

A CHALLENGE TO THE ACADEMIC COMMUNITY:  
ECONOMICS AND INSTITUTIONS IN THE  
REPORT OF THE NATIONAL WATER COMMISSION

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Report of the National Water Commission<sup>1/</sup>

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The National Water Commission has written an important document that will join the many similar reports by official study bodies that have examined one or more aspects of water resources. It is probably the most far-ranging and ambitious of this rich "official conscience" literature. It presents many challenges to the nation and to the academic community. This paper is primarily concerned with one aspect of how the academic community should respond.

The Search for a Framework

Those of us who profess the policy sciences would do well to examine the work of the Commission for clues as to how we might improve our scholarship. Here is a product of the applied art. We should be looking forward to what we have to say about the tactics and strategy of such studies. The next one to deal with water resources is not organizing in response to the mandate of the Water Quality Act of 1972. Study bodies of this kind play an important, if poorly understood, role in the development of public policy. But more to the point for this paper, official study bodies provide a most important access point for the academic community. After all this is the kind of analysis we say we are good at.

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It is our observation that applied analysis fails to distinguish very well between the behavioral aspects of public activities and the normative aspects. Too often the way it is taken as a statement of what it must or should be. Too often concepts of what it should be seem to prevent the recognition of the degree to which behavior refuses to follow those norms and particularly disrupt an understanding of why such gaps come to exist. Dogma in "should be" terms so permeates our description of public problems and programs that it is hard to know what really happens and why. Combine this lack of relevant empirical data about public policy issues and the inherent problems in agreeing upon value statements, and there should be little wonder why a report like this one can be said to have little in the way of an explicit analytical framework. Few of them do. But the current stock-in-trade of the policy sciences are such frameworks. Therefore, we have attempted to detail some requirements for such a framework in hopes that it will clarify the challenge posed by the National Water Commission Report.

In particular we have attempted to infer what the underlying values of the report may be. These are those strong predispositions about what is right and wrong such that they are not articulated and displayed as variables for analysis. Indeed they usually seem to define areas from which analysis is excluded. But the challenge, it seems to us, is to show how analytical frameworks can be devised which will handle values as variables. Indeed a global framework for institutional and policy evaluation may be where one alternative set of values is used to diagnose pathologies that are inherent in another set of values. (Vincent Ostrom made this suggestion at a meeting of the National Water Commission Institutional Panel attended by the author.)

The interplay between use projections and the allocations of roles between levels of government provides an oversimplified example. Previous policy studies in water resources have projected past trends in water use and rather uncritically assumed that a good future policy is one which will contribute to meeting such performance targets. Expanding the federal initiative relative to the role of state and local government was a policy variable that was subject to careful consideration. This Commission reversed these positions. Albeit quite imperfectly between the issues it addressed, it attempted to examine a variety of alternative futures in terms of use. It used concepts of flexibility and adjustment to water availability to reinforce a trend in the allocation of roles between levels of government which it sought to project. Not usually subject to analytical examination was the value that less federal involvement was good and more, bad.

We offer the following as our identification of the major underlying values of the report. Such topics, we submit, should be dealt with in suggestions for the future conduct of such policy studies. Of course these comments also serve as a partial review of the present report.

### Rationality

The collective writers of the report have a strong commitment to a vision of rationality that follows the Wilsonian vision of ideal public administration and the separation of politics and administration. The ideal is a detached, disinterested, stakeless expert who decides on the basis of complete and unbiased information. As a result, numerous suggestions are made to improve the data base for decision making, but little attention is given to the incentives to actually use new data. In order to evaluate the multitudinous possibilities for combinations of water uses within a river basin, the Commission sees a need for systems analysis. (3-18) Agencies are criticized for not living up to their ideal. The draft report strongly disapproves of the bias which federal agencies have in favor of their own missions. In the view of the Commission, "The construction agencies basically are just that -- construction oriented ... The agencies are basically builders. Fundamentally, they are not managers of either people or resources..." (5-149) The information which agencies generate about projects cannot be trusted. "The Commission does not find it surprising that federal construction agencies tend to color their calculations with self-interest in making project evaluations." (11-25) Little analysis is presented to suggest conditions that produce such stakeless agencies or that they exist at some other level of government.

In order to provide for more rational decision makers and decision making, the Commission makes various attempts to insulate against the heat of interests. The independent review board which is prescribed to check the bias of federal construction agencies is an example.

