

METHODOLOGY FOR STUDYING RECREATION CHOICE BEHAVIOR

WITH EMPHASIS ON GROUNDED INQUIRY

Kent B. Downing and Roger N. Clark

ABSTRACT: This paper reports methodology for investigating recreation choice behavior using grounded, naturalistic research methods. How these techniques can be coordinated with other social research methods is described. Naturalistic methods are preferred over other approaches to uncover recreationists' decision making processes at work.

INTRODUCTION

This paper reports on procedures using naturalistic, grounded, research methods for investigating recreation choice behavior. It addresses how these techniques might be coordinated with other social research methods. Substantive findings are reported by Clark and Downing in a paper included in these proceedings. Results presented in that paper are based on an integrated analysis of data from several different studies that used traditional quantitative survey research methods as well as qualitative methods.

The naturalistic model relies on field study and emphasizes the discovery of information about human behavior as it is affected by the context within which it occurs. The techniques of naturalistic inquiry are generally qualitative (for reasons that will be explained later). Theory development is grounded in data generated from field studies (Guba and Lincoln 1981). Glaser and Strauss (1967) refer to this as "grounded theory."

Methodological Overview

Clark and Downing attempted to develop the basis for "substantive" as opposed to "formal" theory, as defined by Glaser and Strauss (1967). Substantive theory is developed for a rather specific topical or empirical area of inquiry, such as wildland recreation choice behavior or patterns of high-risk recreational activities. Formal theory generally applies to broader areas of inquiry such as the role of leisure in various lifestyles. "Substantive and formal theories exist on distinguishable levels of generality, which differ only in terms of degree" (Glaser and Strauss 1967); Glaser and Strauss further describe how formal theory may later grow out

of work begun initially in a narrower, substantive area.

The approach for model or theory building can be described briefly as follows: Naturalistic inquiry requires the investigator to study a phenomenon in its ongoing, real-life context. Being grounded is accomplished by building and refining models inductively through close, day-to-day processing of field data; theory is thus derived directly from data. As the investigation progresses and new factors and relationships are uncovered that are relevant to the emerging model, the model is modified. The fluid nature of the process renders quantitative analysis very difficult if not impossible. Quantification is delayed until it is needed when, for example, efforts turn to testing and verification of hypotheses deductively derived from the model.

Motivation for Initiating Qualitative Inquiry

We explored the naturalistic, grounded, qualitative methods because of our uneasiness over the inability to explain or predict recreational behavior from studies relying on quantitative (primarily survey) methods alone. Most studies reported in wildland recreation research literature are descriptive; findings have not been generated that enable sociologists to predict specific behavioral outcomes. Knopf (1983) in discussing research on recreation preferences captured the essence of this concern:

"...data abound, theory does not...The normal process seems to be to collect as much descriptive data as possible, then search through it in hope of finding revelations about preference... data collection has taken precedence over confirmation or disconfirmation of theoretical postulates...As a discipline, we continue to suffer from an inability to predict in advance of data how and why recreationists are likely to relate to a setting. This is not a moot issue for recreation planners, who frequently are forced to make decisions without the benefit of available data."

Although the authors agree that advancement of knowledge of recreation values suffers from the scarcity of systematic verification, this paper discusses another equally compelling explanation for the inability to predict responses or choices of recreationists. Most investigations have failed to examine actual recreation choice behavior or to construct models consistent with the observed data. It is difficult to find studies that, as the basic methodological strategy, seek to develop theory which begins with and builds upon participants' behaviors and their explanations of those behaviors.

Kent B. Downing is Associate Professor, College of Natural Resources, Utah State University, Logan, Utah; Roger N. Clark is Project Leader, Wildland Recreation Research, Pacific Northwest Forest and Range Experiment Station, USDA Forest Service, Seattle, Washington.

To apply qualitative methods for purposes of understanding wildland recreation choice behavior, models were developed that account for factors people consider and the processes they follow in making decisions. Previous studies have not recognized the range of choices people make from one trip to the next. If models are to aid in predicting actual behavior, they must reflect tradeoffs people invariably must make in choosing to recreate in a particular way.

