

SOCIAL SCIENCE IN THE NATIONAL PARK SERVICE: AN EVOLVING MISSION AND PROGRAM

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In 1988 the director of the National Park Service requested that a social science program be established. Since that time a number of new research initiatives have been developed to address this need. This paper describes seven major steps taken thus far to meet social science needs of park superintendents, program managers, and park planners. Specific examples are presented.

Introduction

Three years ago, the director of the National Park Service (NPS) asked me to establish a social science program for the service. At that time there were a total of four sociologists and no economists in the NPS. Let me read for you what I wrote in early 1988 characterizing our social science activities. And remember as you listen to this characterization that the NPS is an organization about to celebrate its 75th anniversary, that has 356 park units, and that provides services to over 260 million recreational visits each year. This is what I wrote three years ago:

At the present time, the service has little scientifically derived socio-economic information useful for supporting people-management decision processes. Fewer than five percent of the parks have collected statistical data to establish visitor demographic profiles and to determine where visitors go and how they actually utilize their time in parks. There is no routine and systematic collection of visitor baseline data throughout the system, or even a determination of what information should be included in such a baseline database. There is very little meaningful scientific information currently available concerning what visitors like to do in parks, what problems they encounter, or what factors contribute or detract from a quality visitor experience. Similarly, there is very little information concerning the unique needs of special visitor populations such as the elderly or single parent families. Absent these kinds of data, we do not now have bases for identifying and quantifying changing visitor use patterns, for detecting emerging trends in visitor interests and expectations, or for determining future requirements for visitor services. Neither do we have quantitative bases for assessing the adequacy of park facilities and services, for evaluating the effectiveness of park interpretive and educational programs, or for determining visitor use and enjoyment of parks."

To put this into perspective, let me describe a situation that occurred shortly thereafter.

A major consumer products company came to the NPS with a proposal for spending \$1.2 - 1.5 million on a major marketing campaign. They proposed to develop an 8-page, high quality insert to Readers Digest magazine: four pages would be given to NPS to discuss matters such as park etiquette, respect for park resources, how to use park reservation systems, park safety, etc. The remaining four pages would be devoted to a highly professional, low-key marketing initiative, and would be subject to NPS approval for quality and content. This consumer products company asked that we provide them with three kinds of information about park visitors:

- 1) information about visitor demographics;
- 2) information about visitor leisure time interests and recreational preferences; and
- 3) information about visitor values.

We told them we were unable to provide such data, that it simply didn't exist. Their initial reaction was one of disbelief, citing their own very detailed customer database about those who buy their products. They were absolutely amazed that we would attempt to provide quality services to over a quarter of a billion visitors each year without knowing at least basic information about our client population.

Step 1 - Socio-economic Information Users

In the intervening three-year period, we have made considerable progress. I want to summarize for you where we are at the present time, and describe the nature of the social science program that we have developed to support visitor management activities in the NPS. The *first* thing we did was to define precisely who are the potential NPS users of socio-economic data. They fall into three primary categories: 1) park superintendents, 2) program managers, and 3) park planners.

Step 2 - Types of Socio-economic Information Needed by User Group

Second, we have identified the kinds of socio-economic information that these three user groups will need:

Park Superintendents

Park superintendents require general socio-economic information about visitors in order to measure the quality of the visitor experience, to set priorities, to deal with conflict situations, and to make policy decisions such as whether to impose visitor carrying capacity limits in order to deal with perceived crowding problems. Park superintendents also need comprehensive economic data in order to deal with local governments and with local business and community interests. A case in point is the recent Yellowstone fire. It was charged by some local and regional business groups and by some public officials that prompt failure to extinguish the fires caused economic devastation to the area as a result of loss of tourism revenues. In reality, a follow-up economic analysis indicated that considerably more money was spent on fire suppression activities than was lost as a result of reduced tourism expenditures. True, the fires caused economic dislocations but the overall result clearly was a net economic gain, certainly no an economic catastrophe.

Park superintendents also are very concerned about the ability of the park to meet future visitor needs, and so park superintendents are interested in changes occurring over time on visitor recreation preferences, visitor behavior, visitor values, visitor travel patterns, etc. and they require good socio-economic baseline data in order to identify and respond to these visitor and visitor-use trends.