The review board should be structured as an independent agency; nominally within the executive branch but insulated from the presidential politics by appointments which extend beyond the term of the President. A provision which would prohibit more than, say, four out of seven members to be selected from one particular political party would be an additional device to secure the board's independence of action. The review board would function free of any entanglements with the special interest of operating departments. By standing apart from the President's office as an independent organization, there would be less opportunity to question the objectivity of the review board's actions when it is dealing with those water development proposals which the President may have cause to favor for personal or party reasons. (11-28)

As this excerpt illustrates, the Commission places its faith in the rationality of the detached, objective analyst, not that of the politician or existing political system. The political rationality of an astute President might well dictate that he not expend many resources to support a review board over which he has so little influence. By the same sort of calculations of political benefit and cost, the Office of Management and Budget would be altogether rational in treating the review board as a competitor, performing evaluations which heretofore had been OMB's assignment. Without the support of the President or OMB, it is hard to imagine that the review board could survive in our present political scheme.

The Commission's vision of rationality excludes the possibility, raised by a number of modern students of public administration, that biased actors pursuing their own self-interest in a bargaining arena may in the end come up with decisions as rational as might be delivered by the disinterested, objective expert. Rational analysis requires that all alternatives and interests must be somehow weighed and taken into account. Where every interest has a watchdog, even if that watchdog is not especially powerful, alternatives and information will surface. It can be argued that an advocacy system, where agencies fight hard for their particular clientele, often assures a more comprehensive regard for the values of the whole society than any attempt at intellectual comprehensiveness. (Lindblom, 1959)

Theory and analytics of the relationships between agency technicians, interest group representatives, elected officials and other participants should provide for more insightful diagnosis of problems and effective prescriptions. Included in such a view of analysis should be the role of professionalism and analytical constructs. Planners have developed an idealized image of what planning should be like. Benefit-cost analysis has its own moral rationale. These are important variables in explaining how policy is developed and carried out, and how relationships between participants develop and are constrained.

#### Efficiency

The National Water Commission favors the most direct, least cost, most efficient solution to problems. It decries inconsistent federal water programs which it views as anachronistic in light of what has happened since they were established. (5-2) The Commission finds comprehensive regional planning frequently disappointing. "Too often the final plan turns out to be no more than a poorly coordinated conglomerate of the plans favored by individual agencies." (5-69) There can be little quarrel with this assessment. At the same time, the Commission fails to consider some costs which might render the straight-forward economic course of action extremely inefficient.

However much the goals and objectives of the American people have changed in relation to water resources, there is little to indicate that we are more in agreement today than when the major water programs were initiated. Without some sort of consensus, the most efficient path toward any one goal or set of goals is bound to create conflicts. The cost of conflict must be included in a realistic assessment of efficiency. There is a cost of change. Organizations must be compelled to alter their practice and procedure; there may be legal, psychological and other impediment which may make change difficult or impossible. (Wildavsky, 1968) Water development projects, the Commission finds, are an inefficient means of stimulating regional economic development. (3-46) Long practice, however, has made this kind of economic impetus politically acceptable and negotiable. Whatever the actual economic impact of the Central Arizona Project will be, many citizens in Tucson and Phoenix believe that it will insure continued prosperity and growth. It is unlikely they will be willing to accept some other medium, even if one were available.

The effectiveness of a solution ought to have some weight in determining efficiency. The draft report fails to judge efficiency on the basis of actual experience in several areas. For instance, the Fish and Wildlife Coordinating Act provides that fish and wildlife values be taken into account early in the planning process. The Commission did not examine whether this was happening, and if not, why not. Instead, it rested upon the statement that legal authority for enforcement existed.

(5-167)

### Equity of the Market Place

One of the notions which underlie the draft report is equity. Fairness in the Commission's view requires that beneficiaries pay, and the draft report states that direct beneficiaries of water supply projects who can be identified and reached should ordinarily be obliged to pay all project costs which are allocated to that purpose. (5-100) The equity tests applied by the Commission are similar to those of vendability. If a project benefit can be sold, it should be sold to recover the full cost. If it cannot be sold, the beneficiaries who would have been the customers should be taxed to pay the full costs. In case after case, navigation, irrigation, flood control and water supply, present programs are found to be inequitable because interests which are favored do not bear the full financial burden.

