period in mid-August. Figure 1 gives the time line followed of tasks performed for this study.

Study Area

Site Selection

Information networking starts even before the time an individual or group decides to take a vacation trip. Formal mass media information sources and/or informal interpersonal information sources may be utilized by individuals for a variety of information needs both before taking the trip and once the trip has begun. Although Clawson and Knetch (1966) separate the recreational experience into five distinct stages (discussed in an earlier section of this paper), there appears to be two broad ways of looking at information networking for purposes of this study. First, there are pre-trip sources used by visitors to receive information about a vacation destination. Secondly, there are information sources for visitors within the community providing or

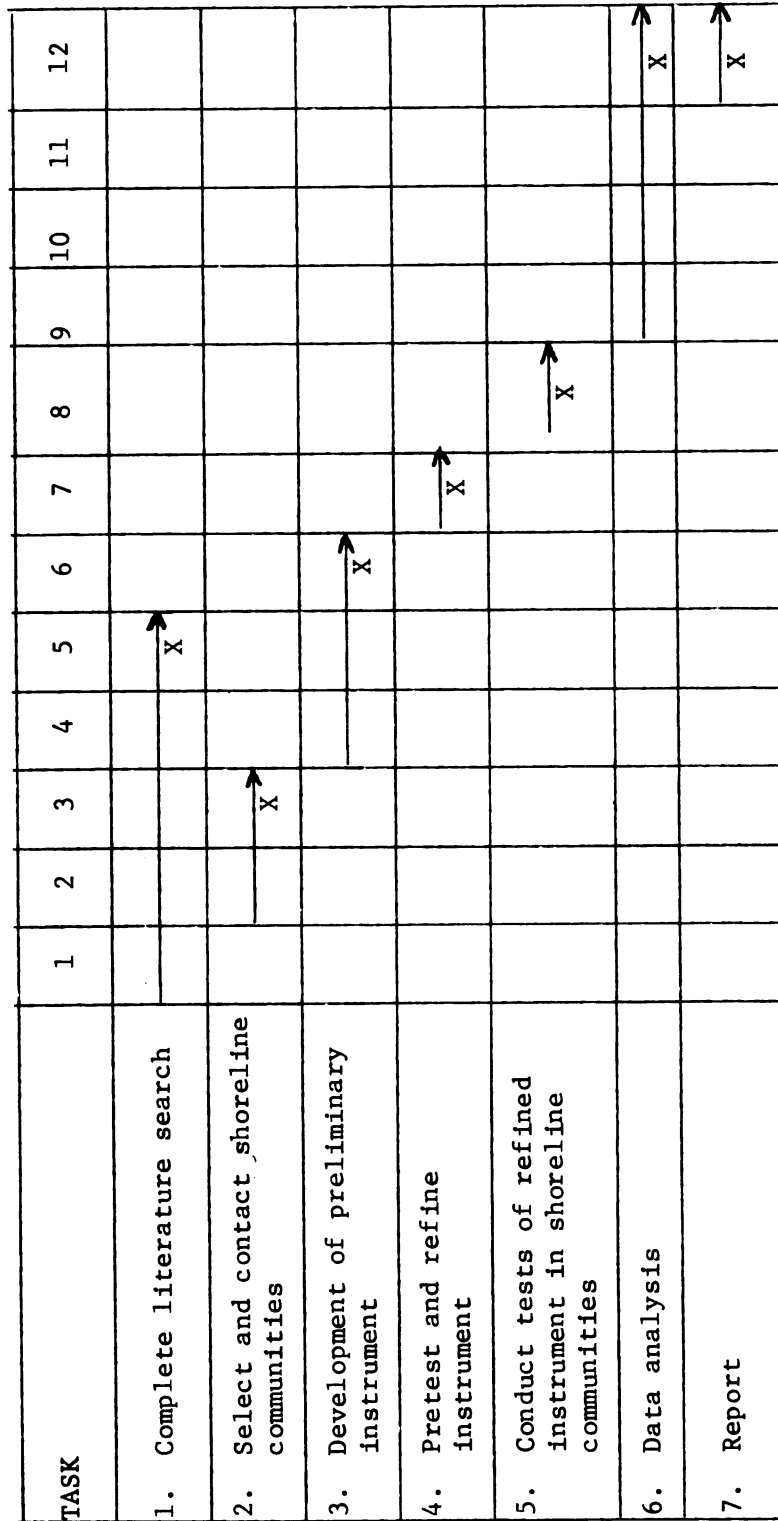


Figure 1. Time Line of Study Tasks

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servicing the recreation opportunity.

Study sites were selected that would facilitate sampling visitors to Michigan shoreline areas on a vacation trip about the kinds and sources of recreation information they use both before the trip and upon arrival to the recreation location. The primary factors in site selection were: 1) to find potential questionnaire participants who were visiting a shoreline area on a vacation trip; and 2) to be able to sample the entire group of visitors who had traveled together on the trip (referred to as the "travelling group" in the remainder of the text). Study sites were also chosen that would provide an adequate number of participants for sampling.

In considering these factors, two study sites were chosen for sampling: the Frankfort area on Lake Michigan and the Tawas area on Lake Huron (See Figure 2.). At each study site several contact locations were chosen from available campgrounds and resorts at which to sample visitors. The reason for including both campgrounds and resorts at each study site was to determine if recreation location influences the kinds and sources of information visitors use to find out about recreation opportunities.

Site Description

The Frankfort and Tawas areas possess numerous features that prompted their selection as study sites. First of all, each community has a small population size permitting in-depth analysis by few researchers. The population of Frankfort is 1,603 persons and the population of the Tawas area is 1,967 persons in Tawas City and 2,584 persons in East Tawas (Michigan 1980 Census of Population). Although Tawas City and East Tawas are two separate cities, they physically

Figure 2. Location of Frankfort and Tawas

merge into each other and therefore are considered together as one study site in this study. Furthermore, the small population sizes of each community facilitates making comparisons between them.

An important reason for choosing these communities as study sites is that they provide and service a large variety of waterbased and nonwaterbased recreational opportunities. In the Frankfort area, Sleeping Bear Dunes National Lakeshore is located a few miles north of town accessed by highway M-22, and is a major recreational resource in Michigan. The park provides numerous recreational activities including: duneclimbs and hikes, woodland hikes, scenic drives, beaches and swimming, canoeing, fishing and camping. Two major rivers flow into Lake Michigan in this area--the Betsie River south of Frankfort and the Platte River to the north (which forms the southern border of the National Lakeshore). Several large inland lakes with public access provide for additional waterbased activities. These are Crystal Lake, Platte Lake and Little Platte Lake (See Figure 3.). And finally, the Huron Manistee National Forest provides major tracts of forested lands for public recreational use.

In the Tawas area, Tawas Point State Park is one of Michigan's newest State Parks. It is located at the tip of Tawas Bay and provides beaches, swimming, hiking and camping facilities. On Lake Huron all forms of boating and other waterbased activities are available. The Tawas area offers three campgrounds with 458 sites; two public fishing docks; three charter boats and launching sites; the Michigan shore-to-shore riding and hiking trail from Tawas to Empire and; thirty miles of snowmobile and cross-country ski trails. Several fishing festivals take place in the Tawas area throughout the year: king Salmon Derby (July-October), Brown Trout Derby (April-May), and Perchville (February).

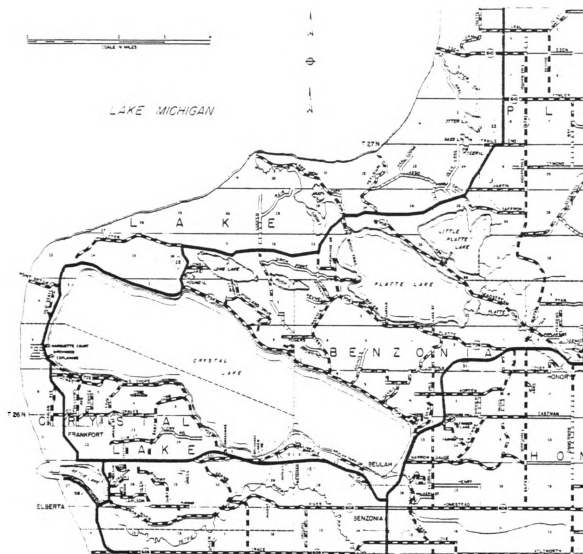


Figure 3. Frankfort Area

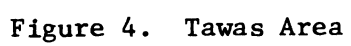
Tawas Lake is an inland lake located a few miles northeast of Tawas. From the lake the Tawas River flows through Tawas City into Lake Huron. Also, the Huron National Forest and the AuSable River are located north-northeast of Tawas (See Figure 4.).

Both of these shoreline areas possess an abundance of natural resources providing recreation opportunities on a Great Lake or in surrounding inland areas. Because of this, these two areas were chosen as study sites for this research.

Contact Locations

Several contact locations were selected at which to sample visitors to each shoreline area. In the Frankfort area, the Platte River Campground was chosen for sampling campers. The campground contains 200 sites with running water and no electrical hookups. It is located at the southern end of Sleeping Bear Dunes National Lakeshore, with the Platte River bordering the southernmost side of the campground. Two resorts were selected on the basis of interviewer access to customers. Chimney Corners Resort located on Crystal Drive (highway M-22) between Frankfort and Sleeping Bear Dunes, and Crystal Mountain Resort on M-115 near Thompsonville. At Chimney Corners Resort, sampling was performed at the resort's private beach on Crystal Lake. Crystal Mountain primarily services golfers in the summer months, so golfers were sampled at the snack shop located by the golfing greens while they waited to tee-off in their game (See Figure 5.).

In the Tawas area, campers were sampled at Tawas Point State Park. This campground contains 200 sites with hot water facilities and electrical hookups. Sampling was also conducted at two resorts located on Lake Huron in Tawas City and at one resort on the lake in



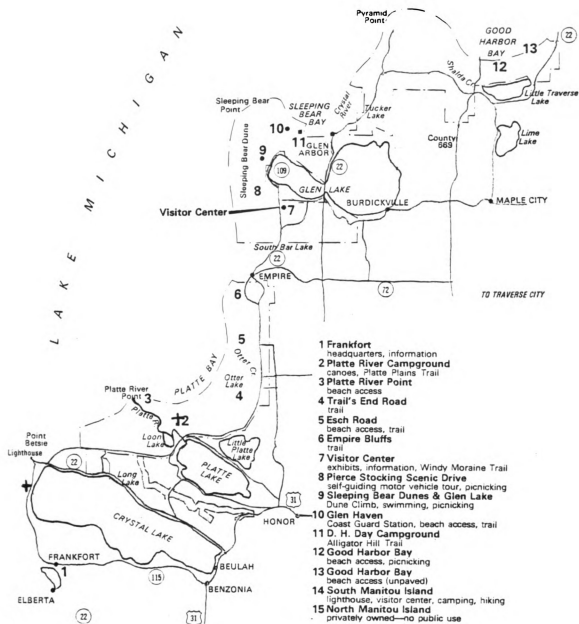


Figure 5. Contact Locations in Frankfort Area

+ Contact locations

East Tawas. All three resorts had a small beach area for patrons. Sampling was conducted at each resort's beach area (See Figure 6.).

Permission to sample visitors at each site was verbally obtained from the owners/managers of the campground or resort facility, except for Platte River Campground for which a letter addressed to the Superintendant of Sleeping Bear Dunes was necessary to obtain permission (See Appendix A.).

Research Instruments

Questionnaire Development

Preliminary work in questionnaire development was carried out at Michigan State University and in the East Lansing and Lansing areas before pretesting questionnaires in coastal areas of Northern Michigan. Several steps were taken with questionnaire design. The first step involved asking sociometric questions about recreation information to students in classrooms at Michigan State University. From responses to sociometric questions, questionnaires were designed and distributed to community groups and individuals at various park locations in East Lansing and Lansing. These questionnaires asked respondents to "map" out the steps of information gathering by filling in a series of boxes with the kinds and sources of information used before taking a vacation trip to a coastal area of Michigan. Respondents were also asked to list what they felt to be the most important information sources upon arrival to their destination area.

Data from the first few batches of mapping questionnaires provided evidence that individuals relied on other people they travelled with for different kinds of information. Therefore, later batches of

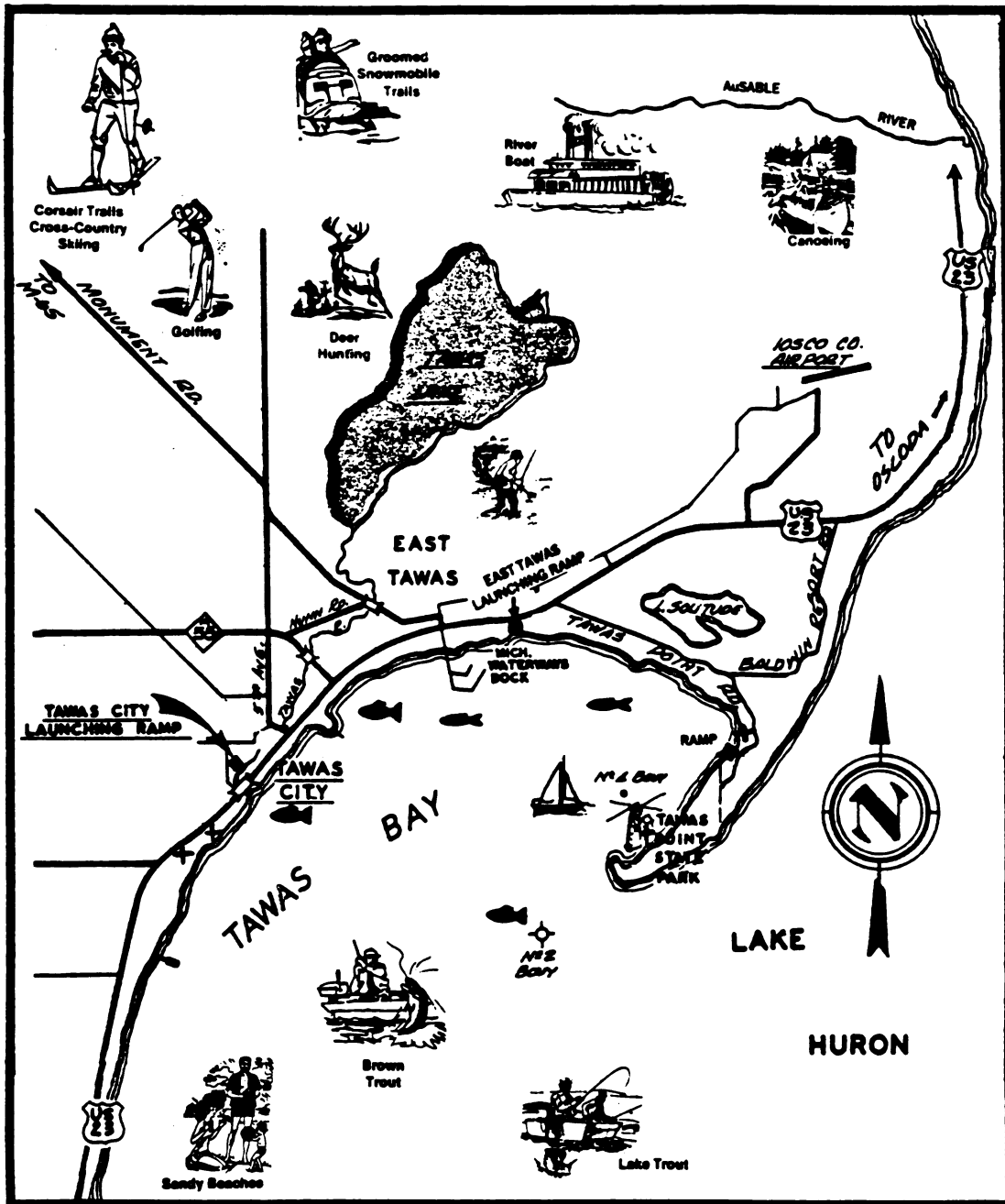


Figure 6. Contact Locations in Tawas Area

+ Contact locations

questionnaires were administered to groups of people who had travelled together on a vacation trip, so that communication flows between these individuals could be more readily established. Data from these questionnaires also indicated that the kinds of information and sources of information used by individuals differed according to phase of trip.