BASIC METHODOLOGICAL ISSUES

The fundamental approach for constructing models using naturalistic, grounded, qualitative methods is induction. It is a process of discovery and creativity based on careful observation of individual events. This is followed by interpreting, structuring, and modifying the emerging skeleton of an idea into a fully fleshed out model of the phenomenon of concern.

Can there be a logic to discovery? Some have argued "that there is no order or method in the process of discovery at all, 'the creative' side of science is wild and undisciplined" (Jarvie 1964).

Conversely, other philosophers, defining logic more broadly, (Norwood Hansen in physics and Abraham Kaplan in the social sciences) have argued that there can be a logic of discovery--that the probability of producing new views of the world can be heightened through persistence, chance, and intense creative thought (Austin 1978). In particular, the more active the investigator in searching, exploring, and playing with a diverse array of ideas, the more likely that new and meaningful discovery will occur. The debate on the relationship between deductive and inductive approaches to knowledge has occupied scientific philosophers for centuries and will likely continue.

The grounded, naturalistic approach contains the essential elements of the natural history approach, the origins of which are found in the work of Darwin, who is generally considered the originator of modern natural history method. Darwin's reasoning process combined both inductive and deductive logic. But Darwin expressed openly his suspicions of deduction. He always insisted upon careful and precise observation. Then, from the ordering of the facts, he constructed interpretations and theories (what we might refer to as working models or hypotheses) against which he tested new observations and facts. This view represents the core of the approach outlined in this paper.

We believe that where an understanding of and an ability to predict behavior relating to recreation are sought in real-life situations, the contextual settings where diverse behavioral responses occur must be recognized and worked within. Our research must account for choices made within the context of social relationships, recreation setting requirements, preferences, and other supportive and constraining factors.

Several assumptions underlie the approach:

1. A grounded approach will generate models of substantive phenomena from which hypotheses can be deduced that will have a higher probability of withstanding rigorous "scientific" testing.
2. A naturalistic, grounded approach will allow rapid development of models and hypotheses, which in turn, will allow faster verification.

Platt in his 1964 article in *Science*, "Strong Inference," devotes considerable attention to why some fields seem to move ahead more rapidly than others. He attributes this to the systematic application of an inductive intellectual process which he terms "strong inference." In its separate elements, strong inference is the old-fashioned method of inductive inference that goes back to Francis Bacon, yet in reality it consists of applying formally, explicitly, and regularly the following steps to every problem in science: (1) devising alternative hypotheses; (2) devising a crucial experiment or several of them with alternative possible outcomes, each of which will, as nearly as possible, exclude one or more of the hypotheses; (3) carrying out the experiment; and (4) recycling the procedure.

A formal diagram reminds the investigator to move ahead with the recycling process "without dawdling or getting tied up in irrelevancies" (Platt 1964). Platt writes that for exploring the unknown, there is no faster method; this is the minimum sequence of steps. As a result, strong inference offers a systematic method for reaching firm inductive conclusions one after the other, as rapidly as possible. Naturalistic, grounded methods, because of their responsiveness to new and discrepant data that point toward new phases of theoretical sampling, are particularly adept at facilitating the rapid development and refinement of hypotheses--grounded hypotheses likely to stand the rigors of quantitative and qualitative verification.

3. Model development and elaboration may proceed hand-in-hand with verification during some kinds of investigations (Deising 1971). Justification and verification need not be treated as a separate set of procedures occurring after "discovery," but can be included within the process of discovery. In some methods, verification is scattered throughout the process, and in others it occurs at one definite point. In some methods there are two or more kinds of verification, and in others there is only one. In any case, verification is always a subordinate part of a larger process of discovery; it constitutes the check point or points in the process (Deising 1971).

POTENTIAL SIGNIFICANCE OF A GROUNDED APPROACH

Grounded investigation of a situation/contextual/ecological nature is important from two perspectives:

1. Theoretically, to uncover the nature and structure of complex patterns associated with the out-

come of alternative choices. To understand a particular behavior, we must learn about the range of factors and their interrelationships relevant to the decision.

