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ASSESSING THE ROLE OF SYSTEMATIC DECISION MAKING IN THE PUBLIC SECTOR

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Two principal theories of the nature of decision making in the public sector have been articulated in recent years. These approaches have such prominent strengths and weaknesses and they differ so sharply in character that it seems useful to explore how fundamentally incompatible they are and to explore to what extent they can be reconciled. This paper undertakes such an explanation.

The Two Theories

One view, associated principally with C. E. Lindblom and A. Wildavsky, is that decision making in the public sector is, and should be, a disjointed, partisan, incremental, consensus seeking activity.¹ This view holds that only such a process satisfies the needs of a democratic society with its diverse values, that decisions are made on matters of complexity that are beyond the competency of decision makers to deal with comprehensively, that there are no generally accepted criteria for policy decisions in the public sector, that ends and means interact strongly, and that consistency among policies is unattainable. It is also argued that such a process facilitates the reaching of agreement by those having differing objectives, that it reflects the breadth and intensity with which values are held within society, and that, in stress-

NOTE. In the course of preparing this paper I had the opportunity of hearing a talk by Charles Schultze on this general subject. A number of the ideas in the paper were stimulated by his talk, but he should not be blamed for the bad ones.

¹ D. Braybrooke and C. E. Lindblom, *A Strategy of Decision*, New York, 1963; C. E. Lindblom, *The Intelligence of Democracy*, New York, 1965; A. Wildavsky, *The Politics of the Budgetary Process*, Boston, 1964, and "The Political Economy of Efficiency," *The Public Interest*, Summer 1967.

ing agreement based on the expression of interest, it helps to meet an essential political requirement of democratic government.

The other view, which is associated with a longer list of names, including Tinbergen, Hitch, McKean, and McNamara, among many others, has been concerned with causing public sector decision making to be a more systematic, analytical, scientific, efficiency oriented process. This approach, strongly influenced by economic theory, stresses the importance of systematically examining objectives, identifying various ways of achieving them, and estimating—often in quantitative terms—the benefits and the costs of each possibility. Much of this interest in recent years has centered on the evolution within the federal government and a growing number of local governments of a planning, programing, budgeting system (PPBS). That this development has generated a good deal of attention is evidenced by several Congressional hearings during the past two years. At present, the attitude among congressmen seems to be either that PPBS is an over-sold, primitive, misused technique of little or negative merit or that it is such a useful innovation in decision making that the Congress should apply it to its own activities.

There is no important disagreement between these two views on the “normal” workings of the public sector decision making process. It is quite evidently a disjointed, fragmented, partisan, consensus seeking one. What is at issue is the adequacy of the “normal state” and the results to be expected from the introduction of more systematic decision making methods. The main questions in my view are the following:

1. Does a partisan, incremental decision process seem to produce satisfactory results or is there good reason for believing that it could be improved upon?
2. Are there some classes of activities or particular kinds of decisions which should be left to the traditional method and others for which the systematic approach should be emphasized?

With regard to the adequacy of partisan incrementalism there are several tests that might be applied. First, in the spirit of this approach, there may be growing a sense in this country that much of the public sector is not performing as well as it should, that agreement simply on having programs isn't enough and that better results are needed. One might also forecast that the growing number of people trained in analytic skills motivated towards more systematic decision making will

help to bring about a change in decision making styles. This development might be accepted with good grace by those whose primary concern is reaching a consensus but not necessarily by those oriented towards systematic decision making. They should look to the results.

A second test might be to introduce more systematic decision making methods and see what happens—in short, to experiment. Something like this has been happening, for example, in recent years in the tax collection activities of a number of Latin American countries; the decision making innovations of Robert McNamara in the Defense Department provide another example; a third is the PPBS effort underway in New York City. However, one should not expect unambiguous results, for there is no ultimate test of the “correctness” of public policies. Values differ and history runs past only once. But the investigation of such experiments may yield useful insights as to what seems to work well and what does not.

Third, objective measures of program performance are available. The efficiency with which mail is moved, pounds of payload put into orbit, tuberculosis rates reduced, crime reduced, children taught to read, or incomes increased can be examined, experimented upon, and subjected to regional and international comparisons. The results sometimes yield evidence of large inefficiencies. (For example, the Presidential Commission on the Post Office is expected to report soon that about 20% of the Post Office’s \$7 billion budget is wasted.) These indicators do not measure ultimate values, but they should not be despised. They have political significance. And to the extent that they are accepted, they provide a basis for judging the efficiency of government programs. They, of course, need not be accepted, and the investigation of such measures of performance is one of the principal aims of systematic decision making.