The final step in developing questionnaires involved the use of matrices to determine information flows, as well as the use of a separate matrix for before trip and upon arrival phases of travel to clarify differences in information use. The questionnaires were designed to:

1) determine the kinds and sources of information about recreational resources received by visitors both before taking a trip and upon arrival to a recreation location; 2) identify information networking occurring between individuals in travelling groups in regards to kinds and sources of information received; and 3) determine variables that may be useful in network analysis including each respondent's age, sex, role in the group, number of visits to the area, as well as the type of group and location of group.

The questionnaires incorporated techniques used in personal interviews and self-administered questionnaires. Several limitations are associated with these techniques. The disadvantages of personal interviews include: 1) interviewer bias; 2) high cost; 3) need for extensive interviewer training; and 4) time consuming aspects of the interview itself (Poister, 1978; Sommer and Sommer, 1980). On the other hand, the advantages of personal interviews outweigh the disadvantages for purposes of this study. The advantages are: 1) allowance for in-depth questioning, probing and clarification for complex subject matters and 2) higher response rate than other types of surveys (Babbie, 1973; Poister, 1978). Disadvantages of self-administered questionnaires

include: 1) the problem of follow-ups; 2) higher non-respondent rates; and 3) getting a recreationist to take leisure time to fill out the questionnaire (Babbie, 1973; Poister, 1978).

Two formats are used in questionnaire design in this study. One format is almost entirely personal interview, the respondent filling out only a small portion of the questionnaire. The other format is entirely self-administered questionnaires, with the interviewer present to clarify instructions and other items on the questionnaire if necessary. The reason for using two formats in questionnaire design is to determine which of these formats is best suited for collecting data on the complex subject matter under study here. Use of questionnaire formats and specific wording on questionnaires are discussed in the section on administration of questionnaires.

In recent years many researchers have pointed out the weaknesses of using only one measurement strategy, and that more accurate and unbiased information is obtained through the integration of multiple research designs and data collection strategies (Webb et al., 1964; Campbell, 1970; Sieber, 1973; Clark, 1977). Although this study exhibits the very weakness of using only one measurement strategy, an attempt to alleviate this problem is made by using different formats in questionnaire design discussed above.

Pretesting the Questionnaires

In order to determine problems in the question format and survey technique a questionnaire was pretested before final production. The questionnaire was distributed by the researchers and two other trained assistants at two sites--the Platte River Campground in Sleeping Bear Dunes National Lakeshore (SBD) and the Tawas Point State Park in East

Tawas. The researcher and two trained assistants spent approximately two and a half hours per site for two days sampling visitors. A total of 29 questionnaires comprising 13 travelling groups was collected at the Platte River Campground and 18 questionnaires comprising six travelling groups was collected at Tawas Point State Park. The pretest was set up as a self-administered questionnaire to be distributed to all members of the travelling group ages 12 years and older.

Although the pretest sample was small, it provided insights into necessary revisions of the questionnaire. First, the lower age limit set for respondent inclusion was too low to produce reliable data on such a complex subject matter. Therefore, the lower age limit for subject participation was increased to 16 years old in the next round of questionnaires after pretesting. Another problem was that many subjects had difficulty in filling out the matrices. This can partially be attributed to the ambiguity of the questions concerning use of the matrices. The questions asked: "Before your trip to this location, where did you get information about your destination?" and "When you arrive at your destination, where do you seek recreation information?" The ambiguous wording of these questions confused respondents as to which trip the questions referred to (for repeat visitors) and if the words "location" and "destination" referred to the place they were staying or to the general area visited. Also, recall problems about behavior on past trips were encountered by repeat visitors.

In an attempt to eliminate these problems, question structure and design of questionnaire were altered. The questionnaire was split into three different questionnaires based on frequency of visits. Questions concerning use of the matrices were reworded to elicit information about the most recent trip. Other minor revisions were made in

matrix design to facilitate better comprehension and ease of use by respondents. And finally, both personal interviews and self-administered questionnaire formats were used in revised questionnaires to determine which format is best suited for use in future research projects concerned with similar subject matter.

Sampling Procedure

This study was designed to sample visitors at specific locations in the Frankfort and Tawas areas. Sampling was performed during peak visitation summer season to obtain a large enough sample size. Pre-testing of questionnaires was done at the Platte River Campground on July 16 and at Tawas State Park campground on July 17. The late afternoon to early evening hours were felt to be the most productive times of day to administer questionnaires because many campers returned to the campground during this time after a day's activities elsewhere, thereby enabling the interviewer to make the most possible number of contacts with groups.

Questionnaires were distributed by two researchers during the week of August 11-17. In the Frankfort area, questionnaires were distributed at the Platte River Campground on August 11 and 13 and at Chimney Corners Resort and Crystal Mountain Resort on August 13. In the Tawas area, questionnaires were distributed at Tawas State Park on August 14-16 and at the resorts on August 16. Sampling took place during the late afternoon and early evening hours at the campgrounds and in the afternoon hours at resorts in order to facilitate optimal contact with visitors.

It should be stressed here that purposive sampling was used in this study rather than probability (random) sampling. This research

represents a pilot study meant to facilitate exploratory examination of data collected, and a high degree of precision or ability to generalize conclusions is not necessary. Therefore, this study uses chunk sampling--the collection of cases readily available to the researcher, to serve as exploratory analysis aimed at identifying research issues rather than actually testing hypotheses (Poister, 1978). Although chunks are the least desirable kinds of samples in terms of reliability and sampling error, they are useful for purposes of this study.

Administration of Questionnaires

The following procedure was followed for questionnaire administration. The interviewer introduced him/herself and briefly explained the study and why the respondents' contributions were important. The interviewer then asked if all members of the travelling group 16 years of age and older would consent to filling out the questionnaire. If consent was not given by all members of the travelling group who qualified for participation, or if all members who qualified were not present at the site, interviewer contact with the group was broken and another group approached. If all group members qualified to participate in the questionnaires gave their consent, the interviewer proceeded to ask two filter questions to each respondent to determine if they were visitors to the area and the numbers of previous visits made. (See Appendix B for specific wording of Filter Questions.) Interviewer contact with the group was broken if any respondents were not visitors to the area.

For each respondent, the number of visits made to the area determined which of three types of questionnaires she/he was given. All questionnaires were color coded to facilitate ease of distribution. Table 1 gives the format option and color coding scheme for type of

questionnaire.

Table 1

Format Option and Color Coding Scheme for type of Questionnaire

Type of Questionnaire	Format Option	Color Code
First Time Visitor	Personal Interview Self Administered Questionnaire	Blue Light Yellow
Second Time Visitor	Personal Interview Self-Administered Questionnaire	Dark Yellow White
Repeat Visitor	Self Administered Questionnaire	Green

The interviewer had the choice of using either a personal interview format or self-administered format with first and second time visitors. But, only one format was used with first and second time visitors in any one travelling group. In other words, either personal interviews or self-administered questionnaires (but not both) were conducted with these respondent types within the same group. This was done in order to promote consistency of sampling techniques within groups to control for interviewer bias.

In the self-administered format, matrices were used to determine the kinds and sources of recreational information received both before taking the trip and upon arrival to the shoreline area. Matrix rows indicated kinds of information and columns indicated different sources used. The respondents were asked to indicate which sources they used for each kind of information. The personal interview format involved the researcher filling out the matrices according to subject response rather than having the subject fill out the matrices. (See Appendix B

for specific wording of Personal Interview for Recent Visitors, Option AA and Option BB.)

Different questionnaires were administered to first and second time visitors. The only structural difference between questionnaires was in the wording of the questions concerning use of the matrices. (See Appendix B for specific wording of questionnaire for Recent Visitors Option A and Option B.) The questions were worded slightly different in order to promote uniformity in subject response about the most recent trip so that group networking analysis could be accomplished.

A personal interview was conducted with all respondents who were repeat visitors (making three or more visits to the area). The format involved the researcher asking a series of open-ended questions. (See Appendix B for specific wording of Personal Interview for Repeat Visitors Option C.) These questions do not closely approximate those asked to first and second time visitors because of possible recall and non-response problems. Rather, the questionnaire asks open-ended questions in place of the matrices used for first and second time visitors in an attempt to elicit comparable data for all respondents in a travelling group.

All questionnaires included a self-administered section which asked close and open-ended questions to elicit descriptive and behavioral data. (See Appendix B for specific wording of Respondent Characteristics.)

Groups chosen for sampling were randomly selected by the interviewer at all contact sites. All participants were encouraged to respond only to their own questionnaire and not ask for or give "help" to any other group member present. Time for questionnaire completion varied from ten to forty minutes depending upon the individual respondent

and questionnaire format used.

Completed questionnaires were stapled together for each travelling group sampled. The last step in the procedure involved the interviewer filling out an Observer Record. The Observer Record identified the activity of the group at the time of interviewer contact, group type, contact site location, and the first names and roles of all respondents in the group. In groups where the roles of individuals were not clear to the interviewer, she/he asked for this information. (See Appendix B for specific wording of Observer Record.) Respondents were then thanked for their cooperation and interviewer contact with the group was broken.

Analysis Procedure for Questionnaires

Analysis was performed by hand tabulating all questions. Data from the matrices and questions #2, #3, #4 and #7 on the Repeat Visitor questionnaire was coded if necessary and put into frequency tables. These tables were then used to analyze the kinds and sources of information used before the trip and upon arrival. Frequencies were also calculated for the variables age, sex, location, number of visits, type of group and role in group, and used to determine the influence on information networking occurring. Details on the procedures used to calculate frequencies are given in the Results and Discussion section.

Limitations and Contributions

The limitations of nonaccurate subject responses to behavior recall questions were discussed in the section on questionnaire development. A number of other limitations are also present in this study. During sampling, measures were taken to control for interviewer bias,

but despite precautions a small amount of interviewer bias must be accounted for. The researcher and aid conducted all on-site sampling. The researcher spent half a day training the aid in procedures for questionnaire administration and interviewing. This included dry run practices as well as having the aid stand by and observe the researcher administer questionnaires to three different groups. Although minor differences existed in individual presentations between researcher and aid, it is felt that interviewer training kept this bias to a minimum.

Since this study was designed to be exploratory in nature, results were not intended to be representative of all visitors to Michigan shoreline areas. Several factors limit its usefulness to the Frankfort and Tawas areas. The number of groups sampled is too small to make valid conclusions applicable to the larger population. Also, a larger variety of contact locations is needed to obtain a representative sample. Only campgrounds and resorts were sampled and these locations do not adequately represent the variety of recreation locations serving different recreational needs of visitors. Constraints of time, budget and researcher availability prevented sampling at other sites.

Another limitation is that the cross-sectional research design of this study restricts applicability of results to the time period when sampling was performed. Since data was generated in the summer months, it does not provide insights as to possible variations in information networking caused by seasonality of use of recreation locations. And finally, results are biased in that only overnight visitors were sampled. The possibility that information use may differ for day users of a recreation location as opposed to overnight visitors is not examined in this study. Despite all these limitations, this

study offers several research contributions.

An important contribution is a methodological one. The study is concerned with communication networking visitors used to find recreation information. It is unique in that it uses the travelling group as the unit of analysis to reveal the networking process rather than the individual (which would not accomplish this task). Past research in this field has elected to follow the latter method and therefore has not adequately identified the process involved in information transfer. The researcher believes this process to be vital in information utilization by visitors and attempts to gain further insights by identifying communication networks between individuals that travel together as a group to a recreation location.

It is believed that the data collected will be of use to those interested in generating more tourism and recreation in the State of Michigan. It will enable government and commercial enterprises to gain preliminary ideas on where to tap into existing information systems and how to do this in terms of who and what are perceived as credible sources of information. They will therefore have a better idea on how to effectively communicate with potential tourists in order to generate more tourism. Communities such as Frankfort and Tawas will also be able to provide the visitor with more and better information that will contribute to a quality recreation or vacation experience.

RESULTS AND DISCUSSION

Introduction

The results section is divided into five sections which relate and discuss results of the questionnaire. Section one looks at where visitors first learned about the area they are visiting. Section two discusses the kinds of information visitors receive both before a vacation trip and upon arrival to a recreation location. Section three discusses the sources of information used by visitors in the pre-trip and upon arrival stages of the vacation trip. Section four ties the kinds of information received together with sources of this information. The three most frequently used sources for each kind of information are examined before the trip and upon arrival stages of vacation travel. And finally, the last section attempts to determine information networking by examining several variables which might influence the kinds and sources of information visitors use before the trip and upon arrival to the recreation location. Information networking is operationalized as the variations present between respondents in the kinds and sources of information used. The following variables are used to examine information networking: 1) sex; 2) location; 3) age; 4) number of visits; 5) type of group; and 6) role in the group.

Before presenting results, the use of certain terminology should be clarified in order to avoid misconceptions that might result. The terminology "information received" is used purposely in text rather

than "information sought" or "information used." What is being implied here is that individuals do not necessarily actively seek out or even use some of the information they find out. Rather, this information can be passively acquired by the individual. Therefore, the term "received" is used in regards to information because it embraces the totality of active and passive measures taken by individuals.

Also important is that when asking the visitor to relate the kinds of information she/he receives, the term "information" is left to be self-defined by each respondent. In other words, information is perceived on an individualistic basis and may be defined in slightly different terms by each person. So, what one person perceives as being "information" another person may not.

Where Visitors First Learn

Asking visitors where they first learn about the area they are visiting gives information on the original sources used. The frequency or percentage of respondents is calculated using a total of 77 respondents. Table 2 summarizes this information. Before discussing results in Table 2, the distinction should be made between several sources listed. As discussed earlier, the travelling group can be comprised of individuals of different relations to one another as long as these individuals travel together. Thus, the travelling group can be any combination of family or friends. However, in this table and all others following in the results section, the sources "family" and "friends" pertain to individuals who are not part of the travelling group at the time of sampling. Another source requiring clarification (not listed in Table 2 but encountered in a later part of this section)

Table 2

Where Visitors First Learn (N=77)

Sources	% Respondents
Travelling Group	33.8
Friends	24.6
Family	10.4
Trips taken as child	7.7
Passed through on previous trip	6.5
Michigan Tourist Associations (EMTA/WMTA)	4.0
Co-worker	2.6
Map	2.6
Organized Group	2.6
AAA Campguide	2.6
Vacation travel guide	2.6
Total %	100.0

is "place staying." This source refers to where visitors are staying (i.e. lodging facilities) once they reach the recreation location they are visiting.

