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Commentary

Applied Social Research Can Improve Public Participation in Resource Decision Making[1]

Involving the public in resource decision making is a new way of life for federal agencies. Public demand for access to the decision-making process has been reinforced by statutes and administrative directives that call for public input as agencies make plans to use the resources they steward. Natural resource management now recognizes public input as a legitimate component of decision making, embraced in such broad policy guidelines as the President's Water Resources Council's (1962) statement which says: "All viewpoints—national, regional, state, and local—shall be fully considered and taken into account in planning resource use and development." Similarly, the U.S. Forest Service is committed to seeking out and obtaining local and national views in the process of policy and program formulation (USDA Forest Service, 1970).

However, many citizens and scientists view agency efforts to involve the public with cynicism and mistrust. They maintain that effective public participation is not possible under the existing institutional structures. They voice suspicion that in the interest of self-preservation, agencies shield themselves from critical public review. Moreover, even though public scrutiny is now required on management proposals and impact statements, responsiveness to such scrutiny is not and critics say that agencies will move ahead as they wish, irrespective of public opinion.

Recently, we participated in an intensive review and evaluation of Forest Service public-involvement efforts (Hendee *et al.*, 1973). The review was based on interviews with three National Forest Supervisors and their staffs in each of the nine administrative regions. In it, we sought to identify the relative effectiveness of alternative public-involvement strategies in securing public input. The case study found a variety of methods being used to secure and use public input and it concluded that agency commitment to public involvement (particularly at field levels) was sincere and well-meaning, but that the actual performance—despite some bright spots—left much to be desired. The shortcomings, in most cases, appeared to result from honest mistakes in execution rather than from any sinister effort to subvert public participation. We feel that the skill with which public involvement efforts are applied is the critical constraint on effectiveness.

Our review of Forest Service experience in public involvement concluded that *the main problem seemed that those attempting to involve the public in decision making seldom know how to do so effectively.* Two factors cast light on this shortcoming. First, administrators often were unaware of existing research which had direct implications for their efforts (Borton and Warner, 1971; Bishop, 1970; Reinke and Reinke, 1973). The diffusion of such information has been limited; it rarely reached those working in field level positions. A second, and perhaps more fundamental problem, is that much of the

[1] Based on a presentation to the Rural Sociological Society Annual Meeting, College Park, Maryland, August 1973, by John C. Hendee and George H. Stankey.

research on citizen participation simply does not apply to the particular problems at hand; it often is aimed at identifying structural changes deemed necessary in the institutional setting rather than upon working effectively within existing structures.

A review of topics chosen for study by academicians shows that much attention has focused on validating social science hypotheses at the conceptual level. This work can have long-run benefits which, in time, might filter down to affect handling of practical problems. But by its very nature, basic research, or what Ford (1973) has referred to as "discipline research," has little immediate utility at the operational level. It must be applied—a task which calls for understanding not only the theory, but also the practical problems which fall within that theoretical framework. Research questions appropriate for structural and theoretical study differ from those asked by practitioners. Unfortunately, little effort has been directed at extending scholarship to the field due to the failure of the academic community and its institutions to formulate standards to reward public service (Ford, 1973) and, consequently, to the lack of internal incentives to encourage a more active role for academicians at applied levels (Hendee, 1971).

This paper identifies various questions for social research that might yield new knowledge directly beneficial to public participation in decision making. Ours is an applied approach seeking answers to facilitate better performance *within* existing management structures. Thus, we disagree with many colleagues who seek structural changes because they believe existing institutional frameworks are incapable of adjusting to accommodate full public participation.

We recognize the utility of basic research aimed at structural aspects of the problem, and we encourage it. At the same time, we are enthusiastic and optimistic about the potential of providing new information and techniques to facilitate performance within the current structure. Our optimism is grounded in experience gained assessing the public involvement performance of the Forest Service (Hendee *et al.*, 1973), developing new approaches and methods for the analysis and use of public input (Hendee *et al.*, 1974; Clark *et al.*, 1974), and extensive application of these methods to current resource issues in the Forest Service and Park Service. Finally, we offer an appeal for help. We feel that better resource management depends on public participation; applied social research is needed to develop better ways of involving the public and using its input in decision making.

Problems needing study

Our experience has yielded insights into crucial problem areas that affect the efficacy of the public involvement process, and consequently, the extent to which the agency can realize the benefits of citizen participation. Efforts focused on these questions could lead to more effective public involvement in resource decision making.

To help present these topics on which social science skills could be focused, we are seizing upon a structure developed in our previous work—a framework which defines five processes inherent in public involvement in public decision making (Hendee *et al.*, 1974). Our framework is only one of several that might

be utilized. Other, more detailed outlines exist (e.g., Creighton, 1973), but the processes we define seem generic to all. The five processes include:

1) *Issue definition*—where various legal, environmental, and fiscal constraints help identify a range of possible alternatives that might require public input;
2) *Collection*—including all the varied processes which yield input from citizens;
3) *Analysis*—the description of the nature, content, variation, and extent of public input;
4) *Evaluation*—the subjective interpretation and weighting of all data that have been collected and analyzed for the purposes of making a decision; and
5) *Decision implementation*—the process of providing feedback to the public, securing review, and translating a decision into a program of action.

