

USING PARTICIPANT OBSERVATION TO STUDY RECREATION MANAGEMENT DECISION-MAKING

Kenneth Chilman
Associate Professor Emeritus
Department of Forestry
Southern Illinois University
Carbondale, IL

Abstract

Participant observation, negative case analysis (Kidder 1981) has been the research design used in a series of recreational carrying capacity decision situations. The studies discussed here began in 1972 at Ozark National Scenic Riverways. After 7 years of research, a series of steps was identified for determining recreation capacities for large scale land and water areas. That nine-step process was used as a hypothesis for testing in similar decision situations on other recreation management areas including Lake Tahoe Basin. The process hypothesis was modified to a five-step process and tested on several Corps of Engineers lakes in the 1990s. The key step in the process appeared to be the recreation visitor inventory step to provide managers with systematic, place-specific visitor inventory data about numbers of different types of visitors to various parts of an area and their perceptions of conditions. These numbers in the framework of the recreation opportunity spectrum (ROS) concept can then be used to formulate alternatives for discussions in public meetings about capacity decisions.

A four-step inventory process has been developed for training and discussion purposes.

Because participant observation does not appear to have been used in other recreation research, this paper includes discussion of facets of the method as applied in recreation decision research.

1.0 Introduction

Increasing conflicts about recreation management decisions, especially recreational carrying capacity decisions, invite study of how such decisions are made and how conflicts may be reduced. Because capacity decisions are complex processes involving several participants, including various individuals in the management organization, user groups, concessionaires,

community representatives and others, participation of researchers with managers was necessary to understand the decision process.

Participant observation is described in social research textbooks, along with experiments, surveys, and evaluation research (Kidder 1981). It has been utilized for many years in such fields of study as anthropology, business management, and public administration (Whyte 1984). However, it does not appear to have been used in other recreation research studies.

The research reported here discusses the use of participant observation in a series of case studies. A hypothesis was generated about a sequence of events utilized in capacity decision-making in a national river situation (Chilman and others 1996). The hypothesis was tested in other capacity decision situations, modified and retested over a period of some 30 years.

The hypothesis evolved from a nine-step capacity decision process to a five-step process (to aid management communications in public meetings) and then to focus on the recreation visitor inventory step as the key element for capacity management decisions.

The visitor inventory process for large land and water areas is outlined. Also findings about aspects of using participant observation in recreation management decision research are discussed.

2.0 Methods

The research reported here centered around four research questions:

1. What kinds of decisions do recreation managers make?
2. What kinds of information is useful for such decisions?
3. How can such information be collected systematically and inexpensively?
4. How can managers be trained to collect and utilize the information?

These questions originated from the author's work experience with the U.S. Forest Service in the central Sierra Nevada in California from 1956-1965. That was a time of rapidly increasing recreational use of wildland areas (ORRRC 1962). Decisions were needed about how to accommodate and manage diverse uses from development of major ski area facilities to high density wilderness visitation. Decisions were becoming complex as more parties were becoming involved: user groups, environmental organizations, communities, local governments and others.

The author had the opportunity to return to the University of Michigan in 1965, where program recreation research were being initiated. Studies in public administration provided theoretical and methodological training to research organizational decision making. Dissertation research involved comparative case study research on land use decision procedures for ski area developments (Chilman 1972).

Recreational carrying capacity decisions were then identified as problematic and an important topic for research. As recreational use of an area increases, environmental damage or deterioration of recreation visit quality may occur. Calls for limiting use result in conflicting opinions from various parties involved. Court cases may occur.

To study these complex situations over time, participation with the managers involved was necessary. Participant observation, negative case analysis (Kidder 1981) was selected as the research design. With this design, the researcher participated with the managers as a visitor information specialist to contribute systematic data to the decision process. Discussions took place about information needed, how to collect it, and how it would be used in decision-making.

Hypotheses were generated about steps in the process of making decisions, and the hypotheses were tested in a series of case studies. Negative case analysis means that if something unexpected shows up in testing the process hypothesis, the hypothesis will be modified and tested in following cases.