Results of Table 2 indicate that the most frequently used source is the travelling group (33.8%), the second is friends (24.6%) and the third is family (10.4%). These three sources represent 68 percent of the respondents. Adding to this another 16.8 percent that learned about the area through other trips and work-related sources (trips as child, 7.7%; previous trips, 6.5%; and work sources, 2.6%) gives a total of 85.6 percent that used informal communication channels. In contrast, only 14.4 percent learned about the area visited through formal communication channels (mass media). This suggests that informal channels play a much more important role than formal channels in awareness of

individuals that new places exist.

Kinds of Information

This section examines the kinds of information received by visitors both before their trip and upon arrival to the recreation location. The travelling group, rather than the individual, represents the unit of analysis used to calculate percentages (unless stated otherwise). This methodology rests on the premise that the travelling group better represents the flow or networking of information than the individual. If percentages were calculated using individuals as the unit of analysis, the resulting data would not adequately reflect what is happening to the group (in regards to kinds and sources of information). Furthermore, only one individual is needed to bring information to the group that can be used by everyone in that group. Therefore, data presented in this section and subsequent sections uses the travelling group as the unit of analysis for calculating frequencies of use. A particular kind of source of information used by one or more individuals from the same group is counted as one travelling group in calculations; no significance is attributed to more than one individual in each group using the same kinds or sources of information (unless stated otherwise).

Certain complications arise when dealing with data on respondents who are repeat visitors (three or more visits) which should be discussed before presenting results. Since repeat visitors were asked slightly different questions than first or second time visitors, it is necessary to discuss data obtained on repeat visitors separately from other visitors. The only instance where data can be combined for first, second

and repeat visitors is when examining kinds and sources of information used upon arrival to the recreation area. No data was generated on the kinds and sources of information used by repeat visitors before their present trip. These respondents were asked only to recall "new" and "different" activities engaged in upon arrival to the recreation location. Since data were generated only for new activities or places visited, two cases of non-response were obtained for groups comprised solely of repeat visitors. Therefore, the exclusion of the repeat visitor in frequency calculations for before trip data and the inclusion of this group for upon arrival data results in different base numbers for kinds and sources of information according to phase of trip. A total of twenty-one respondent groups are represented in before trip data (for combined Frankfort and Tawas areas) and thirty-two respondent groups are represented in upon arrival data.

A separate section examines the kinds and sources of information used by repeat visitors on their first few visits to the area, in order to facilitate comparisons between repeat visitors and first and second time visitors. A total of forty repeat visitors provides the unit of analysis for combined Frankfort and Tawas areas.

Kinds of Information Received Before Trip

First and second time visitors were asked to indicate the kinds of information they received before making their trip. Results for all respondent groups (combined Frankfort and Tawas areas) are shown in Table 3. (See Appendix C for separate results by area.) The kind of information most frequently obtained by groups before taking a trip was places to stay (85.7%), followed by recreational activities (81%), and scenic areas and directions (57.1%). On the bottom end of the

scale, little information on shopping, local residents and museums was obtained. Interestingly enough, less than 15% of the respondents did not obtain information on places to stay, which can be interpreted to mean that the majority of groups do a certain amount of pre-trip planning as to where they will be staying once they reach a trip destination. A recent study done by the Michigan Travel Bureau (1982) supports this suggestion. The study found that 82 percent of the respondents knew the specific main destination of their trip and 63.2 percent knew where they would stay at the main destination before leaving home. The former Travel Bureau figure (82%) corresponds closely to the figure obtained in this study (85.7%).

Table 3

Kinds of Information Received Before Trip, Combined
Frankfort and Tawas Areas (N=21)

Kinds of Information	% of Respondent Groups
Places to stay	85.7
Recreational Activities	81.0
Scenic Areas	57.1
Directions to a place	57.1
Natural Environment	52.4
Community Events	42.9
Tourist Attractions	42.9
Places to eat	38.1
Shopping	23.8
Local Residents	19.0
Museums	14.3

Kinds of Information Received Upon Arrival

The kinds of information groups receive upon arrival to a recreation area was determined in the same manner as before trip kinds of information in the preceding section. Groups comprised solely of repeat visitors are included in these calculations. Table 4 shows the results of the kinds of information used by groups upon arrival to a recreation location (for combined Frankfort and Tawas Areas). (See Appendix C for separate results by area.)

Table 4

Kinds of Information Received Upon Arrival, Combined
Frankfort and Tawas Areas (N=32)

Kinds of Information	% Respondent Groups
Recreation Activities	59.3
Places to Eat	53.1
Directions to a Place	46.9
Shopping	40.6
Community Events	31.3
Scenic Areas	31.3
Tourist Attractions	28.1
Natural Environment	25.0
Places to Stay	18.8
Museums	12.5
Local Residents	6.3

Results in Table 4 indicate the three kinds of information visitors most frequently receive upon arrival are information about recreational activities (59.3%), places to eat (53.1%) and directions to a place (46.9%). The least obtained kinds of information are on museums (12.5%) and local residents (6.3%). This data shows that the majority

of groups obtain some kind of information on recreation activities and places to eat--these kinds of information being most important to travelling groups upon arrival to the area they are visiting.

Comparisons Between Kinds of Information Received Before Trip and Upon Arrival

The purpose of separating out the kinds of information visitors receive according to phase of trip (before and upon arrival) is to establish if people really do exhibit different information needs at various phases in their vacation trip. The data in Tables 3 and 4 provides sufficient evidence to suggest that significant differences do exist in the kinds of information obtained by visitors in pre-trip and arrival stages of the trip. Before taking a trip, information on places to stay, recreational activities, natural features of the area and directions is most important. However, upon arrival at the recreation location information use shifts. Information on recreation activities maintains its importance, but places to eat and shopping become key informational items while receiving information on places to stay greatly decreases in importance (the majority of visitors having already pre-planned where they will be staying before taking the trip).

It is also interesting to note the overall percentages of groups receiving information upon arrival (Table 4) are considerably lower than those percentages of groups receiving information before the trip (Table 3). This can be explained by the inclusion of repeat visitors and non-response cases in Table 4. Overall percentages drop because these groups may be seeking or receiving less information than first and second time visitors who are not as familiar with the areas they are visiting. In fact, the more familiar repeat visitors become (or think they become)

with the area on each visit, the less additional information is sought or obtained on subsequent visits.

Kinds of Information Received by Repeat Visitors

Results discussed so far indicate that repeat visitors receive less additional kinds of new information upon arrival to a recreation location than do first and second time visitors. But repeat visitors were once unfamiliar with the areas. What were the informational needs of this group when they first started visiting these areas? Did they receive information similar to first and second time visitors already examined? In order to sort this out, repeat visitors were asked about the kinds of information most important to them on their first few trips to the area. Table 5 shows these results (for combined Frankfort and Tawas areas).¹ Percentages for each kind of information were calculated according to the number of repeat visitors (individuals) using a particular kind of information out of the total number of repeat visitors (N=40). Frequencies in Table 5 are based on individuals, not groups, because respondents are asked to recall behavior on previous trips and the group they are presently travelling with cannot be assumed to be the same group as those on previous trips. Therefore, the group cannot be used as the unit of analysis here.

¹It is important to note that the kinds of information listed in Table 5 represent both information received before the trip and upon arrival for the first few trips. The reason for not asking the repeat visitor about kinds of information received according to phase of the trip is that severe recall problems would result in high non-response or distortion of data.

Table 5

Kinds of Information Received by Repeat Visitors
Combined Frankfort and Tawas Areas (N=40)

Kinds of Information	% Respondents
Recreational Activities	67.5
General Information About Area	55.0
Scenic Areas	35.0
Places to Eat	32.5
Places to Stay	25.0
Tourist Attractions	15.0
Directions	12.5
Natural Environment	7.5
Shopping	7.5
Community Events	2.5
Entertainment	2.5

Information most frequently received was on recreation activities (67.5%) followed by general information about the area (55%) and then scenic areas (35%). The kinds of information received by repeat visitors on their first few trips is similar to the kinds of information in Tables 3 and 4. In comparing Tables 3 and 4 with Table 5, a general pattern emerges. Repeat visitors generally obtained the same kinds of information on their first few trips as did first and second time visitors sampled in this questionnaire.

Sources of Information

Table 6 shows the percentage of groups using various sources for the different kinds of information received before their trip and upon arrival. Frequencies of sources used by groups are calculated in the

same manner as were frequencies for kinds of information received. This section also compares sources used at the two phases of the trip for any similarities and/or differences that may exist. Finally, sources used by repeat visitors on their first few trips are examined for similarities to and/or differences from sources used by first and second time visitors and repeat visitors on their present trips.

Table 6

Sources of Information Before Trip, Combined
Frankfort and Tawas Areas (N=24)

Sources	% Respondent Groups
Travelling Group	57.1
Friends	42.9
AAA	33.3
Map	23.8
Family	14.3
Travel Information Centers	14.3
Magazines	14.3
Newspapers	9.5
Chamber of Commerce	9.5
State Police	4.8
Radio	4.8
T.V.	4.8
Flyer	4.8
Bookstore	4.8
Vacation Travel Show	4.8
Place Staying	4.8

Sources of Information Before Trip

Table 6 shows the percentage of groups using various sources for the different kinds of information received before their trip

(combined Frankfort and Tawas areas). (See Appendix C for separate results by area.)

The most frequently used source of information is the travelling group (57.1%) followed by friends (42.9%) and AAA (33.3%). Although sixteen different sources are represented in Table 6, over 56% of these sources are used by less than 10% of the respondent groups. What is important here is that most visitors are using other individuals they travel with and friends as sources of information. Approximately 43% of the groups represented in this table contain individuals who varied as to number of visits to the area, combining first and second time visitors and/or repeat visitors together in one group. Knowing this, it is not surprising to find that the travelling group is the most frequently used source of information--those individuals not familiar with the area they are going to visit relying upon others in their group who are more familiar with the area. The only formal information source receiving frequent use by groups is the AAA.

When viewed in a different manner, this data suggests a hierarchy of information sources being used by visitors. The travelling group represents the primary level, in which most information is obtained in a closely knit network where communication flows link individuals together. All other sources outside the travelling group represent the second level, in which information is obtained from a loosely bound network of sources which are generally not linked to one another by communication flows.

Source of Information Upon Arrival

Table 7 shows the sources of information visitors use upon arrival to the recreation area (combined Frankfort and Tawas areas).

(See Appendix C for separate results by area.) Data in this Table is based on all respondent groups (including repeat visitors).

Table 7

Sources of Information Upon Arrival, Combined
Frankfort and Tawas Areas (N=32)

Sources	% Respondent Groups
Place Staying	65.6
Drove/walked by	46.9
Travelling group	34.4
Chamber of Commerce	15.6
Local Visitor Center	12.5
Gas Stations	12.5
Local Residents	9.4
Restaurants	9.4
Radio	9.4
Merchant Shops	6.3
Newspapers	6.3
Local Police	3.1
T.V.	3.1

The most frequently used source of information is the place where visitors are staying (65.6%), followed by driving/walking by (46.9%) and then the travelling group (34.4%). These three sources represent very informal means of obtaining information. Also important but not shown in Table 7 is how these sources are used. The majority of visitors listing "place staying" as a source on their questionnaires also indicated word-of-mouth communication with owners/employees as the method used to obtain information (as opposed to using brochures or other available mass media information). This suggests that visitors receive most of their

information through interpersonal communication with other members of their travelling group or with employees at the place they are staying. Almost half the groups found information by driving or walking by a place, which suggests that signs play an important role in transmitting information.

The formal information sources Chamber of Commerce and local visitor center were utilized respectively by 15.6 percent and 12.5 percent of the groups, with visitors indicating they received mass media types of information (such as maps and brochures) from these sources. These percentages are lower than might be expected. The use of gas stations as an information source ranked equal to local visitor centers! However certain results of the Michigan Travel Bureau Study (1982) conflict with those found in this study. The Travel Bureau Study found that 23.2 percent of respondents used local visitor information centers and 48.5 percent used TIC's (refer to Table 6 for figures on TIC's in this study), representing substantially higher figures than ones obtained in this study. A possible reason for this discrepancy is that the Travel Bureau Study asked if respondents had ever used a TIC or visitor information center for travel information, whereas this study asked only if these sources were used on the present trip. Another possibility is that many individuals confuse sources out of ignorance, in that they may not know the difference between a local visitor information center, a travel information center, or a Chamber of Commerce. Therefore, non-accurate reporting of exact sources used by these individuals may contribute to the large variations between frequencies obtained in the two studies.

In conclusion results in Table 7 give strong evidence that the most frequently used sources by groups upon arrival are informal ones.

It was also hoped that these results might indicate the use of children as information sources by other members of their travelling groups upon arrival to a recreation location. However, the few numbers of children sampled in this study does not permit this conclusion to be drawn. Had this data enabled making this conclusion, it would have supported results of previous studies done by Myers (1974) and Jenkins (1978) indicating the role of children in family decision making in vacation travel discussed earlier in this paper.

Comparisons Between Sources of Information Before Trip and Upon Arrival

As with kinds of information received by visitors, sources are separated according to phase of trip to establish any differences that might exist. Once again, the phase of trip seems to strongly influence kinds of sources used as well as their frequency of use by visitors (as seen in Tables 6 and 7). This data offers strong support for Hodgson's Study (1979) which proposes that people use different information sources at various phases in their recreation experiences. Before the trip the travelling group is the most frequently used source. Upon arrival, the most frequently used source becomes the place visitors are staying, whereas before the trip it was one of the least used sources. This can be explained in terms of proximity of these sources to the visitor at each phase of the trip. Before trip sources are mostly ones within the respondent's area of permanent residence, with the exception of the Chamber of Commerce and place staying sources. Use of these two sources requires greater effort through active pursuit than other before trip sources. Hence, they receive less use. But upon arrival to the area these sources become immediately available to the visitor,

and their use increases (6% for Chamber of Commerce and over 60% for place staying).

When comparing frequencies obtained on the travelling group as an information source before the trip and upon arrival, the use of this source decreases over 23 percent upon arrival (dropping from the most frequently used source before the trip to the third most frequently used source upon arrival). An explanation for this lies in consideration of the usefulness of expertise of the travelling group as an information source. Before taking a trip, the travelling group may be the most useful informative or convenient source of information. However, upon arrival to the recreation location other sources such as the place staying or driving/walking around may be more informative, resulting in more frequent use of these sources and less frequent use of the travelling group.

Sources of Information Used by Repeat Visitors

Table 8 gives the percentage of repeat visitors using different sources on their first few trips for combined Frankfort and Tawas areas. The same procedures for calculating frequencies are used here as were used for Table 5.