Each of these processes is linked to the others in a complex, interdependent fashion. Shortcomings at one point will reverberate throughout the processes which follow. Inadequate collection, for example, hampers rigorous analysis and evaluation. In the following discussion, we attempt to define the fundamental issue that hinders efficiency in each process. From these fundamental issues flow a host of attendant problems that invite research. To the extent that research is able to answer these attendant issues, solution to these fundamental problems can gradually evolve.

Issue definition

The process of issue definition is designed to yield a range of management alternatives, consistent with the various constraints affecting decision makers, on which public review is needed. This process is analogous to the problem-definition phase in research design. The rigorous and clear definition of issues requiring public review, to satisfy statutory reasons as well as to upgrade the quality of resource decision making, warrants close attention by both administrators and researchers.

Tough dilemmas confront administrators. On the one hand, implementation of programs without adequate public input can lead to judicial intervention, even in cases where public review is not legally necessary. On the other hand, the pressure for public involvement has led some administrators to ask if excessive reliance on public involvement might not hamstring the agency in attempting to conduct even its most conventional activities.

Although research is unlikely to replace the need for enlightened managerial judgment, there is an urgent need for empirically-founded criteria to guide decisions on "when" and "how much" input is required. For instance, the National Environmental Policy Act (1970) requires a detailed statement regarding the environmental impact of "major Federal actions significantly affecting the quality of the human environment." What criteria are emerging from agency policies and judicial decisions? Such criteria should be defined explicitly—and implications of alternative criteria explored. To date, there has been little systematic evaluation of alternative criteria and their long-range implications. How can a particular agency accommodate public pressures for

goals, products, and services that lie outside its domain? How can such pressures be directed to the appropriate institution?

Collection

The principal objective of the collection process is to get public input, i.e., to alert interested parties to a pending issue and to facilitate their participation by providing information about both the issue and procedures for providing input. But in our review of this process, it became clear that systematic biases affect its execution. Participation by local populations is often extensive while regional or national populations are meagerly represented. Identifiable interests dominate solicitation efforts, while non-affiliated interests frequently are missed. Agency provision of technical resource data, couched in resource management jargon, often discourages the expression of general or emotional values.

This fundamental problem of diffusing information across a broad spectrum of public interests (or across a wide geographic region or among minority and disadvantaged groups) and facilitating feedback affords a host of researchable topics. For example, what are the relative benefits, costs, advantages, and disadvantages associated with such collection techniques as public meetings, workshops, ad hoc committees, questionnaires, television, and other forms?[2] What new techniques or technology might facilitate collection of public input? What kinds of people are participating in resource decisions; why, and how do they get involved?

How does the quality, nature, and extent of opinion vary in relation to collection technique? Does any technique facilitate communication sufficiently to produce an "inoculation effect," reducing polarity between interest groups? How can public input focus more sharply on issues facing decision makers? We found much administrative interest in issue- or site-specific input. Many administrators say this type of input is more valuable to them than general statements or emotional appeals. Although we feel that the latter type of input is an important indicator of public values, we agree that some effort should be directed at acquiring more site- or issue-specific input—if only because such information is more readily usable. What are the relative merits of alternative collection techniques at each stage of the planning process? What techniques are most effective in displaying information to the public? How do various methods of presenting information, implications, and consequences of alternatives influence public response? What new techniques might be employed to identify, measure or record public opinion and values; e.g., survey sampling, social-indicator analysis, policy Delphi (Sheridan, 1971)? To what extent does public involvement counteract public feelings of helplessness and anomie?

Analysis

We have defined analysis as the description of all the dimensions of public input (form, content, number, etc.) that might be relevant to a decision maker. It is systematic, objective, reliable, and quantitative (although qualitative aspects also must be included). However, the sheer volume of public input

[2] See Hendee *et al.* (1973) for a review of advantages and disadvantages of 11 public input collection techniques used by the U.S. Forest Service.

often has made it difficult to utilize this information effectively. A fundamental problem of public-involvement analysts is how to accommodate accumulations of input (often containing diverse content and ranging in numbers from a few to the thousands) in a systematic, orderly fashion.

In response to this general issue, we have developed a flexible content analysis system called CODINVOLVE. The system is designed to facilitate the storage, retrieval, summary, and display of both quantitative information (opinions for or against) as well as qualitative descriptions such as the reasons why people feel as they do (Clark *et al.*, 1974). CODINVOLVE has been used in over 50 land-use studies. We would cite our experience with CODINVOLVE as a productive, rewarding, working relationship that developed between resource administrators and social scientists only because we became involved in working on the administrator's problem at his level of application. We feel that only when a problem is defined at a meaningful level of application can appropriate social science techniques be applied to its solution.