Participant observation does not have the explicit research design structure that survey research does. However, observation methods and examples of applications are described in detail in various texts (Whyte 1984; Whyte 1997; Wolcott 1995; and Rossman and Ralls 1998). In Whyte's 1997 book, three important considerations, - gaining access to the field, systematizing participant observation, and interviewing in the field – are addressed. How those aspects have worked in the series of studies reported here will be commented on in the Discussion section of this paper.

3.0 Results

Decision-making is a process by which a person, group, or organization identifies a choice to be made, gathers and evaluates information about alternatives, and selects from among the alternatives (Carroll and Johnson 1990). The research reported here began with a recreational carrying capacity choice to be made at Ozark National Scenic Riverways (ONSR) in south central Missouri in 1972.

ONSR had been established in 1964 as the first national scenic riverway in the U.S. It included 134 miles of the Current and Jacks Fork rivers and is administered by the National Park Service (NPS). The very clear free-flowing waters and scenic Ozark mountains began to attract large numbers of canoeists.

Dr. Leo Marnell, a fisheries biologist who had worked at Yellowstone and Yosemite national parks before arriving at ONSR, began a research program in 1972 to gather information for capacity decision-making (Chilman and others 1996). Through that research, a nine-step process was identified for capacity decisions (Chilman and others 1981). That process and subsequent rationale for limiting river use was thoroughly tested in a federal court case in St. Louis in 1982 and found to be valid.

This process hypothesis was subsequently tested in a series of capacity studies on the land areas of Lake Tahoe Basin Management Unit in California in the 1980s. The land area managed by the U.S. Forest Service within the Basin was a major portion of about 100 square miles. Methods were developed for visitor use data collection for undeveloped beach areas, Desolation Wilderness

(a very heavily used wilderness area), and for off-road vehicle riding areas. A concept of using systematic, place-specific visitor use data within the recreation opportunity spectrum (ROS) framework began to emerge as a strategy for capacity management. The capacity process emphasized improving recreational quality (rather than just imposing limits) and was titled Quality Upgrading and Learning (QUAL) (Chilman and others 1989).

The QUAL hypothesis was then tested in a series of studies at Corps of Engineers (COE) managed lakes during the 1990s. The process hypothesis was shortened to five steps to be more easily communicated to the various decision participants (Chilman and others 1990, Chilman and others 1995). In the COE lakes studies, the particular focus of interest became the systematic, place-specific visitor inventories part of Step II – Inventory Existing Conditions. This information allowed managers to understand visitors' perceptions of conditions and also frequently suggested alternatives to resolve capacity situations as management actions rather than long-drawn-out and expensive capacity planning processes.

An opportunity to replicate this inventory hypothesis took place on the St. Croix National Scenic Riverway along the Minnesota and Wisconsin state line from 1999-2002. The St. Croix National Scenic Riverway encompasses 252 miles of the St. Croix and Namekagon rivers, and is located near the Minneapolis-St. Paul metropolitan area. Within funding limits, river user data collection could be done on approximately one-third of St. Croix NSR each year, including repeat measurements on the 98-mile-long Namekagon River in 2002. Different river user densities on various river sections offered the opportunity for managers to maintain choices for river visitors related to their particular preferences for quality visits.

It can be seen from the above that the research began with the development of a process hypothesis, testing of the hypothesis, modification, and retesting. During this sequence, intensive discussions of the decision process took place with individual managers and groups of managers and other decision participants. Aspects of the participant observation research during that time are discussed in the following section.

4.0 Discussion

What have we learned from this series of capacity decision studies? We started with four research questions. First, we identified recreational carrying capacity decisions as probably the most problematic that managers face, and selected them as focus for these studies.

Second, we identified a sequence of steps involved in the process of making a capacity decision on a national scenic riverway. This nine-step process was then used as a hypothesis for testing at various large land, lake and river situations across the U.S. That process was shortened to five steps to aid management communications. The key information gathering step appeared to be systematic, place-specific visitor inventories (counts and short interviews) that were lacking for the areas studied.