2. Practically, to determine which contextual factors can be manipulated by resource managers and to predict the consequences of changes that are beyond the control of resource managers. It should be added with considerable emphasis, that the lack of an integrated, behaviorally based, grounded theoretical perspective seriously complicates our ability to predict the relationships between resource inputs for recreational management (money, staffing, land allocations, and the like) and recreational outputs (numbers, types, behaviors, satisfactions, experiences of people, return visits, as well as decisions to avoid areas in the future--displacement and conditional displacement).

Evidence from our investigations suggests that from an ecological, ongoing, real-life perspective, people have a lot of things to choose from that are often conflicting--and choosing requires trade-offs. This gives rise to questions about users' decision processes and the factors they consider such as people, places, and management activities, as well as the interrelationships among the decision factors. Naturalistic field inquiry uncovered instances of each of the factors (and their interactions) as expressed in the questions in the following list. "Answers" to the questions do not necessarily require quantifying. In fact, quantifying may not be possible when addressing such questions until the types of variables inherent in them are better understood. Only after the processes at work have been discovered is it appropriate to begin measuring the direction and magnitude of the relationships.

Questions About People's Decisions, Choices:

What role do prior experiences, preferences for, and expectations about setting attributes play in choosing the site?

How does willingness to adapt to setting changes or the desire for and propensity to explore new and unknown territory influence choice?

How does habit or tradition influence choice?

How does knowledge of a range of options influence choice?

What effect does being in a particular group have in choice?

Why are "favorite" sites not necessarily those used "most frequently?"

How frequently do constraining conditions which confound the relationship between preferences and actual choices dominate the choice of settings?

Questions About Places:

What are the relative influences on recreational choice of macrosite attributes (canyons, river

valleys, mountains, lakes, deserts, seashores) as compared with microsite attributes (at a campsite or day-use area, for example)?

What changes at the macrolevel and microlevel are likely to lead to temporary or permanent relocation (conditional or permanent displacement), change in timing of visit, or change of activity?

What setting conditions are "necessary" and "sufficient," as opposed to "nice-to-have," to achieve overall trip satisfaction by the group or by each individual within the group? Does this vary depending on whether the outing is constrained by other decision factors or not?

Questions About Management:

Which macrolevel and microlevel characteristics are susceptible to management control or influence?

How do management factors associated with other resource uses (timber management, visual management, etc.) interact to affect recreational choice? How do they interact with factors beyond management influence?

Which managerial factors are most likely to change recreational choice?

Which strategies can minimize disruption to established users, particularly those who rate a setting among their most favorite or those who know of no acceptable options?

What role does information provided by managers about site options play in choice?

Questions About Complex Interrelationships:

What is the relationship between expectations of trip satisfaction and recreation choice when trade-offs are required among group, place, and activity?

How are we to represent the interrelatedness of the various decision factors? How can we represent the pattern complexity in an ecological framework or model that is scientifically verifiable and reflective of user concerns and behaviors patterns?

Are the concepts "necessary" and "sufficient" realistically applicable in understanding recreational choice?

RESEARCH PROCEDURES WITH CASE ILLUSTRATIONS

The procedures described below have evolved through application and field testing. The literature provided a basic approach for looking at the choice behavior process. This basic approach was modified as necessary to respond to the problems and opportunities encountered.

Because for many researchers the approach described will be somewhat different from that previously used,

initial applications will be slow and awkward--this is not an easy approach, although it appears to be so on the surface. By using this approach, it was possible to identify factors and their interrelationships that account, in part, for people's choices of particular macrosites and microsites for recreation. Progress to date, in the derivation of a grounded model related to choice behavior, is discussed.

A. Select and Define the Phenomenon of Interest. It May be Defined Quite Narrowly and Precisely or in More General, Open-ended Terms.

The Utah study (see Clark and Downing in this proceedings) originally had the objective of describing seasonal variation in dispersed recreational use of the North Slope of the Uinta Mountains. The underlying concern was to determine the extent to which recreation opportunities varied for the same area because of seasonal changes, and whether the users were the same regardless of season.

B. Survey Carefully the Literature in the Substantive Area of Interest. (Note, However That Some Theorists Argue That Literature Review in the Substantive Area of Inquiry Should at Times be Delayed Until Much Later in the Investigation as a Protection Against Prejudging Which Data to Collect and Which Interrelationships to Test. This Clearly is a Departure from Traditional Research Practice).