However, many critical problems remain. What computer science and content analysis techniques could be applied to public input? How could such methodologies summarize and display public sentiment in more useful ways? What analytical techniques might be employed to identify the relative intensity as well as the nature and extent of values found in input? How might such analysis be facilitated if input were collected by different methods or in different forms? What criteria could analysts use to alert decision makers that significant shifts in public opinion are occurring? What are the tradeoffs in terms of monetary costs, time, and decision quality among various analytical techniques? What other criteria might be utilized?

How do opinions and supporting reasons vary according to the form in which public input is provided (letter, petition, oral testimony, among others), the residence of the respondent (rural, suburban, urban) or the clientele bases for responding (environmentalist, recreationist, commodity interest)? What underlying social and cultural values are being expressed?

Evaluation

The evaluation of public input involves the subjective interpretation of the various kinds received and its integration with other decision variables. We have stressed the need for rigorous, quantitative procedures in the preceding processes—issue definition, collection, and analysis. However, it is unlikely that any set formula can be developed to guide managers in evaluation. Decisions on the relative importance of the input and on its relation to other variables will almost certainly remain judgmental. Nevertheless, these judgments will be strengthened greatly by accurate, objective, and quantitative displays of information (Hendee, 1974). The situation is analagous to other phases of resource decision making where judgments must be made about physical resources. The better the data about these resources, the better the judgments and decisions that can be made.

What philosophical frameworks and empirical guidelines could aid decision makers in evaluating public input in relation to other factors? What is the relative significance of public input to such traditional measures of program evaluation as benefit-cost analysis? What sources of input (judicial decisions, legislation, agency directives, and others) could decision makers use to evaluate

regional or national opinion when direct public input is scarce? To what extent can public input predict the potential social and economic impacts of a pending decision? For example, could public input be useful in determining the social impact of a decision as required by National Environmental Policy Act? How could public response to broad, general invitations for opinions serve to identify more specific issues that require attention?

What general conflict-resolution models might be utilized in order to minimize or more constructively use public challenge (Freeman, 1972)? In what ways does the social conflict inherent in public input provide decision makers with measures of public values as well as with strategies for satisfying those values? What skills, available through academic training, special short courses or on-the-job training, would help prepare resource decision makers evaluate public input?

Decision implementation

When implementing a decision, the output of all previous processes is united in visible action. Here, the decision maker principally is concerned with translating a decision into an acceptable action program.

It is in the process of translation that major barriers arise to frustrate implementation of a decision. Administrative, legislative, judicial, and public reviews often result in abrupt shifts in anticipated direction, and significant economic and social costs accompany such changes. Such actions that counter their plans often are perceived as "losses" by agency personnel rather than as important feedback contrasting the agency's priorities with those of other groups. To improve and facilitate this phase, we can suggest several issues for research attention.

How can political and legal actions that modify decisions be reviewed and internalized so that future decisions find greater acceptance? How could early, systematic feedback from the public minimize the need for more lengthy and costly legislative and judicial remedies? What criteria might indicate the likelihood of a decision's public acceptance or rejection?

To what extent will public involvement tend to decentralize public-resource-management agencies? How will broadened public participation affect traditional bases of political support? What is the relationship between the cost of public involvement and increments of improvement in decision? For instance, is the expense involved in obtaining a representative sample of public opinion throughout a region warranted by the increased "quality" of the decision? What criteria would permit such a judgment?

Conclusion

Public involvement in decision making reflects resource-agency commitment to its clients, but good intentions are not enough. New information and innovative programs are needed to do an effective job. Creative thinking and research should provide original or refined conceptual frameworks, philosophies, procedures, and techniques to make possible a better job.

The issues and questions outlined above demand immediate and urgent attention. We urge our colleagues to focus the collective conceptual and methodological skills of the various social sciences on applied questions regarding public involvement. Bringing such talents to bear on issues of pressing

social concern recently has been endorsed by such prominent scholars as Ford (1973) and by such prestigious bodies as the National Science Foundation (1969) and the National Academy of Sciences (1970). Ford, as President of the Rural Sociological Society, called on his colleagues for increased efforts to communicate relevant information and recommendations to appropriate policy-makers and program administrators. Such efforts, he concluded, must go beyond the traditional outlets of published reports; rural sociologists must devise ways to communicate with and educate groups and agencies that deal with social problems. Included would be such actions as the development of criteria to evaluate public service and publications directed at public consumers of information (Ford, 1973). Warner (1973) has recently suggested:

> the utility of sociological work . . . is only partly a function of how good that work is . . . [it] is also a function of the perspectives and skills of the users. . . . Even great theory and empirical findings are of little value to those who do not understand them, do not know how to use them or what problems to use them for.

In this paper, we have attempted to formulate a set of issues and attendant questions that seem both relevant and fundamental in light of working with administrators. We urge fellow scientists to move into similar participatory relationships with resource managers—an avenue we have found rewarding and fruitful. Such efforts, we are convinced, will yield cooperative dialogue with policy-makers that will lead to the active demonstration of the utility of social science concepts and methods for the solution of pressing resource-management problems.

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