THE HOW AND WHY OF EXPANDING SOCIAL ANALYSIS IN

WATER RESOURCE PLANNING

David J. Allee

October 1976

The How and Why of Expanding Social Analysis in Water Resource Planning[1]

by David J. Allee[2,3]

Public programs, like organisms, must adapt to changes in their environment if they are to grow and prosper. This is desirable because it leads to more efficient and equitable use of that very scarce resource -- public decision-making capacity. Important to the process is the ability to make use of new information because it suggests new ways to get something done, something that needs doing. Expanding social analysis is doing this in water resources planning. I will attempt to present some ideas about how this works, apply them to the Corps of Engineers and then suggest some guidelines for where social scientists should direct energy in order to make the most difference. For example, I suggest that, in part, our work should speak to the interests of new groups that have the potential of providing support for new missions and new roles. The identification of sympathetic "young turks" inside the organization should raise the confidence of quiet outside interests that they might be heard if they spoke.

Why Generate Information for Decision Making?

Inside the Corps, decisions are made in a complex environment of multiple level review processes and a host of formal and informal value sets. A system of formal and informal checks and balances brings in private individuals and groups and a multitude of governmental agencies.

Two closely linked objectives must be fulfilled. First, the decisions should reflect the preferences of those served, affected and who care enough to at least be potentially represented in the process. Second, choices should be made which will keep the organization viable and growing. In a well-structured, democratic society the achievement of the first should achieve the second.

At least four kinds of knowledge are needed to make better choices in response to these objectives:

1) Preferences at the individual and group level and a knowledge of the power used to translate those preferences into effective demand.

2) Knowledge of self; ie., evaluate past decisions and learn from them; relative problem-solving capacity; the agency's own ability to influence others.

3) Rules of the game; laws and rules, expectations of behavior and other constraints on the use of power; particularly how the allowable range of choice is changing.

4) How to obtain knowledge for problem solving -- management of technical expertise in both a design-analysis sense and an organizational-action sense.

Note that most of the information needed is of a social science character. Also note that it is information whose importance and sensitivity is so great that it is rarely collected directly in a systematic fashion. Much of it is taken for granted -- covered by myths, policies and ritualized procedures. Much of it is collected as a by-product of less sensitive but more technical information. Much of it is simply transmitted in face-to-face communication in the translation of more formal communications. The point is not that social scientists through their skills are more able to collect such data systematically -- although they probably would be more effective than natural scientists if they had comparable experience and status in the system. The point is that they will filter, process and interpret information differently because their biases are likely to be different. The result is a view of the environment for choice making that is more complete and more likely to contain the biases of more effectively meeting the two objectives of generating information for decision making. This all follows from the elements of information that give it leverage -- content and power.

Leverage of Information

Whether from internal channels of communication or external channels not all bits of information are treated equally. Some are more equal than others. The source of the information can have characteristics which cause it to be heard. The content of the information -- on the other hand -- may so fit the predisposition of the listeners that it is heard. In any case, it is well to recognize that there is so much

information that is or could be transmitted that to deal with it, simplification, condensation, or some means to make it manageable is essential. Leverage provides a basis for such processing.

Power at the source can be thought of as a question of four general classes of resources available in different endowments. Political resources include authority to speak in the name of a constituency and legitimacy in that trust is conferred on the source. Social resources include status and prestige -- analogous but stemming from different causes than authority and legitimacy. Combined in the same source, they provide much more leverage to information than either alone. Management resources of the source include the ability to control the flow of information, skill in bargaining, and smooth internal operations. Production resources include manpower, money, and capacity to produce goods and services. Obviously, the existence of a resource is not enough; there must be the commitment to use it and that is some function of the rewards provided for its use.

Social scientists within the Corps vary greatly in the resources they have as individuals and as internal subgroups. Also, they vary greatly in the resources held by those with whom they are allied outside the organization. Economists and lawyers tend to have more status and prestige, more authority and legitimacy. Closely allied to the rise of resources available to planners within the organization, the resources of social scientists have increased. Engineers predominate in the Corps and probably should. The social scientist has to deal with the problem of being one of a minority group, not without parallels to the treatment of minorities in other contexts.

And like minorities in other contexts there are a number of devices that add to the resources available to them. Education complete with degrees adds to status. Professional organizations recognize various activities and add prestige. Agitation for more explicit recognition of social science credentials in the requirements for positions -- especially recognition that supervisory positions can be filled by social scientists -- will add to authority eventually. Specialized subgroups add to management and production resources. But alliances with outside organizations that deal with more social science analysis and that tend to define their goals and objectives in social science terms may be the best long-term means of adding to resources at the source of social science information. Then, as we shall argue, the role of the inside social scientist as interpreter becomes crucial.