The sources receiving most use by repeat visitors are place staying (70%), driving/walking by and the travelling group (20%) and family, friends or the Chamber of Commerce (17.5%). The data presented in Table 8 is quite similar to data in Tables 6 and 7. The same patterning emerges with sources as with kinds of information. Data in Table 8 also suggests that informal sources played an important role to repeat visitors in providing them with information when they were new to the area and unfamiliar with its resources.

Table 8

Sources of Information Used by Repeat Visitors,
Combined Frankfort and Tawas Areas (N=40)

Source	% Respondents
Place Staying	70.0
Travelling Group	20.0
Driving/Walking by	20.0
Family	17.5
Friends	17.5
Chamber of Commerce	17.5
AAA	5.0
Map	5.0
Mobile Travel Guide	5.0
Local Visitor Center	5.0
Travel Information Center	5.0
Merchant Shops	2.5
Newspapers	2.5
Magazines	2.5

Taking this one step further, these informal sources of family, travelling group, driving/walking around, and place staying represent homophilous links, with information being exchanged through strongly connected individuals. The communication network literature reviewed in this paper presented the idea that for new information to diffuse dyadic communication must connect individuals who are somewhat heterophilous (Lauman, 1973). This concept further clarifies why percentages of groups receiving information upon arrival to a recreation location (Table 4) are lower than before trip percentages (Table 3). It was noted earlier that repeat visitors (included only in upon arrival data) may be seeking or obtaining less information than first or second time

visitors. When examining the sources of information this idea is more strongly supported in that repeat visitors are using the same sources on subsequent visits, resulting in the transfer of less information with repeated use of these homophilous communication links.

Sources Used for Kinds of Information

This section relates the various kinds of information received by visitors with the sources of this information in the different stages of travel. The three most frequently used sources for each kind of information are determined for before trip and upon arrival stages of the trip. Frequencies are determined by calculating the number of respondent groups using a particular source into the summed total respondent groups using all sources for each kind of information. Any group is counted more than once in the summed total if that group used two or more sources for one kind of information. The purpose of calculating frequencies in this manner is to obtain relative percentages of use on a scale from 0% to 100%. In cases where more than one source is used by the same number of groups for a particular kind of information, sources are weighted according to numbers of individuals. The source represented by groups containing more individuals receives higher ranking than a source represented by the same number of groups with fewer individuals.

Most Frequently Used Sources for Kinds of Information Before Trip

Table 9 shows the three most frequently used sources for each kind of information before the trip (for combined Frankfort and Tawas areas). (See Appendix B for separate results by area.) In the following

table, the rows indicate kinds of information; the columns rank the three most frequently used sources from highest (#1) to lowest (#3) and also give the percentage (%) of groups using each source. In any box listing two or more sources possessing the same frequencies of use (%), the following procedure is used to weight sources: 1) the source listed on top is used by more individuals (but the same number of groups) as the source below it, and therefore receives a higher rating; 2) the sources with a slash (/) between them are equal in terms of numbers of groups and numbers of individuals and are rated equally.

Table 9 indicates that the travelling group is the most frequently used source for places to stay, places to eat, recreational activities, community events (shared with TIC's), shopping, tourist attractions, scenic areas, local residents (shared with four other sources) and natural environment (shared with friends). The AAA is most frequently used for information on museums and maps are most frequently used for information on directions. However, the travelling group is ranked second in use for these two kinds of information. The use of mass media sources plays a minor role except for information on shopping, tourist attractions and natural environment, where newspapers and magazines rank second in use.

The general trend here is that the travelling group is most frequently consulted as a source for almost all kinds of information received before the trip. Furthermore, formal information sources (AAA, TIC's, Chambers of Commerce) and mass media sources (newspapers, magazines, radio, T.V.) are less frequently used by groups for information. This data substantiates the idea that information networking occurs on a highly informal level (mostly between homophilous links of family, friends and other individuals going on the trip), and that

Table 9

Most Frequently Used Sources Ranked (1-3), for Kinds of Information Before Trip,
Combined Frankfort and Tawas Areas

KINDS OF INFORMATION	RANKED SOURCES				
	#1	%	#2	%	#3
Places to stay	Travelling Group	40.0	AAA	30.0	Friends
Places to Eat	Travelling Group	40.0	AAA	20.0	TIC/place staying
Recreational Activities	Travelling Group	22.7	Friends	20.0	TIC
Community Events	Travel. Info. Center	33.3	Friends	22.2	Newspaper
Shopping	Travelling Group	80.0	Newspaper	20.0	
Tourist Attractions	Travelling Group	27.3	AAA/newspaper/TIC	18.2	Chamber of Commerce/
Scenic Areas	Travelling Group	42.9	TIC	21.4	Friends
Museums	AAA	66.7	Travelling Group	33.3	AAA
Directions	Map	23.5	TIC		
	AAA/Trav.Grp./TIC/		Travelling Group	17.6	AAA
Local residents	Friends/Magazines	20.0	AAA		
Natural Environment	Travelling Group/	25.0	Magazines	12.5	Radio/TV/TIC/Chamber
	Friends				of Commerce
					6.3

heterophilous links of more formalized sources of information are not heavily used before taking a vacation trip.

Most Frequently Used Sources for Kinds
of Information Upon Arrival

Table 10 shows the three most frequently used sources for each kind of information received upon arrival to the recreation area. The same procedures are used in calculations for the Table as were used for Table 9. (For separate results by area, see Appendix C.)

Data in Table 10 shows that the place where the visitor is staying is the most frequently used source for information on recreational activities, community events, tourist attractions, scenic areas, museums (shared with three other sources), directions and natural environment. This information source ranks second in use for places to stay, places to eat, and shopping (shared with the travelling group). Driving or walking by a place is the most frequently used source for information on places to stay (shared with the travelling group and local visitor centers), places to eat, shopping and museums (shared with three other sources). Upon arrival to the area, the general trend is that most visitors are receiving information from the place they are staying, the travelling group, and by driving or walking around. This indicates that owners/employees at lodging facilities (campgrounds, resorts, etc.) play a very important role as sources of different kinds of information for their customers. Gas stations, restaurants, local shops and local residents are used as information sources on a more infrequent basis. Finally, local visitor centers receive more use by visitors as information sources than do Chambers of Commerce. It is surprising how infrequently Chambers of Commerce are used when

Table 10

Most Frequently Used Sources Ranked (1-3) for Kinds of Information Upon Arrival,
Combined Frankfort and Tawas Areas

KINDS OF INFORMATION	RANKED SOURCES				
	#1	#	#2	#3	#
Places to stay	Trav.Grp./Local Visitor Center/ Drove/walked by	28.6	Place staying		
Places to eat	Drove/walked by	43.8	Place staying	Travelling group	17.4
Recreational activities	Place staying	35.1	Travelling group	Local Visitor Ctr.	10.8
Community events	Place staying	33.3	Travelling group	Newspapers Chamber/Sport Shop/ Local Vis.Center/ Local residents	8.3
Shopping	Drove/walked by	35	Place staying Travelling group	Chamber Gas Station/Local residents/Restaur.	5
Tourist Attractions	Place staying	38.5	Trav.Grp./drove/ walked by	Chamber/Local visitor center	7.7
Scenic areas	Place staying Drove/walked by/ Local Visitor Ctr. Place staying/Trav. Grp.	70	Trav.Grp./drove/ walked by/local visitor center	Local residents	
Museums		25			
Directions	Place staying Trav.Grp./Chamber/ Local Police	45	Travelling group/ Gas stations	Local residents	10
Locals		33.3			
Natural environment	Place staying	25	Local residents	Drove/walked by Trav.Grp./Sport Shop/gas station/ Local police/radio/ Local Visitor Ctr.	8.3

considering that providing information to visitors is one of the main functions of this organization. Obviously, a wide gap exists between visitors' behavior upon arrival to a recreation location and their use of Chambers of Commerce as information sources. On the other hand, the idea suggested earlier that low use of the Chamber could partially be a result that visitors do not know the name of the source they are using could mean that this source is being used more often than credited for.

The most frequently used sources for different kinds of information by repeat visitors on their first few trips is very similar to sources used in Tables 9 and 10. Most frequently used sources by repeat visitors for the different kinds of information received are the traveling group, place staying and friends. (See Appendix C for these results.) Thus, a similar pattern emerges with this data as was seen with previous data on the repeat visitor in that the kinds and sources of information and frequency of sources used correspond to those of first and second time visitors.

Variables Influencing Information Networking

The last section of the results examines several variables which might influence information networking of visitors. For both phases of the trip (before and upon arrival), the kinds and sources of information visitors use are examined according to six variables: 1) sex; 2) location; 3) age group; 4) number of visits; 5) type of group; and 6) role in group. Each variable is divided into two or more descriptive categories used to explain information networking (the variations present between respondents regarding the kinds and sources of

information used). Table 11 summarizes the variable categories used in network analysis.

Some of the categories for variables used in Table 11 require elaboration. The variable age group is categorized into age ranges similar to those used in other studies. Numbers of visits are categorized initially according to number of visits for all three categories.

Table 11
Summary of Variable Categories

VARIABLE CATEGORIES	
<u>Sex</u>	<u>Type of Group</u>
1. Male	1. Family with children
2. Female	2. Family no children
	3. Friend
<u>Location</u>	4. Mixed
1. Campground	5. Alone
2. Resort	
<u>Age Group</u>	<u>Role in Group</u>
1. 16-25	1. Individual's role
2. 26-45	a. Mother/wife
3. 46-64	b. Father/husband
4. 65+	c. Son
	d. Daughter
	e. Friend
<u>Number of Visits</u>	2. Most influential (perceived)
1. First Time Visitor	a. Male
2. Second Time Visitor	b. Female
3. Repeat Visitor	c. Joint
a. 3-4 yrs.	
b. 5-7 yrs.	
c. 8-16 yrs.	
d. 17-38 yrs.	

However, subcategories under repeat visitor were determined according to clustering of respondents occurring within the range of years. Years are used rather than number of visits in order to facilitate more accurate recall by the repeat visitor. The categories for type of group were determined using the following criteria. Groups comprised of husband and/or wife with children under age 26 were classified as "family with children." Also included in this category is the extended family spanning three or more age generations. A husband and/or wife with children aged 26 years and over or married couples with no children in the travelling group were classified as "family with children." A family travelling with other unrelated individuals (friends) or two or more unrelated families travelling together were classified as "mixed." The unique case of one respondent group comprised of four related families spanning three age generations was classified as "mixed." And finally, for the role in group variable, subcategories of "most influential" indicate whether the person perceived as most influential in the group is male, female, or joint (equal influence of all respondents). To determine who was perceived as most influential in the group, ratings for each individual (by him/herself and all others in the group) were summed, and the respondent receiving the highest score was thus classified.

Tables 12-15 summarize the variable categories used to examine information networking before the trip and upon arrival to the recreation location. A total of 36 respondents comprising 21 groups provides the base for calculating frequencies of before trip networking (Tables 12 and 13). A total of 77 respondents comprising 32 groups provides the base for calculating frequencies of upon arrival networking (Tables 14 and 15). The reason for differences in base numbers here is that

Table 12

Frequencies (%) of Respondents According to Variable Categories for Kinds of Information Received Before Trip

KINDS OF INFORMATION	SEX		LOCATION		AGE GROUP				NUMBER OF VISITS		TYPE OF GROUP				INDIVIDUAL'S ROLE				MOST IMPORTANT					
	Male (n=15)	Female (n=21)	Camp- ground (n=13)	Resort (n=8)	16 - 25 (n=4)	26 - 45 (n=26)	46 - 64 (n=4)	65 + (n=5)	First Visitor (n=16)	Second Visitor (n=15)	Family with Children (n=9)	No Children (n=5)	Friend (n=3)	Mixed (n=2)	Alone (n=2)	Mother? (n=16)	Father/ husband (n=10)	Son (n=0)	Daughter (n=3)	Friend (n=2)	Male (n=2)	Female (n=3)	Joint (n=6)	
Places to stay	80 (n=15)	71.4 (n=15)	84.6 (n=11)	87.5 (n=7)	50 (n=2)	76.9 (n=20)	75 (n=3)	100 (n=5)	88.8 (n=8)	60 (n=4)	88.8 (n=8)	60 (n=4)	33.3 (n=1)	50 (n=1)	50 (n=1)	64 (n=1)	21.4 (n=1)	40 (n=4)	-	64.7 (n=2)	71.4 (n=2)	85.7 (n=2)	66.7 (n=2)	66.7 (n=2)
Places to eat	33.3 (n=5)	28.6 (n=6)	30.8 (n=4)	50 (n=4)	-	21.1 (n=6)	75 (n=3)	100 (n=5)	22.2 (n=2)	60 (n=4)	22.2 (n=2)	60 (n=4)	33.3 (n=1)	50 (n=1)	50 (n=1)	21.4 (n=1)	21.4 (n=1)	40 (n=4)	-	-	42.9 (n=2)	71.4 (n=2)	85.7 (n=2)	50 (n=3)
Recreational activities	46.7 (n=7)	61.9 (n=13)	76.9 (n=10)	75 (n=6)	75 (n=1)	53.8 (n=14)	75 (n=3)	100 (n=5)	55.6 (n=5)	60 (n=4)	55.6 (n=5)	60 (n=4)	100 (n=3)	100 (n=2)	100 (n=1)	54.1 (n=1)	54.1 (n=1)	40 (n=4)	-	-	85.7 (n=2)	71.4 (n=2)	66.7 (n=2)	50 (n=3)
Community events	20 (n=3)	33.3 (n=7)	53.8 (n=7)	25 (n=2)	-	30.8 (n=8)	25 (n=1)	50 (n=2)	11.1 (n=1)	60 (n=4)	11.1 (n=1)	60 (n=4)	66.7 (n=2)	100 (n=2)	50 (n=1)	28.6 (n=1)	28.6 (n=1)	20 (n=4)	-	-	42.9 (n=2)	28.6 (n=2)	33.3 (n=2)	50 (n=3)
Shopping	6.7 (n=1)	23.8 (n=5)	23.1 (n=3)	25 (n=2)	-	15.4 (n=4)	25 (n=1)	50 (n=2)	-	40 (n=2)	-	40 (n=2)	33.3 (n=1)	50 (n=1)	-	21.4 (n=1)	21.4 (n=1)	10 (n=10)	-	-	28.6 (n=2)	14.3 (n=2)	16.7 (n=2)	33.3 (n=3)
Tourist attractions	26.7 (n=4)	38.1 (n=8)	33.8 (n=5)	25 (n=2)	-	38.5 (n=10)	25 (n=1)	50 (n=2)	44.4 (n=4)	20 (n=2)	44.4 (n=4)	20 (n=2)	33.3 (n=1)	100 (n=2)	50 (n=1)	42.9 (n=1)	42.9 (n=1)	20 (n=10)	-	-	28.6 (n=2)	14.3 (n=2)	16.7 (n=2)	33.3 (n=3)
Scenic areas	46.7 (n=7)	38.1 (n=8)	49.2 (n=6)	75 (n=6)	50 (n=2)	42.3 (n=11)	25 (n=1)	50 (n=2)	33.3 (n=3)	60 (n=4)	33.3 (n=3)	60 (n=4)	66.7 (n=2)	100 (n=2)	100 (n=1)	42.9 (n=1)	42.9 (n=1)	40 (n=10)	-	-	42.9 (n=2)	28.6 (n=2)	33.3 (n=2)	50 (n=3)
Museums	6.7 (n=1)	14.3 (n=3)	23.1 (n=3)	-	25 (n=1)	11.5 (n=3)	-	-	-	40 (n=2)	-	40 (n=2)	33.3 (n=1)	-	-	7.1 (n=1)	7.1 (n=1)	10 (n=10)	-	-	28.6 (n=2)	14.3 (n=2)	16.7 (n=2)	33.3 (n=3)
Directions to a place	53.3 (n=8)	34.1 (n=7)	84.6 (n=11)	12.5 (n=1)	-	46.2 (n=12)	50 (n=2)	-	55.6 (n=5)	60 (n=4)	55.6 (n=5)	60 (n=4)	66.7 (n=2)	-	100 (n=2)	50 (n=1)	50 (n=1)	50 (n=10)	-	-	28.6 (n=2)	14.3 (n=2)	16.7 (n=2)	66.7 (n=2)
Local residents	13.3 (n=2)	14.3 (n=3)	30.8 (n=4)	-	-	19.2 (n=5)	-	-	22.2 (n=2)	40 (n=2)	22.2 (n=2)	40 (n=2)	33.3 (n=1)	-	-	14.3 (n=1)	14.3 (n=1)	20 (n=10)	-	-	14.3 (n=2)	14.3 (n=2)	33.3 (n=2)	33.3 (n=3)
Natural environment	40 (n=6)	38.1 (n=8)	69.2 (n=9)	25 (n=2)	-	50.2 (n=13)	25 (n=1)	-	33.3 (n=3)	40 (n=2)	33.3 (n=3)	40 (n=2)	66.7 (n=2)	100 (n=2)	100 (n=1)	42.9 (n=1)	42.9 (n=1)	30 (n=10)	-	-	42.9 (n=2)	28.6 (n=2)	33.3 (n=2)	50 (n=3)