In sum, my impression is that there is a growing sense of dissatisfaction with the adequacy of the performance of many activities in the public sector, that some of the recent changes in decision making will meet the market test of usefulness and be incorporated into decision making routines, and that in a large number of specific program areas there is strong evidence of inefficiency. However, this does not constitute an indictment of partisan incrementalism. Far from it. For to my view the objective should be a strengthening of this system with its built-in adversary features, a strengthening of the ability of different groups and centers of power to compete in the political market place.

The Effect of Policy and Program Characteristics on the Scope for Systematic Decision Making

The variety of activities to be found in the public sector is so great that one should expect to find substantial differences in the scope for change in decision making styles. The following factors seem to be among the more important ones in influencing this scope.

THE NATURE OF THE DEMAND. First, there is the demand for *specific services* by consumers. It is useful to distinguish two kinds of consumption services: (a) those where the consumer knowledge of the service is generally good (mail delivery, library services, garbage collection, housing services); (b) those services with generally poorly understood characteristics (health care and education services). In the latter case consumers generate a demand for these services in input terms, such as physician visits and accessibility of classrooms with a given teacher-pupil ratio and a given ethnic mix but, on the whole, they do not generate a demand for health care and education with well defined outputs. They do not largely because of consumer ignorance. Where consumer ignorance is large the consumer is in a poor position to judge the adequacy of government performance. In such cases the pressures for effective results and for efficiency are likely to be especially weak. It is especially in such cases that the payoff from systematic analysis aimed at informing consumers as to the quality of the service they are receiving may be high. Second, there are those activities for which the demand is for *money transfer* (crop support programs, welfare payments). These demands for income transfer are oriented geographically or by socioeconomic group. In either case the issue is one of income distribution. This does not rule out questions of efficiency but it sharply reduces the intensity of interest in them. Third, there are *public goods* often involving issues remote from the consumer's ken. Fourth, there are *intermediate* products usually involving well defined outputs (timber from national forests, oil from off shore lands). Fifth, there is the demand for public works as *monuments* (courthouses, Post Office buildings).

THE NATURE OF THE PRODUCTION FUNCTION. A well defined production function with its known relationship between inputs and outputs permits predictable outputs and makes estimates of efficiency relatively straightforward. A production function might be poorly

defined for several reasons: it might involve fundamental uncertainty (basic science research activities), it might involve outputs strongly dominated by subjective elements (aspects of health care), it might be dominated by behavioral uncertainties (response of recipient countries to foreign aid programs), or it might be a relatively unexplored activity (the relationship between welfare programs and population migration or the effects of different teaching techniques on pupil performance). Examples of activities with relatively well defined production functions are those of the Internal Revenue Service, space programs, Forest Service logging operations, the air traffic control system and our old age insurance system. (I am not, of course, asserting that there is necessarily a high degree of agreement on the value of the outputs produced by these activities.)

Where the production function is poorly understood, programs are judged mainly in input terms: the money spent, the people employed, the cases handled. Professional standards get developed which sanctify these inputs in the absence of output measures in which there is much confidence (e.g., the now abandoned "demographic" argument for increasing basic science budgets at 15 per cent a year, hospital bed requirements per unit of population). Where the production function is unclear, the payoffs from more systematic decision methods are likely to be high. In the well defined cases, decisions are likely to be made fairly efficiently, or, if they are not being so made, the reason is probably fragmented authority or overriding political constraint (as in the case of the Post Office).

THE AVAILABILITY OF DATA. The production function might be known to some but not necessarily to those making important decisions. For example, if programs are run by local governments and the federal role is primarily one of providing funds, the likelihood is fairly high that decision makers at the federal level (including members of Congress) will not have much relevant program data available. It may not be in the perceived interests of the grantors of funds or the recipients to collect and disseminate program data. The former may not demand it, for they are not held responsible for program performance; the latter may not readily volunteer it because they are.

PUBLIC VS. PRIVATE GOODS. In the production of public goods partisan pressures are weaker than in nonpublic goods production. There may remain intense partisanship over inputs (e.g., the location of facilities) but there is less about outputs.