Leverage from content depends upon the characteristics of the listener. If the rules of the game require the collection of information about benefits, information about benefits has a better chance of being heard. In general, Corps projects have to be economically efficient, have commitments for non-federal cost sharing, satisfy vague rules about a federal interest usually heavily related to precedents set in previous projects, have demonstrated local support and low levels of controversy in terms significant to the Congress and particularly the delegation from the area of the project. Information that fits these requirements almost regardless of source will be heard. Screens can be expected that will filter out information that doesn't fit.

Biases enter from a number of sources that may be dangerous to the
objectives of generating information. First the listeners may screen
out information they do not understand -- engineers will hear engineer-
ing information. Second, information that suggests costly changes in
decisions and commitments already made will not be heard as well as in-
formation that confirms previous decisions. Decisions and related agree-
ments are so hard to come by that we all resist unmaking them unless the
incentives are great.

Some are More Equal than Others

Behaviorists -- sociologists, political scientists and some related
social science disciplines -- fare less well in part because of less
familiarity and understanding of their kind of information. But also
their information may seem to have more conflict producing potential.
The Corps has not yet learned how to use behaviorist skills, and this
applies equally or more so to many "hard" science oriented groups. Once
the Corps learns how to use the skills of the behaviorists they may have
more potential for conflict avoidance. Note the contrast likely between
the results of a representative public opinion survey and the results
of a study of attitudes of those community leaders determined to be in-
fluential in a particular issue. If there is a substantial deviation
whose preferences should prevail, especially if there is no way to give
each what seems to be desired? Society and we as a part of it, have a
majority rule ethic, but the reality of political power is with the in-
fluentials. A nice dilemma, but a dilemma water resources planners have
dealt with in benefit-cost analysis. The economist's normative model
treats one man's values much like another's and discounts values to be
received in the future, and so on. Many do not share a preference for
those approaches to value, yet benefit-cost analysis which employs them
is quite well institutionalized -- with a very interesting exception.
The Congress has never given much legitimacy to maximizing the net be-
tween benefits and costs; the rule is simply benefits to exceed costs.
The B/C rule has been most helpful in providing a way to say "no" that
reduces acrimony and conflict. In time I expect no less from the behav-
ioral disciplines.

I judge that social scientists as a group are better off than the
biologists in water resource planning. Social scientists enjoy more
leverage because while both kinds of information are required by the
rules of the game, social science information has more of a substantive
role in decision making whereas biological information is still handled
in an experimental mode. Both kinds of information are heard but the
character of the listening is different. Mechanisms for integrating bi-
ological information into the planning process are only now being de-
veloped. It has not been clear how biological data, and the social val-
ues associated with such data as supported by environmental interest
groups, could be accommodated into the process of project formulation.
Until there is more experimentation and particularly until there is
more feedback from the many who share decisions on the accommodations
tried, it is likely that concern over biological information will em-
phasize the procedures involved in collecting it. It will continue to
be treated experimentally.

Biological information has been associated with more conflict recently. Linkages to outside organizations have been more apparent. Court cases have been dramatic -- the Corps lost at least eight the first year of NEPA. But for all the court action these are still largely procedural victories. The substance is on the way -- perhaps a third of the Corps districts have had major disruptions in their traditional programs and more than that are actively experimenting with accommodations to environmental values.

If social scientists are a minority group I suppose it is nice to know that there are other minority groups with less leverage. But more to the point is the search for how to increase that leverage.

Exploiting the Commitment to Comprehensive-Rational Planning

Corps planners take a comprehensive and rational posture in what is otherwise a fragmented incrementalist world. They believe that a meritorious decision process involves setting goals and values, arraying all alternative means to achieve those goals, identify the full consequences of those alternatives and then choose a course of action employing criteria that are derived largely from the goals and values set for the process. The reality of available resources, skills and knowledge, authority and power means that this ideal is always being compromised. Broad goals ease agreement. Planners must underplay alternatives they haven't implemented and thus know little about. Consequences not likely to be well represented must be ignored -- no one wants to hear about them. Emphasis is on the direct, immediate and tangible, the understood and the familiar. Criteria for choice is agreement.

Yet even if the treatment is experimental exploring a new kind of information satisfies some of that professional urge to be comprehensive and rational. No new kind of information can be expected to be moved onto the control agenda for substantive use right away. It takes some getting used to, and the planning process is a safer place to experiment, especially at the basin and framework level, than in final project design.

The reality of incrementalism suggests a remedial approach to small changes away from the status quo. Look for problems which seem to stem from over-reliance on hard science and engineering data. Suggest how the gaps can be filled using social science skills, but describe them in ways that take advantage of all similarities, analogics and complementarities to the established approaches.