Table 13

Frequencies (%) of Respondents According to Variable Categories for Sources of Information Before Trip

SOURCES OF INFORMATION	SEX		LOCATION		AGE GROUP		NUMBER OF VISITS		TYPE OF GROUP		INDIVIDUALS IN GROUP		MILE IN GROUP		MILE IN GROUP		INFORMATION				
	Male (n=5)	Female (n=21)	Camp (n=11)	Reveries (n=8)	16 - 25 (n=4)	26 - 45 (n=26)	46 - 64 (n=4)	65 + (n=2)	First Visit (n=2)	Time Second Visit (n=2)	Family With Children (n=9)	No Children (n=3)	Friend Children (n=3)	Mixed (n=2)	Alone (n=2)	Father/ Mother (n=10)		Son (n=0)	Daughter (n=3)	Friend (n=2)	Male (n=2)
AAA	33.3 (n=5)	33.3 (n=21)	34.5 (n=5)	25 (n=8)	35 (n=4)	26.9 (n=26)	- (n=4)	100 (n=2)	11.1 (n=1)	60 (n=3)	44.7 (n=2)	50 (n=1)	- (n=2)	- (n=2)	- (n=2)	21.4 (n=15)	- (n=0)	- (n=3)	37.4 (n=2)	28.6 (n=2)	33.3 (n=6)
Travelling Group	33.3 (n=5)	42.9 (n=9)	41.5 (n=8)	50 (n=4)	35 (n=1)	42.3 (n=11)	35 (n=1)	50 (n=1)	33.3 (n=3)	80 (n=4)	100 (n=3)	100 (n=1)	- (n=2)	- (n=2)	- (n=2)	28.6 (n=4)	- (n=0)	44.7 (n=2)	31.4 (n=5)	14.3 (n=1)	66.7 (n=4)
Travel Information Center	33.3 (n=5)	9.5 (n=2)	23.1 (n=3)	- (n=4)	- (n=1)	15.4 (n=4)	- (n=1)	- (n=1)	11.1 (n=1)	- (n=1)	- (n=1)	50 (n=1)	- (n=1)	- (n=1)	- (n=1)	14.3 (n=2)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)
Chamber of Commerce	6.7 (n=1)	4.8 (n=1)	7.7 (n=1)	12.5 (n=1)	- (n=1)	3.8 (n=1)	- (n=1)	50 (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	33.3 (n=1)	- (n=1)	50 (n=1)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)	
Friends	28.7 (n=6)	28.6 (n=6)	46.2 (n=6)	37.5 (n=12)	25 (n=1)	34.6 (n=9)	- (n=1)	- (n=1)	55.6 (n=5)	- (n=1)	66.7 (n=2)	- (n=1)	50 (n=1)	- (n=1)	50 (n=1)	28.6 (n=4)	- (n=0)	33.3 (n=1)	14.3 (n=1)	14.3 (n=1)	33.3 (n=3)
Family	13.3 (n=2)	4.8 (n=1)	15.4 (n=2)	12.5 (n=12)	25 (n=1)	7.7 (n=2)	- (n=1)	- (n=1)	27.2 (n=2)	30 (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	14.3 (n=2)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)
Place staying	6.7 (n=1)	4.8 (n=1)	- (n=1)	12.5 (n=12)	- (n=1)	11.5 (n=3)	50 (n=2)	- (n=1)	- (n=1)	10 (n=2)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	7.1 (n=1)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)
Magazines	6.7 (n=1)	4.8 (n=1)	15.4 (n=2)	12.5 (n=12)	- (n=1)	11.5 (n=3)	- (n=1)	- (n=1)	11.1 (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	7.1 (n=1)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)
Newspapers	6.7 (n=1)	4.8 (n=1)	15.4 (n=2)	12.5 (n=12)	- (n=1)	11.5 (n=3)	- (n=1)	- (n=1)	11.1 (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	- (n=1)	7.1 (n=1)	- (n=0)	- (n=1)	- (n=1)	14.3 (n=1)	16.7 (n=1)
Map (Rand McNally) Other (State Police; T.V.; radio; flyer; Brochure; vacation travel show)	33.3 (n=5)	4.8 (n=1)	34.5 (n=5)	- (n=4)	50 (n=2)	21.1 (n=6)	- (n=1)	- (n=1)	33.3 (n=3)	5 (n=1)	33.3 (n=3)	20 (n=1)	33.3 (n=1)	50 (n=1)	50 (n=1)	21.4 (n=15)	- (n=0)	- (n=1)	14.3 (n=1)	42.9 (n=3)	- (n=1)
	28.7 (n=6)	14.3 (n=3)	23.1 (n=3)	37.5 (n=1)	- (n=1)	19.2 (n=5)	50 (n=2)	- (n=1)	33.3 (n=3)	20 (n=1)	33.3 (n=1)	20 (n=1)	33.3 (n=1)	- (n=1)	50 (n=1)	21.4 (n=15)	- (n=0)	- (n=1)	14.3 (n=1)	28.6 (n=2)	16.7 (n=1)

before trip networking does not include non-response cases (these cases representing repeat visitors for which no data exists) and upon arrival networking does include non-response cases so that resulting frequencies are not distorted. The influence of each variable on the kinds and sources of information is discussed in text succeeding Tables 12-15. (See Appendix C for units of analysis used and percentages of respondents for variable categories.)

Sex

Frequencies for variable categories were calculated using individual respondents as the unit of analysis.

Kinds of Information Before Trip. Males most frequently receive information on places to stay (80%), directions (53.3%) and recreational activities/scenic areas (46.7%). Females most frequently receive information on places to stay (71.4%), recreational activities (61.9%) and tourist attractions/scenic areas (31.8%). When comparing categories a much higher percentage of males are receiving information on places to stay, directions and scenic areas, which seems to indicate male dominance in regards to this kind of information. Females show much higher percentages for information on recreational activities, community events, shopping, tourist attractions and museums, which seems to indicate female dominance in regards to this kind of information. This suggests that the variable sex influences the kinds of information received by visitors before their trip, each sex exhibiting more influence or dominance over the other regarding certain kinds of information received before the trip.

Kinds of Information Upon Arrival. Males most frequently receive information on recreational activities (51.4%) and places to eat and/or

directions (29.7%). Females most frequently receive information on places to eat (47.5%) and recreational activities/shopping (37.5%). When comparing categories, a higher percentage of males receive information on recreational activities whereas a higher percentage of females receive information on places to stay and eat, community events, shopping, museums and local residents. This suggests that the variable sex also influences the kinds of information received upon arrival. Most obvious variations are seen in percentages obtained for recreational activities, places to eat and shopping, suggesting that this variable most strongly influences these particular kinds of information.

Sources of Information Before Trip. Males most frequently use the AAA, travelling group and maps (33.3%) as sources before the trip whereas females most frequently use the travelling group (42.9%). When comparing categories, the only large variations in percentages occur with males much more frequently using maps and females more frequently using the travelling group. All other sources show either small variations or approximately equal percentages between categories. This suggests that the variable sex does not seem to influence sources used by visitors before their trip.

Sources of Information Upon Arrival. Males most frequently use the place staying (37.8%) and driving/walking by/travelling group (21.6%) as sources upon arrival, whereas females most frequently use driving/walking by/place staying (32.5%) and the travelling group (17.5%). Although percentages vary between categories, the differences are slight with exception to a substantially larger percentage of females using the source driving/walking by. This suggests that the variable sex does not seem to influence sources used by visitors upon arrival to a recreation location.

Location

Frequencies for variable categories were calculated using respondent groups as the unit of analysis.

Kinds of Information Before Trip. Campers most frequently receive information on directions/places to stay (84.6%), recreational activities (76.9%) and scenic areas/natural environment (69.2%). Visitors at resorts most frequently receive information on places to stay (87.5%), recreational activities (75%) and places to eat (50%). This suggests that location may influence the kinds of information visitors use before their trip. When comparing categories, a much higher percentage of campers receive information on community events, tourist attractions, scenic areas, museums, directions, local residents and natural environment; a much higher percentage of resorters receive information on places to eat. The large variation in percentages between categories not only confirms that the variable location strongly influences kinds of information received but also suggests that campers receive more pre-trip information (showing much higher frequencies than resorters).

Kinds of Information Upon Arrival. Campers most frequently receive information on recreational activities (77.8%) and directions (61%) upon arrival to a recreation location whereas resorters most frequently receive information on places to eat (64.3%) and shopping (50%). When comparing categories, a much higher percentage of campers receive information on places to stay, recreational activities, tourist attractions, scenic areas, museums, directions and natural environment. A much higher percentage of resorters receive information on places to eat and shopping. This data not only suggests that location strongly influences the kinds of information visitors receive upon arrival, but

also that a dissimilarity of interests exists between campers and resorters. The largest discrepancies in percentages between categories are shown for recreational activities, scenic areas and directions, with very high percentages of campers receiving this information compared to very low percentages of resorters. This seems to indicate that campers are very active in seeking out information on different activities while resorters are much more passive in this regard. General observations of the researcher at contact sites confirm that campers usually leave their sites during the day, while resorters tend to engage in activities at the resort where they are staying. This data also suggests preferences by campers for information on natural amenities of the area they are visiting while resorters prefer information on dining and shopping. What becomes important here is that tourism organizations need to target information according to the needs and preferences of the different tourist markets represented by campers and resorters both before the trip and upon arrival to a recreation location.

Sources of Information Before Trip. Both campers and resorters most frequently use the travelling group and friends as sources of pre-trip information. This would suggest that location does not highly influence pre-trip sources used by visitors. However, some differences are elicited when comparisons are made between categories. Although frequencies do not vary much between sources used by both categories, there are several sources used only by one category. Travel information centers, newspapers and maps are used solely by campers. Before jumping to conclusions, it should be stated here that the possibility exists that small sample size has distorted this data. However, if this data is representative of the larger population, it suggests that before the trip campers can be targeted more effectively than resorters

through promotional schemes using formal information sources and mass media communication.

Sources of Information Upon Arrival. Campers most frequently use place staying (77.8%), driving/walking by (38.9%) and the travelling group (33.3%) as sources of information upon arrival to a recreation location. Resorters most frequently use driving/walking by (57.1%), place staying (42.9%), and the travelling group (35.7%). When comparing campers and resorters, a much higher percentage of campers use the place they are staying, local visitor centers, and gas stations, whereas a much higher percentage of resorters use driving/walking by, Chamber of Commerce and radio. Some of these results can be explained by referring back to the kinds of information these groups use upon arrival to a recreation location. Campers make higher use of the place staying because they may perceive this source as very credible in terms of receiving information on the natural amenities of the area whereas resorters may not perceive the place they are staying to be as credible in terms of this information. Furthermore, resorters are most interested in information on places to eat and shopping which explains why this group uses driving/walking around much more frequently. (Table 10 indicates that driving/walking around was the most frequently used source for these two kinds of information.) This data also suggests that resorters rely more heavily on certain formal information sources (Chamber of Commerce) and mass media sources. This is in direct contradiction to kinds of sources used before the trip. Therefore, phase of trip must be accounted for when trying to target tourist markets.

Age Group

Frequencies for variable categories were calculated using individual respondents as the unit of analysis. Over 70 percent of respondents fall into the second age group category (26-45) while approximately 30 percent comprise the remaining three categories (both before trip and upon arrival). Small sample sizes in three categories most likely distorts resulting frequencies. Therefore, conclusions cannot be made about the influence of age on information networking of visitors. But, intuitively speaking, it seems that age would at least influence the kinds of information received by visitors because of varying interests in different kinds of activities based primarily on physiological differences due to aging processes. Therefore, possible influence of this variable on information networking should be pursued in more detail with future studies.

Number of Visits

Frequencies for variable categories were calculated using the individual as the unit of analysis. Of the total numbers of respondents, 20.8 percent are first time visitors, 26 percent are second time visitors and 53.2 percent are repeat visitors. In reality, second time visitors are also repeat visitors, so combining the two categories results in approximately 80 percent of all respondents being repeat visitors. This means that four-fifths of the visitors to the Frankfort and Tawas areas were already somewhat familiar with the area they were visiting (having been there at least once before). The implications of this are discussed below. Also, before discussing results, it should be pointed out that two subcategories of repeat visitor (8-16 yrs. and 17-38 yrs.) contain sample sizes too small to permit meaningful

interpretation of data. Therefore, these categories are not discussed in the following text.

Kind of Information Before Trip. Both first and second time visitors most frequently receive information on places to stay and recreational activities. When comparing categories, higher percentages of first time visitors receive all kinds of information. This suggests that repeat visitation not only brings increased familiarity about an area, but also results in decreased use (and possibly need) of different kinds of information before the trip. In fact, the only kinds of information not experiencing large decreases in use between first and second time visitors (less than 10% decrease between categories) are recreational activities, scenic areas, and directions. This suggests that not all information is completely learned or absorbed by visitors on their first trip, and that continued information seeking is pursued to learn more about the area before the next trip.

Kinds of Information Upon Arrival. First and second time visitors most frequently receive information on recreational activities and directions, followed by places to eat. Repeat visitors ("total" column) most frequently receive information on recreational activities followed by places to eat. The percentage of repeat visitors receiving directional information is almost negligible (2.4%) which suggests that increasing familiarity with the area decreases the need for this type of information. The kinds of information most frequently received by subcategories of repeat visitors are recreational activities for the first category (3-4 yrs.) and places to eat for the second category (5-7 yrs.).