Program Managers

Program managers represent a second group who need socio-economic data, in this case for carrying out operational programs. For example, the National Park Service each year spends tens of millions of dollars on visitor centers and on interpretive and educational programs. Park staff need visitor survey data in order to know if these interpretive and educational programs are effective. Similarly, park rangers who are responsible for resource protection and visitor safety functions need visitor survey data in order to measure the effectiveness of alternative ways of dealing with problems. For example, if the park has an ecologically fragile area, should the staff rely on *direct methods* such as law enforcement or fenced exclusion to protect the resource, or would it be more appropriate to use *indirect methods* such as education, or signs, or hand-out brochures to accomplish resource protection objectives.

NPS Planners

NPS Planners make up the third major group who require socio-economic data. This includes three types of planners: 1) operational planners, 2) facility planners, and 3) strategic planners. Operational planners need socio-economic information for preparing EISs, for developing visitor-use plans, for meeting the unique needs of special visitor populations such as senior visitors, for assessing the values of campgrounds reservation systems, etc.

Facility planners need socio-economic data for designing and siting visitor centers, for sizing visitor support facilities such as drinking water supplies and waste disposal systems, and for developing highway and transportation system plans.

Strategic planners need comprehensive socio-economic data for developing long-range park general management plans, for evaluating the pros and cons of capital intensive and often controversial new visitor support facilities such as new marinas, runway extensions, and overnight stay accommodations, and for developing long-range recreational use plans and visitor marketing strategies.

Step 3 - Environment for Social Science

The third thing we have done is to try to characterize the environment in which we expect our social science program to function. We acknowledge that we are in a period of recreational transition, and that important changes are taking place that likely will affect our delivery of services to park visitors in the future. For example:

- 1) We expect to see increasing regionalization of park visits, with smaller visitor catchment areas.
- 2) We expect to see substantially more older adult park visitors in the years immediately ahead and we anticipate that these senior visitors will command an ever-growing proportion of the discretionary income available for leisure time purposes.
- 3) We expect the trend toward deferred child-bearing to continue, with a high percentage of young two-wage earner families who frequently have difficulty in matching vacation times, who place a high dollar value on their discretionary time, who place growing emphasis on high-intensity recreation activities, and who often seek instant gratification in their use of limited leisure time.
- 4) We expect to see increased park visitation during the shoulder season periods and during traditional off-peak seasons. For example, over the last 10 years, the National Park System experienced a 57% increase in visitation during the winter season. We believe this trend will continue.
- 5) We expect to see much greater use of parks by minority/ethnic groups, and we can anticipate that these

visitors will have recreational preferences and interests that may be substantially different from those of "traditional" park visitors.

- 6) We expect to have to deal with increased crowding, increased traffic congestion, increased competition among different user groups for the same recreational resources and recreational opportunities. We have experienced many visitor conflict situations among visitors who have different goals, priorities, expectations and recreational interests. For example, conflicts between ORV users and beach hikers, showmobilers versus cross-country skiers, water skiers vs river rafters, motor boaters vs canoers, horsebackers vs hikers, and RVers vs ten campers. We expect to see more such conflicts in the future.

Let's also look at what is happening to numbers of park visitors. During the decade of the 70s, we experienced roughly a 30% increase in recreational visits, during the 80s, roughly another 35% increase. If these trends continue, we might anticipate recreation visit levels of perhaps 325-350 million by the year 2000, and perhaps 425-475 million by the year 2010. No matter what the exact number, we know that we will be called on to provide substantially more visitor recreational opportunities, and more visitor services, and do so in an environment in which visitor needs, interests, use patterns, demographics, values and expectations all may be undergoing significant change. Dealing with this level of visitation represents a truly awesome challenge, particularly in a period of limited dollar and staffing resources.

Step 4 - Role of Social Science

The fourth thing we have done in developing our program is to articulate the specific role that we want the social science program to play in the NPS. The NPS social science initiative is essentially a research effort. The program is designed to provide credible, accurate and reliable socio-economic data. It functions in a decision support role, not in a decision-making role.

Furthermore, it is critical to recognize that the NPS social science program is concerned with a set of very complex socio-economic issues that are endemic to social systems that exist in and around parks. We are dealing not only with park visitors, but rather with a park-centered social system comprised of the following sub-populations, all of whom interact with and among each other: 1) park visitors; 2) park employees; 3) concessioners; 4) inholders; 5) gateway communities; 6) park neighbors; and 7) the travel and tourism industry.