FRAGMENTATION OF RESPONSIBILITIES. There must be a division of labor in the management of complex activities. But many problems to which public programs are addressed often cut sharply across jurisdictional lines and do so in ways that seem to prevent effective performance. For example, there is good reason to believe that educational performance, family environment, housing, jobs, and the incidence of crime are strongly interactive. Yet these are typically the responsibility of different bureaucracies with different motivations and professional outlooks. Partisan adjustment among the bureaucracies and professional groups concerned with these areas may fail to take anywhere near adequate account of these interactions.

THE EFFECT ON INCOME DISTRIBUTION. Income distribution is always relevant and it is often dominant. With many ongoing programs the recipients have virtually established rights to support from government programs. In any case, where income distribution is the objective, there are two kinds of efficiency issues: One is the efficiency with which funds are put in the hands of the preferred recipients. The other is the economic efficiency of the activity which is used as the vehicle for transferring the funds (the water project, crops produced or not produced, jobs subsidized). The main point with those income distribution dominated programs and strongly vested interests is that they have usually been developed over time through a process of a bargaining and negotiation and consensus building that makes them relatively impervious to change in decision making methods. They are often Congressionally dominated program areas. (Even so, it appears that cost-benefit analyses have resulted in some of the worst programs being cut out.)

The case for the more intensive application of systematic decision methods would seem to be strongest for those activities that involve public goods, strong externalities, fragmentation of responsibilities, a poorly understood but potentially understandable production function, poor consumer knowledge of the quality of services provided, Presidential more than Congressional power to decide, and are not a traditional income transfer vehicle. The unreconstructed partisan, incremental approach either is relatively acceptable in terms of the results produced or is nevertheless likely to prevail where the opposite conditions hold.

The Need for a Strengthened Adversary System

The issue of the nature of decision making in the public sector, as frequently posed, is the wrong one. The alternative to a partisan, incremental system is not necessarily a centralized, synoptic, hierarchical one. It is necessary to accept—not only as a fact but as a positive good—the existence of a multiplicity of sources of political power and influence frequently operating as adversaries; and it is necessary to accept the impossibility of comprehensive, consistent decision making, and nevertheless seek to improve upon the workings of this system. This means changing the rules of the game somewhat, but accepting that it is basically the same game.

Decision makers (congressmen, governors, mayors, executive branch officials, city councilmen, lobbyists, newspaper editors, trade associations, members of public commissions) should be encouraged to adopt the practice of demanding and producing more systematic, quantitative data on objectives and costs and benefits of alternative programs and policies in areas for which they have a responsibility or interest. One should expect that these data and analyses will frequently be biased. It is for the partisans of differing views to supply countervailing data and analyses. To some extent this style of decision making is practiced in our society today, for a partisan often feels motivated to have his case buttressed with an analysis. But it is far from as common as it might be.

It will be objected that it frequently will not be in the interest of partisans to behave in this fashion—especially if they have an already vested interest in ongoing programs. What could compel them to behavior possibly contrary to their perceived interests? Several things could: one is the strength of the ethos of rational behavior in our society. It is difficult, although far from impossible, even for strong partisans to reject totally the legitimacy of the demand for data and analysis on public issues. They may provide false or distorted material but complete stonewalling is fairly rare. (More common is the inability of the partisans to provide coherent data because they don't have it. An especially interesting case is that of the bureaucrats who don't collect data even for themselves so that they can't be called on to provide it to others.)

It may also be argued that analysis may be too costly. This may be, and clearly much decision making must be done routinely. But it is also true that much of what is needed by way of analysis is pretty

elementary. And, with the substantial increase taking place in the number of analytically trained people in our society, this argument is losing force.

The beginnings of a system of adversary analytic groups exists within the federal government. It is understood that the analytic output of the Agriculture Department or the Office of Economic Opportunity or the Defense Department will reflect not only the responsibilities but what to some might be regarded as the partisan bias of these agencies. But, even so, the gains can be substantial—at best, explicitness of analysis, data on estimated costs and benefits, statements of uncertainties, the citation of experimental evidence. It is possible for those of differing persuasion to meet the argument in detail. The best may be rare but even distant approximations to it can be useful. It may be possible to get second order agreement and clarify differences. These are not hypothetical possibilities. They can happen when contending analyses meet head-to-head.