An exhaustive search of literature was not conducted in our study. The decision was to see what might result from taking the most extreme approach in applying the method. Only much later in our work were the results compared with other studies on dispersed recreation.

A comprehensive study was conducted of the varied views and procedures relating to the broad area of qualitative sociological research including naturalistic inquiry, ethnographic research, qualitative sociology, grounded theory, and the like. The general results of that effort were summarized at the beginning of this paper.

C. Enter the Field for Data Collection.

Dispersed recreation sites in two classes of the recreation opportunity spectrum were identified and mapped in the study area. This information was used in selecting locations in dispersed roaded areas in which to interview groups of recreationists. Contacts were made in locations that met the criteria for "roaded natural" and "semiprimitive motorized" as described by the USDA Forest Service.

Camping parties were approached and asked if they would be willing to discuss their recreational outing and if the comments could be tape-recorded. They were asked where they lived, what they were doing while in the area (asked to show on maps places they might hike or drive to to sightsee, fish, etc.), how long they had used the area,

what changes they had noticed, and whether they used the area during other seasons. In addition, they were asked why they were in the area rather than at locations closer to home. Finally, they were asked if they ever used developed campgrounds in the area, why or why not, and the conditions under which they would choose developed sites over dispersed sites.

The process is largely unstructured. A set of standardized questions is not asked; rather, the researcher probes in an open-ended way for a variety of issues related to the topic of interest. As new, relevant topics are encountered, they are also pursued. It is therefore imperative that the principal researcher be involved in the field; this work cannot be delegated to technical personnel, no matter how competent and qualified.

D. Analyze the Findings.

Following a period of interviewing (2-3 hours; 1-2 days) the comments were reviewed to see if the pattern of responses suggested other lines of inquiry (such as whether each party was at their favorite kind of place or doing their favorite activity).

"Scope" sampling (Willer 1967) or "theoretical" sampling (Deising 1971) was used, which means the investigator chose the next sample site(s) based on what was learned in previous interviews. For example, on the basis of widely scattered field contacts, it was decided that there was a need to talk to people in developed sites in the macrosite as well. It was found that some respondents in both kinds of settings in close geographic proximity were there because it was a preferred location; others were there for other reasons.

Careful probing disclosed that some members of the same groups were pleased with the microsite chosen (dispersed campsite) while others in the party wished they were down the road in a developed site with water, toilets, etc. Given the opportunity, they gave rational reasons for preferring to be elsewhere for that kind of outing. It was evident, however, that going on the outing for these people was preferred over not going at all--thus, a trade-off within the groups was apparent. It was decided to probe further for this phenomenon.

E. Reenter the Field.

Based on the analysis, the selection of interview locations and some of the questions asked were changed. Interviews in developed sites were added and those people were asked about their use of dispersed areas. Questioning was expanded to determine what other places they used for a similar kind of outing; why they were here, rather than at other locations; the conditions under which they would use other areas, rather than the sample site; if there were areas they had used previously for this kind of outing, but do so no more, and why they stopped using those areas. (The other acceptable areas and the areas no longer used were mapped and became sample sites for a small pilot study the following year).

The data were analyzed again and the process was finally ended when it was determined that no new factors and no new relationships among factors were uncovered to explain dispersed and developed site roaded recreation activities. At this point the model was "saturated" and ready for testing using other methods (quasi-experimental designs, survey research based on predictions of patterns of responses).

F. Match the Emerging Grounded Model With Literature.

The Clark and Downing paper (this proceedings) gives some initial interpretations of information in which the findings from qualitative and quantitative studies are combined. Both kinds of information were used to develop hypotheses for further field verification.

To match the grounded model with the results of previous research, it is necessary to pay close attention to areas of agreement and points of discrepancy between the model and reported findings. Discrepancies in particular may require the investigator to: (1) reenter the field and further modify the model or (2) systematically subject the competing ideas to a critical test.