Subsidies are in the view of the Commission generally unfair, "...subsidies are only justified if they serve some compelling social purpose; where society benefits but where conventional markets and pricing mechanisms do not adequately reflect those benefits." (5-100) With the exception of recreation in the draft report, the Commission identified no overriding social purposes. None of the present and emerging water problems are identified as worthy of massive commitments of non-reimbursable federal funds. No inadequate markets and pricing mechanisms are examined in any detail. Some might argue that water quality, adequate urban water supply, preservation of coastal zones, estuaries, and water-based natural areas are national goals which demand nationally funded efforts and are problems because markets and police powers have failed. The draft report presents no theory of subsidies with which to judge such claims or to establish amounts and means of subsidies if they are indeed justified. Cost sharing as a means of supplementing the police power of government or as a means of changing incentives of local governments and in the market is not discussed. The Commission only states a preference for explicit subsidies, preferably in the form of cash payments if they are to be given at all. Such subsidies, of course, are politically more difficult to practice.

The Commission treats the question of equity as if it were dealing with a clear ledger. Old programs are judged obsolete in view of today's needs. No account is taken of the informal understandings such as are operative in water development in the West. These are formalized somewhat by river basin plans and basin development accounts. The ostensible purpose of the informal understanding is to insure that all needs will eventually be served, although why they must be served through the medium of water development is not clear. The states which could develop

their water first, like California, were allowed to proceed with water development projects under federal subsidy. The unstated agreement has been that as states or Indian tribes get ready to use their water similar federal aid will be available to them. Claims of injustice and inequity will be raised if informal agreements are abrogated by the termination of water programs.

#### Faith-in-Dollar Measurements and Market Mechanisms

Perhaps because the equity notions of the draft report require monetary costing out of benefits, there is a clear preference in favor of economic efficiency criterion that can be expressed in dollar terms and a reluctance to become enmeshed in quantifying and measuring other values. Further, the market is expected to be fair if not always efficient. For instance, one of the recommendations that the Commission makes to provide equity to the Indian is to give the right to governing bodies of tribes to sell water appurtenant to a reservation to the United States at fair market value. (13-24) Similarly, in the section on interbasin transfers, the Commission suggests that the losses suffered by the area of origin be calculated in dollar amounts, and that amount of money be paid to the area of origin as part of the project costs. (8-24)

The effect of faith-in-dollar measurement is that the draft report gives little attention to the methodology now becoming available in multi-objective evaluations. While multiple objective evaluation is endorsed at one point in the report, the concept is not applied or recognized elsewhere.

A number of difficult problems underlie the Commission's preference for economic efficiency and money measurements, namely.

- (1) That economic analysis appears more precise than it is;
- (2) That in order for information to be expressed in commensurate units those units must be economic ones;
- (3) That partial information aggregation, say into six dimensions rather than a thousand, is not useful;
- (4) That the use of nonquantified, disaggregated information does not impose a severe cost in time and knowledge on decision-makers and their staffs.

Consider the first two points, i.e., that economic information is reasonably precise and in commensurate units. Based upon what is said in the "green book" and actual practice of water agencies (Proposed Practices for Economic Analysis of River Basin Projects, 1958), it clearly is not. Irrigation benefits are estimated in terms of producer surplus; power benefits in terms of monopoly market price; municipal and industrial benefits in terms of alternative cost; and recreation benefits in terms of consumer surplus. Certainly these are all measured in dollars but the assumption that they are really commensurate kinds of estimates or in the Commission's word "precise" is not more than an assumption. Little attention is given to the way economic analysis is really used.

Consider further the second implied idea, i.e., that in order for something to be in commensurate units, those units must be economic ones. If one adds apples and oranges, one will get the number of fruit. Why should this be thought to be less precise information than the number of dollars estimated to accrue based on different methods for something which, since it is being planned, has not yet been done? No recognition of such literature on social indicators (Bauer, 1966; Terleckyj, 1970) or designs for aggregation of social and environmental information (Peterson, et. al., 1971) as exists is made anywhere in the report. It would be unreasonable to ask the Commission to take into account reports that were not available when drafting their report. Still, it is reasonable to ask why they did not proceed in a direction which would lead to aggregation of information about, for instance, aesthetics. Others have (Brown, 1973). If the need for multiple objective evaluation had been fully understood, it should have been irresistible.

The "plain, textual judgment" which the Commission favors for social, environmental and inter-regional effects (10-2), in practice often can impose a high cost on the decision maker. One of the reasons for the primacy of benefit-cost analysis is that it is represented by a single number which decision makers access and relate to. Its multidimensional character has been removed. Social and environmental information can be highly dimensional as to kind, location in space, and occurrence in time but can frequently be expressed in units, although not economic ones. Indices of social and environmental effects might be as useful to the political process as benefit to cost ratios. The danger is that by allowing information aggregation of other kinds of information, the unaggregated information will be neglected because it is too highly dimensional to consider. It may not be necessary to point out that various kinds of aggregate indices which are in part misleading, e.g., the gross national product and the crime rate, nevertheless seem useful to at least some decision makers.