When comparing categories (using "total" repeat visitor category), the general trend seems to be that repeat visitors much less

frequently receive different kinds of information and receive fewer kinds of new information than first and second time visitors. But there are exceptions to this trend. The second subcategory of repeat visitor (5-7 yrs.) shows frequencies approximately equal to or higher than other categories for information on places to eat, recreational activities and shopping. Also, second time visitors represent the category most frequently receiving information on recreational activities, scenic areas, directions, local residents and natural environment. Expected results would show the first time visitor most frequently receiving all kinds of information as was the case with information received before the trip. This discrepancy supports the earlier postulation that continued information seeking occurs with subsequent trips. However, visitation seems to influence the kinds of information received upon arrival to a recreation location.

Sources of Information Before Trip. Most frequently used sources of information by first time visitors are the travelling group (56.3%) and maps (31.3%) while second time visitors most frequently use the AAA (40%) and friends (30%). This suggests that visitation influences the kinds and frequencies of sources used. When comparing the two categories, first time visitors most frequently use the travelling group, travel information centers, Chamber of Commerce, magazines, newspapers and maps. This suggests heavier use of formal information sources and mass media communications by first time visitors. Thus, the first time visitor represents the tourist market or segment most receptive to formalized types of tourism promotion strategies.

Sources of Information Upon Arrival. First and second time visitors most frequently use the place they are staying as an information source followed by driving/walking by. The repeat visitor ("total"

column) most frequently uses driving/walking by followed by the travelling group. Sources of information most frequently used by subcategories of repeat visitors are the Chamber of Commerce for the subcategories 3-4 years and 5-7 years as well as driving/walking around for the subcategory 5-7 years.

When comparing categories (using "total" repeat visitor category) highest percentages of first time visitors use driving/walking by, local visitor centers and gas stations as information sources; highest percentages of second time visitors use the place they are staying, local residents, Chamber of Commerce, restaurants, radio and merchant shops. No sources are used more frequently by the repeat visitor (total column). However, the second subcategory of repeat visitors more frequently uses the travelling group than any other category.

The following interpretation provides a possible explanation for these results. First of all, the place staying receives most use by first and second time visitors and less use by repeat visitors. Obviously, the same source(s) can be used only so often before depleting its usefulness in providing new information, thereby explaining decreasing percentages in categories of increasing visitation. Another important statistic is that lowest use is made of the travelling group as an information source by first time visitors. The fact that almost all first time visitors sampled were travelling together in uniform groups (without individuals who were repeat visitors) possibly explains why the travelling group is a less desirable information source than other sources outside the group. Furthermore, the fact that repeat visitors also tended to travel in uniform groups can be considered an asset in this situation because it allows the use of other potentially informative individuals in the group for additional information. A final

point to be made is that driving/walking around was frequently used as an information source by all categories because it accomplishes a dual function: 1) it represents a passive and easily accessible way to find out new information; and 2) it also functions as a "recreational activity" for many individuals.

These findings offer strong support for Cockrell's research (1981) discussed earlier. He found that as individuals gained experience as river runners there is a shift in reliance on friends, family and working companions as important information sources to personal experience and other experienced individuals. These findings also apply to those in this study on level of visitation. As visitation to a recreation location increases, there is a shift from reliance on the place staying as an important information source to the travelling group and personal experiences gained by driving or walking around the area.

Type of Group

Frequencies for variable categories were determined using respondent groups as the unit of analysis. The same problem of small sample size occurs with several categories for this variable as were encountered with variable categories for age. The first two categories (family with children and family no children) comprise 75% of total respondent groups while the other three categories combined comprise the remaining 25%. Therefore, no substantive conclusions can be made about the influence of this variable on information networking. However, Tables 12-15 indicate large variations in percentages between categories for kinds and sources of information used before the trip and upon arrival. This suggests possible influence of group type on

information networking and may be worth analyzing in more detail in future studies.

Role in Group

Frequencies for variable categories were determined using individual respondents as the unit of analysis. Non-response cases are not included in these calculations so that meaningful data is obtained. For the variable category of individual role, over 80% of all respondents are represented in the mother/wife or father/husband subcategories for upon arrival data and over 70% in these subcategories for before trip data. Small sample sizes were obtained for the "son", "daughter" and "friend" subcategories. There are a few possibilities as to why such large percentages are obtained in the first few subcategories. First, most groups sampled were families (with or without children), which explains low sample size for the "friend" category. Secondly, the lower age limit of 16 years for respondent inclusion was too high to permit inclusion of almost all children in these groups, thereby resulting in low sample sizes for "son" and "daughter" subcategories. The distribution of respondents in these subcategories cannot be considered representative of the larger population due to limitations imposed by small sample size of this study. Therefore, small sample sizes in several subcategories prohibit conclusions from being made about the influence of the individual's role on information networking. However, the possible influence of mother/wife, father/husband and friend categories are explored in the attempt to determine if individual role should be examined in more detail.

In the "most influential" (perceived) category, 44% of respondent groups rated male most influential, 19% rated females and 37%

rated joint influence for before trip data (Tables 12 and 13). In upon arrival data (Tables 14 and 15), 48% of respondent groups rated males as most influential, 19% rated females and 33% rated joint influence. Males represent the largest percentage of respondents who are perceived as being most influential by the group. When coding the questionnaires, the researcher noticed that the majority of husbands rated themselves higher than their wives, whereas the majority of wives rated themselves equal to or slightly lower than their husbands. This suggests that individuals may not be very reliable judges of themselves in terms of perceived influence and that self-ratings do not provide adequate measure of actual influence. This suggestion is supported in a study done on urban park familiarity (Spotts and Stynes, 1982b) in which similar conclusions are reached regarding self-ratings about park awareness.

Kinds of Information Before Trip. Respondents with the role of mother/wife most frequently received information on places to stay (64%), recreational activities (54.1%) and directions (50%). Respondents with the role of father/husband most frequently received information on places to stay (90%) and directions (50%). Respondents with the role of friend most frequently received information on recreational activities (85.7%) and places to stay (71.4%). When comparing categories, the highest percentage of fathers/husbands received information on places to stay; the highest percentage of mothers/wives received information on tourist attractions; and the highest percentage of friends receive information on community events, shopping, places to eat, recreational activities and museums. This data suggests that the individual's role influences the kinds of information she/he receives before the trip.

Most influential males most frequently received information

on places to stay (85.7%), recreational activities (71.4%) and scenic areas (57.1%). Most influential females received information only on places to stay and recreational activities (66.7%) and community events and scenic areas (33.3%). Respondents with shared influence (joint) most frequently received information on directions and places to stay (66.7%). This suggests that respondents who are rated most influential are dominant in regards to receiving certain kinds of information. This data also suggests differences in the kinds of information received by most influential individuals due to their sex or shared influence.

Kinds of Information Upon Arrival. Respondents with the role of mother/wife and father/husband most frequently received information on first recreational activities and second, places to eat upon arrival. This order is reversed for individuals with the role of friend. When comparing categories, a higher percentage of mothers/wives receive information on places to stay and community events; higher percentages of fathers/husbands receive information on tourist attractions and natural environment; and a higher percentage of friends receive information on places to eat, shopping, and directions. However, only large differences in percentages between categories result with information on places to stay, places to eat, and shopping. This suggests the individual's role does not strongly influence the kinds of information received upon arrival to a recreation location.

Most influential males most frequently receive information on recreational activities (76.9%), females on places to eat (60%) and individuals with shared influence on places to eat and shopping (66.7%). When comparing subcategories, a higher percentage of males receive information on recreational activities, places to stay and museums

while the joint subcategory shows highest percentages for the remaining kinds of information. Because this category is represented by more than one individual per group, higher percentages result for many kinds of information. This data suggests that the variable category most influential exerts some degree of influence on the kinds of information received upon arrival.

Sources of Information Before Trip. Respondents with the role of mother/wife most frequently use the travelling group and friends (28.6%) as information sources before their trip. Respondents with the role father/husband most frequently use the AAA (50%); and friends most frequently use the travelling group (71.4%).

When comparing categories, a higher percentage of mothers/wives use TIC's, family, magazines and "other" category; a higher percentage of fathers/husbands use the place staying and maps; and a higher percentage of friends are using the AAA, travelling group, Chamber of Commerce, and newspapers. This suggests that the individual's role in the group influences the sources used before the trip.

Most influential males most frequently use friends and maps (42.9%); females show no preference between AAA, friends and family; and groups with shared influence most frequently used the travelling group (66.7%). When comparing subcategories a higher percentage of males use friends, maps, and "other" category; a higher percentage of females use family; and a higher percentage of respondents sharing influence in groups use the travelling group, TIC's, Chamber of Commerce, place staying, magazines and newspapers. This suggests that in groups where influence is shared, a larger number of sources are used more frequently than in groups where either males or females are most influential. However, variations in percentages between categories

are substantially large only for the sources travelling group and maps, which suggests that the variable category most influential only slightly influences the sources of information used before the trip.

Sources of Information Upon Arrival. Individuals in all three role groups most frequently use the place staying as an information source upon arrival. Also, frequencies differ only slightly between categories. This data suggests that the individual's role in the group does not influence the sources of information used upon arrival.

All three subcategories of most influential most frequently use the place staying and driving/walking by as an information source. The joint subcategory shows highest percentages for the different sources used, and some variations between percentages exist between the male and female subcategories. However, all these percentages are generally low (except for place staying), which suggests that the variable category most influential only slightly influences the sources of information used upon arrival.

Summary of Variable Influence on Information Networking

Table 16 summarizes the results for all variables used to examine information networking.

In general, Table 16 shows that the variables examined more strongly influence the kinds of information visitors receive (before the trip and upon arrival to a recreation location) than sources of information used. Furthermore, the variables location and number of visits are the most influential in regards to information networking.

Table 16

Summary of Variable Influence on Information Networking,
Before Trip and Upon Arrival

VARIABLE	BEFORE TRIP		UPON ARRIVAL	
	KINDS OF INFORMATION	SOURCES OF INFORMATION	KINDS OF INFORMATION	SOURCES OF INFORMATION
Sex	Influential	Not Influential	Influential	Not Influential
Location	Influential	Somewhat Influential	Influential	Influential
Age Group	Inconclusive	Inconclusive	Inconclusive	Inconclusive
Number of Visits	Influential	Influential	Influential	Influential
Type of Group	Inconclusive	Inconclusive	Inconclusive	Inconclusive
Role in Group Individual's role	Influential	Influential	Somewhat Influential	Not Influential
Most Influential	Influential	Somewhat Influential	Influential	Somewhat Influential

CONCLUSIONS AND SUGGESTIONS

Conclusions and Implications

Results of this study indicate that informal communication channels are the primary means people use to receive information about recreation opportunities, and that formal communication channels play a minor role in accessing information. The travelling group, place where visitors are staying, driving/walking around, family and friends represent the most important sources for a variety of informational needs. The AAA is the only formal organization used frequently by individuals for recreation information, and use of this source is primarily to obtain maps and travel guides before taking a trip.

These results imply that the majority of visitors to Michigan Shoreline areas do not actively seek out information from formalized sources such as Chambers of Commerce, visitor centers, Travel Information Centers, etc. Instead, many individuals play a more passive role in that they make use of sources most accessible to them or else do not seek information at all and let others in their travelling group provide them with necessary information.

Results also indicate that kinds and sources of information used by visitors are strongly influenced by phase of trip, number of visits and location where the visitor is staying. The findings that source use varies according to phase of trip is supported by Hodgson's research (1979). Furthermore, this study found that source use changes with increased visitation. As visitors become more familiar with an

area through repeated visits, they rely more heavily on other potentially informative members of their travelling groups and their own discoveries as information sources. This coincides with Cockrell's findings (1981) that as wild river recreationists gain experience as river runners, information source use shifts to personal experience. Also important is that repeat visitors less frequently receive new information than first or second time visitors, which suggests that communication links of visitors are primarily homophilous. According to Rogers and Kincaid (1981) the exchange of ideas most frequently occurs between transceivers who are homophilous because more effective communication occurs. However, Lauman (1973) found that for new ideas to diffuse, communication links must be heterophilous. Hence, less information use by repeat visitors in this study may be explained by homophilous communication links rather than heterophilous ones.

It was hoped that this research would provide insights as to how to more effectively promote and manage tourism in Michigan. The results of this study indicate that this is no easy task. The problem becomes one of tying formal information systems into informal systems in order to access the kinds of information potential visitors need or want to know.

There are several possibilities as to how to accomplish this. In order to promote tourism, people must first be made aware that a place exists and then targeted to visit that place. This study suggests that an individual's awareness of a place comes mostly from informal sources such as family, friends and the group travelled with on a vacation trip. If people are not actively seeking out information about possible places to visit from formal sources, then how can these sources be used to create awareness of recreation opportunity? A possible

answer to this is that formal organizations involved with tourism must actively seek out tourist/recreationist markets and provide them with information rather than the traditional role of providing information only to those that seek it out. Much of mass media communications are ineffective in terms of accessing the kinds of information people want or in providing information perceived as "credible" or "useful" by potential users. However, formal tourist-related organizations need to make use of mass media in order to create initial awareness in individuals as to their functions and information-providing capabilities. Hopefully, creating an awareness about these sources will provide the impetus for more use of them.

A second possibility lies in tapping "weak ties" or heterophilous links in communication networks. An individual's family, friends and travelling group comprise interlocking personal networks, which are networks where an individual interacts with a set of dyadic partners who interact with each other (Rogers and Kincaid, 1981). Rogers and Kincaid (1981) suggest that ingrown communication patterns in interlocking personal communication networks discourage the exchange of new information with the environment beyond the personal network and that interlocking networks facilitate "the pooling of ignorance" among individual members. This study has provided evidence that strongly supports the case that visitors receive information through homophilous links. The literature suggests that information is communicated to more individuals through heterophilous links, not homophilous links of family, friends and the travelling group, and that heterophilous links are more powerful than homophilous links in transmitting new and different kinds of information. Heterophilous links are represented by sources individuals use such as the Chamber of Commerce, AAA, merchant shops in communities where

visitors are vacationing, employees at the visitors lodging place, any religious social or recreational groups to which an individual belongs. So, in order to tap into informal communication networks dealing with recreation opportunities, organizations concerned with promoting tourism must access information to an individual's weak ties or heterophilous links. One way to accomplish this would be for tourism agencies to access information to a variety of formal organizations to which individuals belong, such as service clubs, religious groups, and outdoor oriented associations and clubs. Another way would be to provide recreation information to outdoor recreation or sports magazines, whose readers would potentially use this information. The important concept here is that tourism agencies should target weak links of communication networks with recreation information as a possible method of promoting more tourism.

A third possibility lies in isolating specific tourist markets at which to target appropriate promotional strategies. Although this research has identified several variables which influence the kinds and sources of information used by visitors, it is important to realize that the application of these variables towards determining promotional strategies for specific tourist segments can only be tentatively established here because of the highly exploratory conditions of this study. Since the variable phase of trip was seen to strongly influence the kinds and sources of information used by visitors, tourism organizations should keep this in mind when planning promotional strategies. Correct timing in distributing different kinds of information through appropriate communication channels is the key to providing the kinds of information people need or want to know at various phases of their vacation trip.