G. Test the Model.

The authors are testing the model now in the Utah study and have initiated some work that is consistent with predictions from the model. Insufficient qualitative data, and certainly not enough quantitative data, have been generated to support any firm conclusions. Hypotheses have been formulated concerning what should be expected in other roaded forest areas. Hypotheses can be formulated concerning the effects of management activities on altering user patterns.

To test a grounded model several options can be used. A first option is to enter new, but similar areas to collect data necessary to test hypothesized relationships either qualitatively or quantitatively. An acceptable qualitative test occurs when a newly derived model does not conflict with the initial model. The test may, however, depart to the extent that new relationships are uncovered. A quantitative test is judged in terms of statistical agreement between predicted and actual outcomes that result from changes in the values of factors within the model.

A second option is to enter related but different areas to collect data necessary to assess the "fit" of the model in other contexts (Guba and Lincoln 1981). Does it apply to choice among developed ski area alternatives, for example. This concept is similar to assessing how far the model can be generalized.

In summary, the process described is highly iterative and heuristic. It places great value on the "discovery" of new perspectives and, given the diffi-

culties with predicting recreational behavior, this may be a strong point. Initially, there is little emphasis on the question of "how much" of anything is present because the investigator is open to various qualities that may later prove to be worthy of attention. Of greatest importance is "what to look for," and until a worthwhile focus is formed, quantitative measurements are of no importance. Indeed, premature efforts to quantify are luxuries researchers cannot afford in tight financial times.

Grounded, naturalistic strategies incorporate many standard social science tools; participant observation, in-depth interviews, and questionnaire surveys. Naturalistic strategies differ most strikingly from survey research in the degree to which the research design and data collection procedures may be adjusted during the course of the investigation. Grounded strategies must be adjusted if they are to take advantage of newly emerging data. As a result, a significantly different approach to sampling and data analysis is required. Traditional concerns with validity and reliability must be conceptualized in other ways as well (Dobbert 1982; Glaser and Strauss 1967; Guba and Lincoln 1981).

CONCLUSIONS

When is a specific data collection strategy appropriate or inappropriate? In describing alternatives to the traditional cross-sectional survey, Clark (1977) provides a framework for making choices. Two fundamental categories of questions must be considered: First, questions that describe events (what is happening? when? where? how much?); descriptions of participants (who is involved?); and descriptions of preferences (what do people prefer?). Second, questions arise about the explanations of events (why is it happening?) and explanations of change (how can behaviors be modified or changed?). Clark notes that no single combination of research design and measurement strategy will provide data to answer the variety of questions about a particular research phenomenon that are raised by researchers and managers. Methods must be chosen with reference to the nature of questions in need of answers.

The purpose of the efforts reported here has been to explore the contribution that qualitative, naturalistic, grounded inquiry can make toward gaining reliable knowledge about the sociology of natural resource use. It was decided to include this methodological approach in some of our studies in order to identify and understand processes by which people make recreational choices, choices of setting in particular. It was felt necessary to view this phenomenon from the point of view of the research subjects themselves--that is, to allow them the opportunity to describe the kinds of decisions they have made from one trip to the next, and to explain factors that weighed in the decisions. The research question that guided our investigation was: "What decision factors and interrelationships are evident in respondents' explanations of their actions, choices, and behavior?" We wanted people to tell us in their own words how they arrived at a particular choice of group, activity, and recreation setting. Their answers provided the elements to be incorporated into the model.

The authors anticipated that grounded, naturalistic approaches might allow quicker discovery of the range of factors involved in making choices, as well as something of the structure of the interrelationships among factors. Because the findings were grounded in actual behavior, it was expected that they would be of immediate interest and relevance in resource management decision making.

If the purpose of a specific investigation is to describe population characteristics, use patterns, etc., in statistically representative terms, survey sampling is an appropriate tool to use. Alternatively, grounded, naturalistic methods are highly preferred (and efficient) techniques for uncovering processes at work. They provide the means to learn more about the "why" of things (particularly when behaviors appear to be inconsistent with preferences); to model complicated interrelationships; and to identify the range of thought, emotion, and behavior occurring in real-life settings. If a grounded model has been properly derived, it offers a framework more likely to be capable of withstanding rigorous quantitative testing.

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