Step 5 - Park-specific Socio-economic Issues

The fifth step in formulating our social science program was to acknowledge that most of the socio-economic issues of interest to the NPS deal with problems that are of special importance to a particular park. For example:

- 1) At Grand Canyon NP: Evaluate visitor reaction to different levels of aircraft noise intrusion for planes flying over and in the canyon;
- 2) At Yosemite NP: Assess the socio-economic impacts on adjacent communities of relocating NPS facilities and resettling NPS employees outside the park boundaries;
- 3) At Mt. Ranier NP: Assess visitor reaction to a proposed tour bus transportation system that might replace private autos in the park.
- 4) At Carlsbad Caverns NP: Determine visitor reaction to the proposed removal of a profitable, but resource-depreciating, concessioner-operated deep underground lunchroom facility.

- 5) At the Blue Ridge Parkway: Assess visitor reactions to the degradation of scenic views resulting from clearcutting of adjacent forests.
- 6) At Yellowstone NP: Collect socio-economic data required for developing a winter-use recreation plan for the park; identify and characterize the nature and the severity of potential conflicts between snowmobilers, cross-country skiers and other visitors.

Step 6 - Generic NPS Socio-economic Issues

The sixth step in developing our program was to recognize that some of the socio-economic issues of interest to the NPS are generic in nature and occur throughout the system. Although typically few in number, these issues can be very important when considered for the National Park System as a whole. For example:

- 1) We need to develop techniques for determining social carrying capacity limits or threshold levels at which individual visitor satisfaction begins to decline due to the presence of others.
- 2) We need to measure systemic or structural changes in park visitor demographics and basic visitor use patterns.
- 3) We need to develop inexpensive techniques for determining how parks impact local, regional and statewide economies.
- 4) We need to develop standardized methodologies for determining the values of parks, including the intrinsic or amenity values of their natural and historic resources, their community values, their scenic values, and their values as places of unique importance to our national culture and heritage.
- 5) We need to understand the characteristics and the needs of special visitor sub-populations such as seniors, minority groups, and single parent families.
- 6) We need to assess the importance of visitor reservation systems in parks that experience heavy visitor use.
- 7) We need to develop standard techniques for collecting baseline data required to characterize visitor attitudes, expectations, values, interests, needs, recreational preferences and satisfaction achieved.
- 8) We need to determine who comes to parks, and why; and who does not visit parks, and why not.
- 9) We need to identify potential visitor populations, and assess actions that might be taken to stimulate or to channel their future interest in parks.

Step 7 - University-based Research

The seventh and final step we took in formulating our social science program was to establish the concept of a university-based institutional framework within which socio-economic issues are unique to a particular park are addressed through work sponsored by the park itself. Similarly, those socio-economic matters of servicewide interest are addressed by research sponsored by the Washington social science program office. In both cases, nearly all of this research is conducted by university personnel. We believe this enables us to draw upon the talents of experienced professionals from throughout the country, and results in high-quality and cost-effective research. At the present time, for example, the Washington social science office has research projects of general interest underway at a number of universities, dealing with matters such as the following:

- 1) We have a comprehensive study of social carrying capacity issues at the University of Vermont.
- 2) At VPI we are developing an economic model designed to assess the impacts of parks on a statewide basis. At VPI we also are developing a methodology that can be used to determine the economic consequences associated with alternative actions to preserve, develop and utilize currently unprotected Civil War battlefied sites.
- 3) At the City University of New York we are developing a standardized general user survey questionnaire that will be used to collect comprehensive baseline data in a consistent and systematic fashion at key indicator parks throughout the system. We will repeat these same visitor surveys at each indicator park at five- or ten-year intervals to detect changes and identify trends.
- 4) At Yale University and CUNY, we are developing comprehensive human resource management plans for a large urban park and a large natural area park, considering the social interactions among visitors, employees, concessioners, and the other publics with whom the park interfaces.
- 5) We currently are starting a new research project designed to study minority access to, and use of, parks. This likely will involve collaborative efforts at a number of historically black colleges and universities.
- 6) We currently are developing a social science training short course for park managers, to be put on in May. Social scientists from eight different universities are participating in this new initiative.
- 7) Finally, we recently completed development of a standardized catalog of questions, a set of socio-economic questions and responses that have been conditionally pre-approved by OMB. These standardized questions can be used to construct park visitor survey questionnaires quickly and inexpensively.

Summary

In summary, I have outlined for you the general scope and thrust of our social science initiative. These represent new research efforts put in place over the last 30 months. Obviously, we have much left to do. But this does represent a significant beginning in our efforts to develop and implement a professional and credible social science program for the National Park Service.