This study indicates that information on places to stay, recreational activities, scenic areas and directions is most important before taking a vacation trip. Furthermore, this type of information should be made available at AAA's, Travel Information Centers and in maps (for directional information) in order to facilitate maximum use. Upon arrival to a recreation location information on recreational activities, places to eat, directions and shopping becomes most important to visitors. This information is most frequently obtained from the place where the visitor is staying and by driving or walking around. So, it makes sense to focus on providing lodging facilities with this kind of information.

Although results of this study indicate the importance of maps as directional sources of information for before trip and upon arrival stages of travel, maps are not easily accessible. In many areas gas stations charge money for maps. On top of this, maps that are available in the State are of general poor quality in regards to giving detailed information on recreation opportunities. Michigan maps issued by AAA and Chambers of Commerce do not usually indicate publicly owned recreation lands such as national forests, State forests or Sleeping Bear Dunes. Providing better quality maps in places such as Chambers, AAA and gas stations is necessary in order to access a much used source of information to more people who need it.

The variables location and number of visits would likely prove most productive in identifying tourist markets at which to target tourism promotion efforts. This study indicates that campers are more receptive to mass media promotional schemes before taking a vacation trip than resorters. Therefore, efforts should be made to access campers with information on recreational activities, places to stay

and directions through Travel Information Centers, newspapers and maps. Upon arrival to a recreation location it is recommended that campers be supplied with information on recreational activities, directions and natural amenities of the area through the campground where they are staying, local visitor centers and gas stations. On the other hand, targeting resorters requires slightly different tactics. This group is most receptive to information on shopping, places to eat and recreational activities which should be accessed through Chambers of Commerce, radio, and the resort where they are staying.

The variable number of visits identifies other tourist markets for which varying promotional schemes are appropriate. Data in this study suggests that the first time visitor would be most receptive to mass media types of promotion before the trip. This is because a higher percentage of first time visitors use mass media sources than second time visitors before taking a trip and would be more receptive to information placed in Travel Information Centers, Chambers of Commerce, magazines, newspapers and maps. Second time visitors would be more receptive to using the AAA for information on places to stay, recreational activities and directions. Upon arrival to recreation locations, first and second time visitors are most interested in information on recreational activities, directions, and places to eat, which should be provided at the place they are staying. The repeat visitor not only receives less information but relies most heavily on informal sources of driving or walking around and the travelling group. The study done by Calantone and others (1980) found that frequent visitors show little interest in radio and magazines. Therefore, it is not recommended that this group be targeted through formal communication channels.

Aside from the use of formal information sources, several

possibilities exist for using informal communication channels to effectively promote tourism. These possibilities are found within the local communities that provide or service recreation opportunities for visitors. Most important is how visitors are treated once they arrive in the community. The adage "a good customer is a satisfied customer" also applies to the visitor to a recreation location. A satisfied visitor probably does more to promote an area as a good place to visit than mass media efforts because of the potential to pass on information to a large number of people through informal communication networks. The visitor, then, becomes the vehicle by which an area is promoted for tourism. Therefore, it becomes very important that the communities servicing or providing recreation opportunities treat visitors as well as possible so that they take back to friends and family a positive image of the area visited.

There are also ways in which these communities can better provide for the informational needs of their visitors. Since the place where visitors are staying represents the most frequently used source of information, it makes sense to focus efforts here. Employees and owners of lodging facilities (such as resorts, motels, campgrounds, etc.) need to be highly informed about the variety of opportunities available to visitors so that these establishments can provide the kinds of information visitors need or want to know. Many employees presently working in lodging industries are seasonal labor and not well informed about the area. A worthwhile endeavor, then, would be for tourist-related enterprises to organize educational workshops and training sessions for their employees in order to make them more knowledgeable sources of information to visitors.

Another result of this study giving insight as to how

communication can better access information to visitors is that driving or walking around is a frequently used information source by visitors. This means that placement and information content of road signs is very important in creating awareness and use of certain recreation opportunities. Most needed are directional and informative signs on recreational facilities or opportunities such as campgrounds, public beach, scenic views, etc.

Limitations and Research Directions

There are several limitations present in the data utilized in this study. The first is that small sample size did not allow for conclusive evidence of the influence of several variables on information networking. This problem is not so crucial when considering that this research was a pilot study meant to determine important issues and methodologies for examination in future studies.

The second limitation is contained within the methodology of the study. Problems were encountered with treating repeat visitors differently than first or second timers. Different questionnaires were administered to repeat visitors to avoid high non-response that could have resulted had they been given the same questionnaire as first and second timers. The realization came too late that non-responses would have been an indication that less new information is received as a result of increased visitation. Administering different questionnaires to this group also did not allow for comparisons between other respondents regarding kinds and sources of information before the trip. Therefore, results are incomplete for before trip data because repeat visitors are excluded. The fact that before trip data and upon arrival data are based on different sample sizes could have caused resulting

frequencies to be distorted.

An objective of this study has been to determine which format in questionnaire administration is best suited to studying this subject matter. There is no doubt that personal interviews represent the best format. In the self-administered format, respondents experienced a fair amount of difficulty in filling out matrices, whereas with personal interviews this problem was not only eliminated, but less time was necessary to complete questionnaires. Use of the personal interview format would also enable lowering the age limit for respondent inclusion. As was stated earlier, the lower age limit for respondent inclusion (set at 16 years old) was too high to permit gathering data on the majority of children in respondent groups. This problem can be eliminated with the personal interview format. In future studies it is therefore highly recommended that sole use be made of the personal interview format for this subject matter to facilitate more accurate response and examination of the role of children in travelling groups as information sources.

Also suggested for future studies is that more work should be done with the variables chosen to examine influence on networking. Larger sample sizes are needed to obtain usable data on variables role in group, type of group, and age group. Since the variable location suggested a large degree of influence on networking, it might be advisable for future studies to expand on the different kinds of locations used. For example, this variable could include cottages, motels, inns, private campgrounds, etc. in addition to public campgrounds and resorts used in this study.

As well as expanding examination of certain variables in this study, it is recommended that some additional variables be studied.

The variables seasonality and length of visit might prove influential in determining information networking. To examine the effects of seasonality on information networking the use of a more longitudinal research design is suggested, in which sampling would be performed at various intervals (i.e. once each season) throughout a one year period. To examine the effects of length of visit, it is necessary to sample groups at recreation locations that comprise a combination of day visits, overnight visits, and visits of longer duration.

Finally, analysis procedures in this study were very simplistic in that only descriptive data was generated to examine communication networks. The use of frequencies does not establish statistical significance nor distinguish relationships between variables. Suggestions for future studies are to use computerized programs to analyze this data, with special efforts to isolate the influence of variables on information networking as well as to determine any correlations that may exist between variables.

APPENDIX A

APPENDIX A

Letter of Permission

July 29, 1982

Pete Peterson
Superintendent
Sleeping Bear Dunes
National Lakeshore
400 Main Street
Frankfort, MI 49635

Dear Mr. Peterson:

This letter is a written request for permission to conduct informal interviews at the Platte River Campground in Sleeping Bear Dunes National Lakeshore during the months of July, August, and possibly September of 1982. These interviews are part of a Sea Grant research project for the Department of Park and Recreation Resources at Michigan State University.

The interviews will be very informal in nature. The participation by campers in the interviewing process will be entirely voluntary. Only those individuals willing to participate will be approached. Furthermore, the sampling procedure is neither systematic nor random, which means that there will be no pressure to interview select campers over others. The total number of samples taken will be small. An estimated fifty interviews will be conducted over a four or five day period in these months.

You should also be made aware of the fact that these interviews are exploratory. The first year of this Sea Grant Project is devoted to gathering information for the design of a formal research instrument for the following year of the project (starting January, 1983). Next year this formal research instrument will be distributed state-wide and in surrounding states. If researchers working on this project should need to conduct surveys next year in Sleeping Bear Dunes, they will work through the proper channels to obtain permission.

I hope the present arrangement is satisfactory and that no problems arise. Thank you very much.

Sincerely,



Cathy Eckstein
Research Assistant

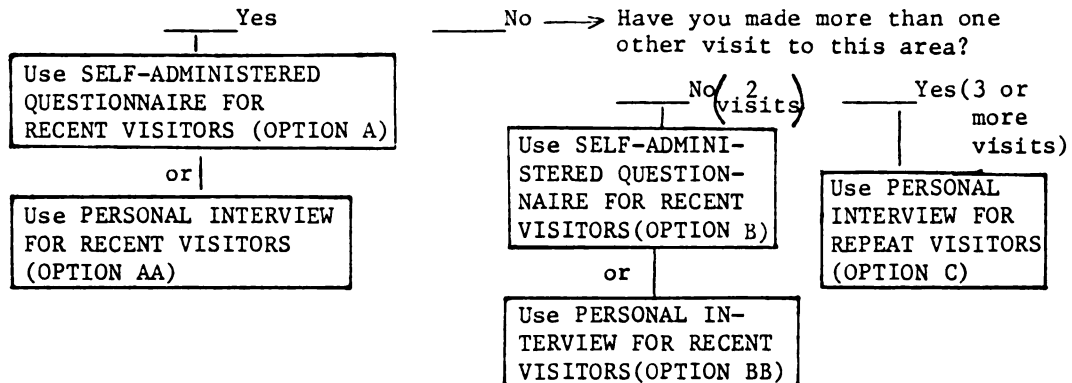
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APPENDIX B

FILTER QUESTIONS

- [illegible]

2. Is this your first visit to this area?



Note: Interview or give questionnaires to all members of travelling group 16 years and older.

3. What is the main purpose of your trip? (Check one)

____ business _____
 ____ accompanying someone _____
 ____ on business _____
 ____ visiting relatives and/or friends _____
 ____ outdoor recreation(specify) _____
 ____ other(specify) _____

4. Is this area a main destination of your trip or is it a stopover?
(Check one)

_____main destination
_____stopover

5. Are you staying overnight in the area?

Yes **No**

If yes, what type of lodging? (Check one)

 hotel/motel/inn (circle) friends/relatives (circle)
 resort/cottage/cabin (circle) other (specify) _____
 public/private campground
(circle)

PERSONAL INTERVIEW FOR RECENT VISITORS (OPTION AA)

1. Before your trip, what information did you get about this area?

PROBE if necessary to get started.

2. Where did you get this information from?
 - 2a. From a person? Who?
 - 2b. From literature? What kind?

3. PROBE - Did you get any additional information before taking this trip?

Interviewer fills in Chart 1 according to responses. Procedure: ask for one type of information and then it's source(s) before going on to next type of information.

4. When you arrived in this area, what information did you get?

PROBE if necessary.

5. Where did you get this information from?
 - 5a. From a person? Who?
 - 5b. From literature? What kind?

6. PROBE - Did you get any additional information after you arrived?

Interviewer fills in Chart 2 according to responses. Procedure: same as for Chart 1.

PERSONAL INTERVIEW FOR RECENT VISITORS (OPTION BB)

1. Before this trip, what information did you get about this area?

PROBE if necessary to get started.

2. Where did you get this information from?
 - 2a. From people? Who?
 - 2b. From literature? What kind?

Interviewer fills in Chart 1 according to responses. Procedure: ask for one type of information and then it's source(s) before going on to next type of information.

3. On this trip, where did you get information when you arrived in this area?

PROBE if necessary to get started.

4. Where did you get this information from?
 - 4a. From people? Who?
 - 4b. From literature? What kind?

Interviewer fills out Chart 2 according to responses. Procedure: same as for Chart 1.

QUESTIONNAIRE FOR RECENT VISITORS (OPTION A)

1. How did you first learn about this area? _____

2. Go to page 2 for this question.

3. Please list all the people in your group by their first name, including yourself. Then rate each of them in terms of their influence on the decision of the group to come to this area. (Circle the correct number for each person you list).

	Didn't Influence at all	Influenced very little	Influenced somewhat	Influenced very much	Entirely their Decision
Yourself: _____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

4. Go to page 3 for this question.

5. Do people ever ask you for information about recreation opportunities?

_____ Yes _____ No

6. Do you enjoy talking to others about your trips? Check the one that applies to you.

- _____ Yes, I look for opportunities to tell people about my trips.
 _____ Yes, occasionally when somebody asks.
 _____ I will talk about the trip but only reluctantly.
 _____ I try to avoid talking about my trips.








































7. What is your age? _____

8. What is your sex? _____

page 2

2. Before your trip, where did you get information about this area? For each type of information please indicate all sources in Chart 1 that apply. In the boxes put either a check, a name, or a letter from the Key below. Check the first box (NONE) for any information you did not get.

KEY

FROM PRINTS
 BOOKS
 NEWSPAPERS
 MAPS
 RADIO
 TELEVISION
 NEWSPAPERS
 BOOKS
 MAPS
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 TELEVISION
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 BOOKS
 MAPS

6. When you arrived in this area, where did you get information? For each type of information, please indicate all sources in Chart 2 that apply. In the boxes put either a check, a name, or a letter from the Key below. Check the first box (NONE) for any information you did not get.

- **YOUR PEOPLE:**
 B - Employee
 V - another visitor
 - **YOUR LITERATURE:**
 B - brochure or pamphlet
 H - map
 M - newspaper or magazine
 T - travel agency
 TG - travel guide/booklet

CHART 2

[illegible]

QUESTIONNAIRE FOR RECENT VISITORS (OPTION B)

1. How did you first learn about this area? _____

2. Go to page 2 for this question.

3. Please list all the people in your group by their first name, including yourself. Then rate each of them in terms of their influence on the decision of the group to come to this area. (Circle the correct number for each person you list).

	Didn't Influence at all	Influenced very little	Influenced somewhat	Influenced very much	Entirely their Decision
Yourself: _____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

4. Go to page 3 for this question.

5. Do people ever ask you for information about recreation opportunities?

____ Yes ____ No

6. Do you enjoy talking to others about your trips? Check the one that applies to you.

____ Yes, I look for opportunities to tell people about my trips.

____ Yes, occasionally when somebody asks.

____ I will talk about the trip but only reluctantly.

____ I try to avoid talking about my trips.

7. What is your age? _____

8. What is your sex? _____

2. Before this trip, where did you get information about this area? For each type of information please indicate all sources in Chart 1 that apply. In the boxes put either a check, a name, or a letter from the Key below. Check the first box (NONE) for any information you did not get.

Abstract

The purpose of this study was to determine whether the use of a computer-based system could improve the accuracy of data collection from a large number of subjects. The system used was a personal computer with a graphics interface. The system was used to collect data from 100 subjects who were asked to perform a simple task. The results showed that the system improved the accuracy of data collection compared to a paper-based system.

Keywords: Computer-based system, Data collection, Accuracy, Subjects, Task performance.

Introduction

In recent years, there has been a growing interest in the use of computer-based systems for data collection. This is due to the fact that such systems can provide a more efficient and accurate method of collecting data than traditional paper-based methods. In this study, we will examine the effectiveness of a computer-based system for collecting data from a large number of subjects.