Third, we developed visitor inventory methods that could be applied in short time frames of a few weeks or months and relatively inexpensively. We have tested them on 30 large and diverse land, lake and river situations. We developed a four-step inventory system to help managers understand and explain the information gathering process to other parties involved in the capacity decision process (Appendix A). Managers tell us that this systematic inventory information helps them by giving them credibility in meetings with specific and current data about what is happening on the areas being considered.

Fourth, we are now in the process of developing an inventory procedures manual for recreation area managers to use when concerns about whether to limit use of an area begin to arise.

Finally, some reflection on the use of participant observation in recreation research is in order. Why has this research method not been used more frequently?

Participation with managers in decision situations take considerable field time and travel time. The work and time requirements for young university researchers may make the method prohibitive. Participant observation has less explicit designs than survey research. As qualitative research, it has been difficult to get published.

From more than 40 years of using participant observation as a research method in various settings, Whyte (1997) identifies three basic aspects of the method to be considered. These aspects are discussed here as they have worked in the recreation decision research.

The first aspect is “gaining access to the field,” he states that “Before you can decide what and how you will observe, you must find your way into the organization or community you want to study” (Whyte 1997).

For recreation decision research, this means time involved in learning where capacity decisions may be a concern and then gaining acceptance by managers involved that the researcher can provide useful information. Managers frequently communicate or meet with managers in other organizations or places. From some early small scale studies on Missouri state forests Dr. Leo Marnell at ONSR learned about the author’s visitor information studies and asked the author to participate in the ONSR capacity research program. Then through intensive discussions and presentations at research meetings, other managers invited participation in their situations.

Identifying a controversial topic where managers are looking for help – in this case recreation capacity decisions – is important in “gaining access to the field.”

Whyte also “soon discovered that acceptance of my study depended on people’s reaction to me. If Bill Whyte was all right, then my study must be all right.” A sincere interest in these wildland places and what is happening there is important. He further states that “it is important to make it clear that you are not trying to pass judgment on the people you meet. You are trying to understand them.”

The second aspect is “systematizing participant observation,” Whyte’s approach places structure first (who interacts with whom, for how long and how frequently), then contents conveyed, and finally an overall interpretation of the sequence of behaviors. For the decision research discussed in this paper, that means daily recording in a journal of interactions of participants in the process (including the researcher),

what information is discussed and what information is utilized and in what way, and an interpretation of what actions to expect (hypothesis) and look for in the next decision situation.

Whyte advocates writing “in full detail” what was observed. Even if the notes may not seem important at the time, they may be important in unanticipated ways later. One further item: make notes of phone conversations when not on-site.

The third aspect is “interviewing in the field.” Whyte says that “as a participant observer, most of your interviewing will be done informally, simply listening to what people are saying and sometimes asking them to explain” something. He says “When you are well established in your relations with a particular group, it may be helpful to get a key informant aside” for an hour or so to discuss the topics of key interest. Guidelines include “not to argue with the informant, not to express disapproval – or interrupt statements made.”

Again, try to make detailed notes on the conversation as soon afterward as possible. In some cases, group interviews (sometimes during informational meetings) can provide different perspectives.

Why learn to practice participant observation research in the study of capacity decisions? Why study decision-making? Carroll and Johnson (1990) suggest: 1) It is not obvious how decision makers make decisions; 2) Years of practice in making decisions do not necessarily perfect decision quality; 3) It may be useful to consider how decisions are made in terms of the information used; and 4) It may be useful to think of how to improve decision-making.

The research program outlined above has attempted to provide insight into these questions in the realm of recreational carrying capacity decision-making for large wildland and water areas.