The Commission Report does attempt on pages 3-19 and 3-20 to look at indirect quantifications in the environmental area;

3. Water for fish, wildlife, and aesthetics cannot now be satisfactorily determined directly by economic evaluation. However, they can be indirectly valued by considering economic values of uses in the hydrologic system with and without these uses. These 'with and without' values should be determined so that informed judgments can be made on balancing of all uses within the hydrologic system.

The statement, for what it says, cannot be criticized. However, one would hope that it is understood by the readers of the report that opportunity cost is not a measure of utility. The dollar cost of foregoing development on two wild rivers does not tell us anything about the relative utility of those rivers as wild rivers.



### New Federalism

Recent Presidents have displayed a penchant for placing adjectives before federalism, the most recent of which is "new." The basic idea is as old as Jefferson and calls for a concentration of initiatives and action at the level of government closest to the problem. The risk in treating this as a value is that parts of a problem that call for the involvement of higher levels of government will not be adequately considered as such considerations would conflict with the value position. The National Water Commission strongly supports state responsibility. Repeatedly the review draft calls for moving the focus for initiative to the state and local level where it is now ostensibly at the federal level, and keeping the initiative at the state and local level where it is at the level now. No theory of analysis of inter-governmental relations is presented. The bias against federal involvement may stem from a presumption that it will result in particular forms of inequity and irrationality. Students of water politics have for a long time observed that when Congressmen and federal officials not involved directly on a problem are given the opportunity to participate in designing a solution, logrolling behavior results. (Bromley, et. al., 1971) Where the incidence of a water project is felt mostly on the local level, the decision is elevated to the national level often only in order to share the costs on a broad national scale. The decision is made mostly on the basis of the side-payments available to those who are not directly involved. No national interest "quid pro quo" is exacted in changed local behavior in return for the national cost sharing.

Accurate though this reasoning may be, it ignores several important considerations. Different interests have quite different access to the state and national governments. The relatively greater influence which polluting and development interests have had upon state governments stalled serious attempts at pollution regulation until the federal government, more responsive to environmental interests, forced action. It is not sufficient to observe, as the Commission does, that the state has adequate authority to act in a field. The real question is, will it? Availability of resources -- money, expertise and personnel -- are as important as will. The progress toward a water planning staff and implementing mechanisms is at a primitive stage in many states. The draft report fails to establish states' capacity to perform functions expected of them.

### Policy Separate From Administration

The draft report of the National Water Commission follows a historic tradition in public administration which prescribes that policy making ought to be separate from administration. The intellectual underpinnings of this doctrine can be found in the works of Woodrow Wilson, Frank Goodnow and Luther Gulick. The separation principle was broadly applied by the first Hoover Commission on the Reorganization of the Executive Branch of the Government created in 1947. The vision of the draft report is that only elected officials, particularly Congressmen, make policy decisions. The role of the planner is simply to describe alternatives, lay out courses of action, the probable adverse and beneficial consequences

of choice, and submit the choice to policy makers. (10-4) The administrative function, in turn, is to administer policy in an efficient, fair and unbiased manner. Congress must not be allowed to encroach upon administrative matters, but kept in the realm of general policy making. For this reason the Commission recommends that year-by-year allocations for projects by Congressional Appropriations Committees be replaced by long-term agency contract authority. "By involving Congress in a broad sense and leaving specifics to the agencies that administer Federal Assistance programs, an appropriate division between policy and administration can be achieved." (10-61) No analysis is presented to suggest how actual behavior would be different -- if at all.

The conceptual limitations of a theory which separates policy and administration are amply discussed elsewhere. A lucid argument was made long ago by Harold Stein (1959). Recently Vincent Ostrom (1973) critically analyzed all the basic propositions of the classical Wilsonian school of public administration, including the separation of politics and administration. Suffice it to note here that a more accurate description of policy making includes a whole process which encompasses all the choices and actors from the time when a problem is identified to the point where the impact of choices is actually felt. Realistic analysis of the policy-making process would focus upon relationships rather than distinctions and separations. For instance, the draft report recognizes that comprehensive basin-wide planning has not always had much effect upon which projects are actually authorized and funded. (10-54) An explanation and any basis for modification must be sought in the incentives and disincentives which operate on all the actors -- the agency planners who hoard shelves of projects which might some day get sufficient local support to be seriously considered, and Congressmen who respond to agencies, but are particularly sensitive to local pressures in the choice of which projects to give a go-ahead.

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