The system used in this study was a personal computer with a graphics interface. The system was designed to allow subjects to interact with the computer by pointing at a screen. The subjects were asked to perform a simple task, which involved identifying a specific object among a set of objects. The system recorded the subject's response and provided feedback immediately.

The results of the study showed that the computer-based system significantly improved the accuracy of data collection compared to a paper-based system. This suggests that the use of such systems may be beneficial in a wide range of applications where data collection is required.

Conclusion

The findings of this study indicate that a computer-based system can effectively improve the accuracy of data collection from a large number of subjects. Further research is needed to explore the potential of such systems in other contexts.

Acknowledgments

This work was supported by a grant from the National Science Foundation.

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60. Bussey, T. J., & Saks

(PAGE 1)

[illegible]

1. On this trip, where did you get information when you arrived in this area? For each type of information please indicate all sources in Chart 2 that apply. In the boxes put either a check, a name, or a letter from the Key below. Check the first box (NONE) for any information you did not get.

FROM PEOPLE:
E - Employer
Y - another visitor
FROM LITERATURE:
B - brochure or pamphlet
H - map
M - magazine
ID - telephone or travel agency
TG - travel guide/booklet

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PERSONAL INTERVIEW FOR REPEAT VISITORS (OPTION C)

1. How did you first learn about the (Frankfort) area? _____
(Tawas)

2. How long have you been coming to the (Frankfort) area? _____
(Tawas)

3. How familiar do you feel you are with this area? (Circle one)

extremely	very	somewhat	not very	not at all
familiar	familiar	familiar	familiar	familiar
4. In general, are you the type of person that looks for new things to do or places to go, or do you like to do the same things and go back to the same places?
 _____ like to do same things, go back to same places
 _____ like to do different things, go to different places
 _____ other(specify) _____

5. When you arrived in the area on this trip, have you been finding out about new things to do or places to go that you didn't already know about?
 _____ Yes _____ No (Go to question 7)
- 5a. like what? _____

- 5b. PROBE. Did/Will you (go there) (visit this place) (do.....)

Opportunity(from 5a):	Yes	No
_____	_____	_____
_____	_____	_____
_____	_____	_____
6. On this visit to the area, what were the sources of information you used to find out about these new things to do or places to go? (Refer to opportunities in question 5 for this question.)
 - a. source: _____
 information: _____
 - b. source: _____
 information: _____
 - c. source: _____
 information: _____

-2-

7. On your first few visits to the area, what were the three most important sources of information you used to find out about things to do or places to go?

a. source: _____
information: _____

b. source: _____
information: _____

c. source: _____
information: _____

RESPONDENT CHARACTERISTICS

1. Please list all the people in your group by their first name, including yourself. Then rate each of them in terms of their influence on the decision of the group to come to this area. (Circle the correct number for each person you list).

	Didn't Influence at all	Influenced very little	Influenced somewhat	Influenced very much	Entirely their Decision
Yourself: _____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

2. Do people ever ask you for information about recreation opportunities?

____ Yes ____ No

3. Do you enjoy talking to others about your trips? Check the one that applies to you.

____ Yes, I look for opportunities to tell people about my trips.

____ Yes, occasionally when somebody asks.

____ I will talk about the trip but only reluctantly.

____ I try to avoid talking about my trips.

4. What is your age? ____

5. What is your sex? ____

APPENDIX C

APPENDIX C

Supplementary Tables

Table C1

Where First Learned, Tawas Area (N=37)

SOURCES	% Respondents
Travelling Group	37.8
Friends	13.5
Family	10.8
Trips taken as child	8.1
Passed through on previous trip	5.4
Organized Group	5.4
AAA Campguide	5.4
Vacation guide	5.4
Map	2.7
EMTA	2.7
Co-worker	2.7
Total	100.0

Table C2

Where First Learned, Frankfort Area (N=40)

SOURCES	% Respondents
Friends	35.0
Travelling group	30.0
Family	10.0
Trips taken as child	7.5
Passed through on previous trip	7.5
WMTA	5.0
Map	2.5
Co-worker	2.5
Total	100.0

Table C3

Kinds of Information Received Before Trip, Tawas Area (N=12)

Kinds of Information	% of Respondent Groups
Places to stay	91.7
Recreational activities	75.0
Scenic areas	50.0
Natural environment	50.0
Community Events	41.6
Directions to a place	41.6
Tourist attractions	41.6
Places to eat	33.3
Local residents	16.7
Shopping	16.7
Museums	8.3

Table C4

Kinds of Information Received Before Trip, Frankford Area (N=9)

Kinds of Information	% of Respondent Groups
Places to stay	77.7
Recreational Activities	77.7
Directions to a place	77.7
Scenic Areas	66.6
Natural environment	55.6
Places to eat	44.4
Tourist attractions	44.4
Community events	44.5
Shopping	33.3
Local residents	22.2
Museums	22.2

Table C5

Kinds of Information Received Upon Arrival,
Tawas Area (N=15)

Kinds of Information	% Respondent Groups
Places to eat	66.7
Recreational activities	53.3
Shopping	46.7
Directions to a place	46.7
Scenic Areas	26.7
Natural environment	26.7
Tourist attractions	20.0
Places to stay	13.3
Community events	13.3
Local residents	6.7
Museums	6.7

Table C6

Kinds of Information Received Upon Arrival,
Frankfort Area (N=17)

Kinds of Information	% Respondent Groups
Recreational activities	64.7
Community events	47.1
Directions to a place	47.1
Places to eat	41.2
Shopping	35.3
Tourist Attractions	35.3
Scenic areas	35.3
Places to stay	23.5
Natural environment	23.5
Museums	17.6
Local residents	5.9

Table C7

Sources of Information Before Trip, Tawas Area (N=12)

Sources	% Respondent Groups
Travelling Group	50.0
Friends	41.7
AAA	33.3
Magazines	25.0
Chamber of Commerce	16.7
Travel Information Center	16.7
Map	8.3
Radio	8.3
T.V.	8.3
Flyer	8.3
Bookstore	8.3

Table C8

Sources of Information Before Trip, Frankfort Area (N=9)

Sources	% Respondent Groups
Travelling group	66.7
Friends	44.4
Map	44.4
AAA	33.3
Newspaper	22.2
Family	11.1
Travel Information Center	11.1
State Police	11.1
Vacation travel show	11.1
Place staying	11.1

Table C9

Sources of Information Upon Arrival, Tawas Area (N=15)

Sources	% Respondent Groups
Place staying	66.7
Drove/walked by	66.7
Travelling Group	26.7
Chamber of Commerce	13.3
Local residents	13.3
-----	-----
Local police	6.7
Gas stations	6.7
Radio	6.7
T.V.	6.7
Newspaper	6.7
Local visitor center	6.7

Table C10

Sources of Information Upon Arrival, Frankfort Area (N=17)

Sources	% Respondent Groups
Place Staying	64.7
Travelling group	41.2
Drove/walked by	29.4
Chamber of Commerce	17.6
Gas Stations	17.6
Local Visitor Center	17.6
Local Merchant Shops	11.8
Restaurants	11.8
Radio	11.8
Local residents	5.9
Newspapers	5.9

Table C11
Most Frequently Used Sources, Ranked (1-3), for Kinds of Information Before Trip, Tawas Area

KINDS OF INFORMATION	RANKED SOURCES					
	#1	%	#2	%	#3	%
Places to stay	Trav. Group	22.2	AAA		TIC	
Places to eat	Trav. Group	40.0	AAA/TIC	16.7	Chamber	11.1
Recreational Activities	AAA		TIC	20.0	Chamber	20.0
	Trav. Group	23.1	Friends	15.4	Family/magazines/ bookstore	7.7
Community events	TIC					
	Trav. Group	40.0	Friends	20.0		
Shopping	Trav. Group	100.0		20.0		
Tourist attractions	AAA	40.0	TIC	20.0		
	AAA/TIC		Trav.Grp./Chamber			
Scenic areas	Trav. Group	25.0	Chamber/family	12.5		
Museums	AAA	100.0				
Directions	TIC					
	AAA	33.3	Chamber/Family	16.7		
Local residents	Friends/TIC/ magazines	33.3				
Natural environment	Friends/magazines	20.0	AAA Chamber/Trav.Grp/TIC/ Radio/T.V.	10.0		

Table C12

Most Frequently Used Sources, Ranked (1-3), for Kinds of Information Before Trip, Frankfort Area

KINDS OF INFORMATION	RANKED SOURCES				
	#1	%	#2	%	#3
Places to Stay	Travelling Group	33.3	AAA	25.0	Place staying family
Places to eat	Travelling Group	40.0	AAA/newspaper	20.0	
Recreational Activities	Travelling Group/friends	22.2	AAA/newspaper/TIC/ vacation trav.show	11.1	
Community events	Travelling Group/friends/ TIC/newspaper	25.0			
Shopping	Travelling Group	66.7	Newspaper	33.3	
Tourist Attractions	Trav. Grp./newspaper	33.3	Friends/TIC	16.7	
Scenic Areas	Travelling Group	66.7	Friends/TIC	16.7	
Museums	AAA/Travelling Group	50.0			
Directions	Map	44.4	Travelling Group	27.3	State police/place staying Friends/TIC
Local residents	AAA/Travelling Group	50.0			
Natural environment	Travelling Group	50.0	Friends	33.3	AAA
					11.1
					16.7

Table C13

Most Frequently Used Sources, Ranked (1-3), for Kinds of Information Upon Arrival, Tawas Area

KINDS OF INFORMATION	RANKED SOURCES					
	#1	%	#2	%	#3	%
Places to Stay	Drove/walked by Place staying/local visitor center	33.3				
Places to eat	Drove/walked by	46.2	Place staying	30.8	Trav. Group Local police/ Restaurant	7.7
Recreational Activities	Place staying	38.5	Travelling Group	30.8	Drove/walkby/T.V./ Chamber/Local Visitor Center	7.7
Community events	Newspaper Place staying	50.0				
Shopping	Drove/walked by	50.0	Place staying	16.7	Trav.Grp./Gas station/ Local residents/ Restaurant	8.3
Tourist Attractions	Place staying	50.0	Drove walkby/local residents	25.0		
Scenic areas	Place staying	75.0	Drove/walked by	25.0		
Museums	Drove/walked by	100.0				
Directions	Place staying	55.6	Local residents	22.2	Chamber/local police	11.1
Local residents	Chamber/ Local police	50.0				
Natural environment	Place staying Local residents	25.0	Drove/walked by Local police/radio/ Local V.S. Center	12.5		

Table C14

Most Frequently Used Sources, Ranked (1-3) for Kinds of Information Upon Arrival, Frankfort Area

KINDS OF INFORMATION	RANKED SOURCES				
	#1	%	#2	%	#3
Places to stay	Travelling group	50.0	Drove/walk by/local visitor center	25.0	
Places to eat	Drove/walked by	40.0	Travelling Group	30.0	Place staying 20.0
Recreational activities	Place staying	33.3	Travelling Group	16.7	Local vis.Ctr. 12.5
Community events	Place staying/Trav. Group		Chamber/Sport Shop/Local Visitor Ctr./Local Residents	10.0	
Shopping	Travelling Group	37.5	Place staying	25.0	Drove/walked by/Chamber 12.5
Tourist attractions	Place staying	33.0	Travelling Group	22.2	Chamber/Local Vis. Center 11.1
Scenic areas	Place staying	66.7	Travelling Group/Local Vis. Center	16.7	Drove/walked by/Restaurant
Museums	Place staying/Trav.Grp.	33.3			
Directions	Place staying	36.4	Travelling Group/Gas Stations	27.3	Sport Shop 9.1
Local residents	Travelling Group	100.0			
Natural environment	Place staying/Trav. Group/Sport Shop/Gas stations	25.0			

Table C15

Most Frequently Used Sources by Repeat Visitors, Ranked (1-3), for Kinds of Information

KINDS OF INFORMATION	RANKED SOURCES					
	#1	%	#2	%	#3	%
Places to stay	Friends/Trav.Grp./Map/Chamber	20.0	Place staying	10.0		
Places to eat	Place staying	53.8	Travelling group	23.0	Drove/walked by	15.4
Recreational activities	Place staying	66.7	Family	18.5		14.8
Entertainment	Drove/walked by	100.0				
Community Events	Friends	100.0				
Shopping	Drove/walked by	66.7	Place staying	33.3		
Tourist attractions	Place staying	42.9	Family/drove/walked by/Chamber/AAA	14.3		
Scenic areas	Place staying	50.0	Drove/walked by	28.6	Friends	21.4
Directions	Friends/Chamber/Mobil Travel Guide	28.6	Place staying	16.7		
Natural environment	Friends	66.7	Travelling group	33.3		
General Information	Place staying	36.4	Travelling group	22.7	Chamber	13.6

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Table C16

Units of Analysis and Percentage of Respondents, Before
Trip and Upon Arrival, For Variable Categories

VARIABLE CATEGORIES	UNIT OF ANALYSIS		BEFORE TRIP	UPON ARRIVAL
	Individ- ual	Groups	% Respondents (N=36) % Respondent Groups (N=21)	% Respondents (N=77) % Respondent Groups (N=32)
SEX				
Males	✓		41.6 (N=15)	48.1 (N=37)
Females			58.3 (N=21)	51.9 (N=40)
LOCATION				
Campground		✓	61.9 (N=13)	56.3 (N=18)
Resort			38.1 (N= 8)	43.7 (N=14)
AGE GROUP				
16-25 years	✓		11.1 (N= 4)	10.4 (N= 8)
26-45 years			72.2 (N=26)	70.1 (N=54)
46-64 years			11.1 (N= 4)	13.0 (N=10)
65 + years			5.6 (N= 2)	6.5 (N= 5)
NUMBER OF VISITS				
First	✓		44.4 (N=16)	20.8 (N=16)
Second			56.1 (N=20)	26.0 (N=20)
Repeat (total)			-----	53.2 (N=41)
-----	-----	-----	-----	-----
3-4 years	✓			16.9 (N=13)
5-7 years				16.9 (N=13)
8-16 years				7.7 (N= 6)
17-38 years				11.7 (N= 9)
TYPE OF GROUP				
Family with children		✓	42.9 (N= 9)	46.9 (N=15)
Family no children			23.8 (N= 5)	28.1 (N= 9)
Friends			14.3 (N= 3)	9.4 (N= 3)
Mixed			9.5 (N= 2)	9.4 (N= 3)
Alone			9.5 (N= 2)	6.3 (N= 2)
ROLE IN GROUP*			(N=34)	(N=66)
Individual's Role	✓			
Mother/wife			41.2 (N=14)	40.9 (N=27)
Father/husband			29.4 (N=10)	39.4 (N=26)
Son			.0 (N= 0)	1.5 (N= 1)
Daughter			8.8 (N= 3)	4.5 (N= 3)
Friend			20.6 (N= 7)	19.7 (N= 9)
-----	-----	-----	-----	-----
Most Influential	✓		(N=16)	(N=27)
Male			43.8 (N= 7)	48.1 (N=13)
Female			18.8 (N= 3)	18.5 (N= 5)
Joint			37.5 (N= 6)	33.4 (N= 9)

*Role in Group variable uses different base numbers to calculate percentages because "individual's role" subcategory does not include respondents travelling alone and both subcategories do not include non-response cases.

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