Remember that the criteria is consent, agreement between and among those inside and outside the organization who have some degree of veto power and/or can provide or withhold support. Feedback from such participants is essential and the more important and substantive the more likely it is to be carried out in face-to-face exchanges. But the other side of the coin is that face-to-face relationships tend to enhance the information being transmitted. Thus, it is important to encourage social scientists to engage in more face-to-face contacts if more social science information is to get into planning.

Many participants in the decision process relate to the Corps planners in a regulatory posture. They must see that various rules and policies are followed by the planners. Remember that the regulators only succeed in the long run by the consent of the regulated. They need you as much as you need them.

Interpreters of the Political Environment

In simpler days it didn't take long to find out who had status and authority in a community. Decision-making power was more concentrated, perhaps because society was less complex and differentiated. It was possible for a few to represent the many. But now it often seems as if the many all want to represent themselves. Planners find it hard to remain technicians and still to be effective. Even the role of broker between groups can be denied because the groups are too small and too many. And if the agency doesn't hustle up its own support base, it may run the risk of being ignored.

The real significance of the role of planners in the Corps' budget processes may lie in the potential and sometimes actual adjustment this provides to the shifting character of community decision making and power structure. The point is that the budget offices, the district engineer and perhaps another senior civilian, simply can't be expected to be able to judge where support is solid and where it is breaking up. The agency can't rationally allocate between the opportunities that exceed the planning budget without that kind of intelligence. Before planning, programming and budgeting (PPBS) planners had no formal role in budgeting. I suspect that the significance of PPBS to the Corps is <u>not</u> so much in the formal data transferred from level to level, computer to computer, shelf to dusty shelf, but rather in the informal interpretations of the political environment.

Social scientists have been well advised to follow-up on this opening by reading signs that others are not trained to see, by advocating new responses that are consistent with new sources of support. In particular it would seem that making contact and seeking cooperative activities with agencies that primarily use social science expertise would be most useful, making the most use of the ability to interpret. These would include regional and local planners, economic development agencies, social services agencies, many parts of HUD, Commerce, and Agriculture including the Economic Development Administration.

Part of the interpretation of the environment is seeing how others see you and how you see yourself. Many judge the builder self-image of the Corps to be counter productive. It is a common characterization by many who are not very familiar with the Corps and is brought on in part by the self-image of many in Corps leadership roles. The problems are many -- not the least of which is that it provides a false sense that the Corps can enter a problem, build the solution and really leave the rest to the locals. Solutions with longer involvements don't fit the image and so are given less attention in planning. But perhaps more to the point the image doesn't fit reality in two important ways. First,

the Corps is in fact a very successful administrative and management
agency. Its permit activities may not be as smooth as some in the agency
would like but compared to almost anyone else's they are models. The
Corps is the largest recreation agency in the world. It is true that
the Corps backed into these roles, but that doesn't make them less real.
Second, the future importance of non-structural, more administered solu-
tions seems clear in virtually every aspect of water resources. Who will
carry it out? Leave it to the locals and/or to the states? That ignores
the federal interest in these problems and the inherent logic of why
local governments and the states couldn't deal with them to begin with.
Certainly partnership arrangements that put different roles with appro-
priate levels of government will work best. But to walk away from a
federal role in non-structural approaches is too wasteful of institu-
tional capacity to be taken seriously. Social scientists in particular
will have much to contribute to this transition.

The imperatives of project support and the consent building processes
which all decision makers must follow, particularly the need to avoid
conflict, should be clearly recognized as you decide where to put your
effort. The list of things to do is always longer than the list of re-
sources. Choices have to be made. Put at least some effort to seeking
feedback, identifying new publics and new missions and roles which they
can support.

Reshaping Position and Structure Within the Agency

Social scientists should cherish the decentralization of authority
in the Corps. The prospect of convincing a District Engineer to take
a flyer on an experimental approach to social evaluation is less formid-
able than trying to get the whole Corps to adopt it. Remember a commander
is always reluctant to give an order that his people can't or don't want
to carry out. Nothing beats a model of success, unless it is being able
to easily bury an experiment that didn't work. Decentralized authority
can lead to both.

The image of a monolithic, highly disciplined, hierarchical agency
does get attached to the Corps. The military, in fact, put great faith
in command decision. With the exception of the small military group
there is little shifting of professional and supervisory personnel be-
tween districts and divisions. The diversity of problems is great. The
huge volume of directives from the center can't cope with these factors --
indeed it's no trick to hold the division and Washington at bay when the
district needs to do so.