5.0 Citations

Carroll, J. and Johnson, E. 1990. **Decision Research: A Field Guide**. Thousand Oaks, CA: Sage Publications

- Chilman, K. 1972. **Land Use Decision Processes in Administrative Organizations: A Ski Area Land Allocation Model.** Dissertation on file at University of Michigan: Ann Arbor, Michigan.
- Chilman, K., Marnell, L. and Pope, R. 1977. **Developing a research capacity in field organizations to aid in management decision-making.** Proceedings: River Recreation Management and Research Symposium. USDA Forest Service, Gen. Tech. Rep. NC-28, 163-167.
- Chilman, K., Marnell, L., and Foster, D. 1981. **Putting river research to work: A carrying capacity strategy.** Some Recent Products of River Recreation Research. USDA Forest Service, Gen. Tech. Rep. NC-63, 56-61.
- Chilman K., Ladley, J. and Wikle, T. 1989. **Refining existing recreation carrying capacity systems: Emphasis on recreational quality.** Proceedings of the 1988 Southeastern Recreation Research Conference, (pp. 118-123). Athens, GA: University of Georgia.
- Chilman, K., Lane, D. Foster, D., Everson, A., and Lannoy, M. 1990. **Monitoring social conditions on wildlands: Designing low-cost systems.** Managing America's Enduring Wilderness Resource. (pp, 163-169). St. Paul, MN: University of Minnesota.
- Chilman, K., Foster, D., and Everson, A. 1990. **Updating the recreational carrying capacity process: Recent refinements.** Managing America's Enduring Wilderness Resource. (pp. 234-238). St. Paul, MN: University of Minnesota
- Chilman, K., Titre, J. and Vogel J. 1995. **Adapting recreational carrying capacity processes for short-term decision-making.** Proceeding of the Fourth International Outdoor Recreation and Tourism Trends Symposium. (pp. 342-347) St. Paul, MN: University of Minnesota.
- Chilman, K., Foster, D., and Aley, T. 1996. **River management at Ozark National Scenic Riverways.** Science and Ecosystem Management in the National Parks (pp. 295-317) (Halvorson, W. and Davis, G., ed.). Tucson, AZ: University of Arizona Press.
- Chilman, K., Vogel, J. and Brown, G. 2003. **Recreation visitor inventories: Key information for capacity management.** Proceedings of the 2003 Northeastern Recreation Research Symposium. USDA Forest Service, Gen. Tech. Rep. NE-317, 48-52.
- Kidder, L. 1981. **Research Methods in Social Relations (4th ed.).** New York: Holt, Rinehart and Winston.
- Outdoor Recreation Resources Review Commission. 1962. **Outdoor Recreation for America.** Washington DC: U.S. Government Printing Office.
- Rossmann, G., and Ralls, S. 1998. **Learning in The Field.** Thousand Oaks, CA: Sage Publications.
- Whyte, W. 1984. **Learning From The Field: A Guide from Experience.** Newbury Park, CA: Sage Publications.
- Whyte, W. 1997. **Creative Problem Solving in The Field: Reflections on a Career.** Walnut Creek, CA: Altamira Press.
- Wolcott, H. 1995. **The Art of Fieldwork.** Walnut Creek, CA: Altamira Press.

Appendix A
Recreation Visitor Inventory System
(RVIS)

A Systematic Process for Gathering and Utilizing Visitor Data for Recreation
Area Management Decisions

STEP I. DESIGN THE STUDY

1. Identify concerns/questions
2. Examine study area – user groups, sampling points
3. Develop sampling plan
4. Develop count forms, questionnaires

STEP II. DATA COLLECTION

1. Train data collectors
2. Do counts and exit interviews
3. Data coding and data entry

STEP III. DATA ANALYSIS/REPORTING

1. Tabulation of counts, interviews
2. Prepare maps of user distribution
3. Prepare preliminary report

STEP IV. DISCUSSION OF DATA WITH MANAGERS

1. Are data, methods clearly understood?
2. Implications for management issues
3. Develop plan for monitoring re-measurements
4. Prepare final report

Citation:

In: Peden, John G.; Schuster, Rudy M., comps., eds. Proceedings of the 2005 northeastern recreation research symposium; 2005 April 10-12; Bolton Landing, NY. Gen. Tech. Rep. NE-341. Newtown Square, PA: U.S. Forest Service, Northeastern Research Station