Perhaps more to the point is the location of social scientists
within the District organization. Some separateness and isolation may
be necessary in the early days of developing a new line of information.
Survival may be easier until an identity and usefulness is established.
But eventually integration into the main stream of project development
is essential to achieving a role in substantive decisions. The emphasis
on multi-disciplinary teams in planning appears to be a good step in the
direction of integration.

Timing has a lot to do with the importance of information to the character of the output from the process. In the life of a project it is often difficult to decide just when the decision was made on what alternatives to go with. Subtly everyone's attitude shifts from a creative, flexible stance, where new options are welcome, to a stance where one set of actions is preferred, appears to all to be widely supported and now information is sought to support that choice. Information that is being treated experimentally, and those that provide it, are apt to be kept away from the process until after that point of decision is reached. Obviously, the objective of the social scientist has to be to find a role in that early part of the process. Writing reports that no one reads until after the basic decision has been made is not likely to be very satisfying. How to achieve such acceptance? It has to be done in terms of providing what the agency and its clients need. Transmitting information on who wants what, what resources they have to help get it and how much they care, may sound crass and unprofessional. But isn't that what planning is really all about?

Social scientists as a minority in the world of water resources planning have to examine how they are going to behave. One model is that of the militant minority member, stressing his differences and urging solidarity and revolution. Another image is that of an Uncle Tom -- so subserviant as to not be taken seriously. Neither seems like a very useful model. I'd suggest the answer is yet a third model -- that of the Young Turk. Fiercely loyal, committed to the organization but also questioning the traditional and the established, supportive of reform, often quite vocal about the need for changes. Joe Toffani, who not long ago retired as the Chief of the Policy and Analysis Division in the Office of the Chief of Engineers, played such a role very effectively -- and often used it to promote social sciences.

The Young Turk role is important from another point of view. It maintains creditability inside, but even more important it makes the agency seem more receptive to messages from the outside. Many messages are never sent because the sender is sure no one will listen -- will take it seriously -- so why bother. But it may in fact be crucial to encourage such transmissions.

Summary and Conclusion

Note this program. The sessions on Social Impacts of Comprehensive Planning is far more experimental than the sessions on Flood Control and Water Transportation. Comprehensive planning is a lower cost, lower risk channel for information. Education must be the objective as well as development of new capacity. But transfer to the project level of planning will be the larger payoff.

Remember the Corps created an agency within the agency in order to take on the flood control function. Luckily, there was a depression and both a lot of unemployed engineers and money to hire them. The old hands all knew that the Corps was a transportation agency and this flood control fad wouldn't last. Interesting how the topics on this program on

flood control and navigation seem to suggest considerable integration of social scientists into established procedures and flood control is still there. Unlike flood control tooling up for other new missions will follow more gradual patterns.

The payoff for social scientists in the long run will be to facil-itate new missions and new roles by identifying measures to accommodate new interests in ways that are much like old approaches as possible. New channels of communication will provide access to new resources and must emphasize feedback from potential sources of support and opposition -- but particularly support. Using incrementalist principles the objectives must be to add to existing evaluations, as early in the process as poss-ible. Interpreting the outside world is only slightly more important than helping in the redefinition of self image.

Remember, the motto for Young Turks is "The Corps cares -- and we care about the Corps."

References

Allee, David J. and Helen M. Ingram. Authorization and Appropriation Processes for Water Resource Development. Prepared for the Na-tional Water Commission (Springfield, Va.: National Technical Information Service, 1972).

Andrews, Richard N. L. "Agency Responses to NEPA: A Comparison and Implications," Natural Resources Journal.

Arrow, Kenneth J. The Limits of Organization (New York: W. W. Norton & Co., 1974), p. 49.

Braybrooke, David and Charles Lindblom. A Strategy of Decision (New York: The Free Press, 1963), pp. 81-110.

Buchanan, James J. and Gordon Tullock. The Calculus of Consent (Ann Arbor: University of Michigan Press, 1962).

Deutsch, Karl W. The Nerves of Government (New York: The Free Press, 1966), p. 88.

Dror, Yehezkel. Public Policymaking Reexamined (San Francisco: Chandler Publishing Co., 1968), pp. 132-133.

Ilchman, Warren and Norman Thomas Uphoff. The Political Economy of Change (Berkeley: University of California Press, 1969).

Ingram, Helen and Daniel A. Dreyfus. "The National Environmental Pol-icy Act: A View of Intent and Practice," Natural Resources Journal.

Lindblom, Charles. The Policy Making Process (Englewood Cliffs: Prentice Hall, 1968), Ch. III.

Rourke, Francis E. Bureaucracy, Politics, and Public Policy (Boston: Little, Brown & Co., 1969), pp. 106-107, 120-121.