Among the multiplicity of decision making groups there should be some prepared to take a synoptic view—for example, in budget bureaus of cities, states and national governments—but *not* with the expectation that comprehensive, consistent choice of optional policies will result. Rather it is to provide better data, theories, insights of partisans of the “big picture.” And analyses at a “high” level can usefully interact with those at lower levels.²

In conclusion, this paper emphasizes the values to be obtained from an interactive analytic process rather than the substantive correctness of a particular problem solving approach. This way of viewing the role of systematic decision making is relevant to a number of issues that have been raised recently. One is the interest in parts of the Congress in having access to modern analytic resources. A second is the interest in strengthening the PPBS system in the foreign affairs area.³ A third is the interest on the part of a number of governors

² Much of the discussion about suboptimization fails to stress the influence of bureaucratic motivation on the behavior of subordinate units and the value of having countervailing views available at higher decision levels. The strong degree of independence and the parochial character of the criteria frequently found in subordinate units makes consistency between the objectives of these units and higher levels far from certain or even probable. This increases the importance to higher levels of having multiple sources of data and advice.

³ T. C. Schelling, in a Memorandum prepared for the Government Operations Committee of the Senate in January, 1968, states the view that the main effect of such a change would not be directly improved budgetary allocations in foreign programs but the enhancement of the authority of the Secretary of State in relation to other departments of the government.

and mayors in improving their decision systems. What these examples have in common is a recognition that power and influence flow not only from traditional sources but also from the ability to command data and analyses. Much of the work that will be done in the future, as in the past, under the heading of systematic decision making will be unscientific, unsystematic and partisan. But much of it will be socially useful nonetheless.

COMMENT

by WERNER Z. HIRSCH, *University of California, Los Angeles*

Rowen asks in an interesting way, "Are the results of present-day public decisions adequate? Or, could they be improved by more systematic decision making? And if so, for which classes of activities could decision making be improved?" The paper contains little new insight, either analytical or empirical, into the first question and, therefore, I turn to that part of the paper that deals with six characteristics of activities that are likely to lend themselves to improved results through systematic decision-making methods. As I interpret his conclusions, the six criteria are: if there is poor knowledge of service demand; if production relations are poorly understood; if there is a paucity of program data; if the good is a public good; if operational responsibilities are fragmented; and if major income transfers are attempted. I would like to review some of these characteristics, and attempt to add a few.

I like the approach of first looking at some of the demand characteristics. However, the phenomenon of poorly understood services is not identical with the phenomenon of consumer ignorance. In economic terms the issue is whether there are detectable demand functions, and if so, how well do we estimate them. A rather reliable demand function emerges if the service is priced, if its various characteristics lend themselves to quantification, and if it has few merit good characteristics. The absence of these conditions, and therefore of a demand function, leads to poor knowledge or to lack of knowledge by decision makers about service demand. But even though decision makers do have good knowledge about consumer demand, consumers still might be ill-informed or ignorant (and vice versa). The question of whether consumers have enough knowledge to want the "right" quantity and quality of public service is only in part an economic question. Under certain conditions, "right" in an equilibrium sense exists if the service is priced with the aid of user charges. More often "right" involves ethical issues and is related to the merit good characteristics of public services.

As to the production function, there can be no doubt that program budgeting can improve decisions when outputs are reasonably definable but so far have not been estimated. However, in this connection attention must be paid to the degree of uncertainty associated with produc-

tion. Thus, while in a narrow sense I can see the output of the Internal Revenue Service being defined and estimated with relatively high degrees of certainty, the output of space programs appears much more difficult to define and empirically project into the future.

Absence of relevant high-quality data is not unique to circumstances in which intergovernmental fiscal instruments are prevalent. Since most officials detest situations in which their performance can be evaluated, they are reluctant to see appropriate data generated. In some instances, however, their resistance to providing data is justified. In an administration that seeks to base decisions on "hard facts," programs which produce mainly intangible benefits are likely to be starved for funds compared to programs whose output can be measured more readily. The ensuing underinvestment in the former programs can be harmful from the viewpoint of both the agency and society.

I am less sure about the conclusion that systematic decision-making methods are more applicable to public than to private goods. The reason given is that in the production of public goods partisan pressures are weaker than in the production of private goods. This conclusion appears to be somewhat inconsistent with the discussion and conclusion about the nature of demand. For example, public programs can be financed through user charges if joint consumption, externalities in consumption, costs of exclusion, and distribution or welfare considerations do not dominate. These conditions, which are more often met by private than by public goods, permit the estimation of demand functions, which in turn facilitates systematic decision making through program budgeting. Decisions about public goods also can be improved by program budgeting if important cost and benefit spillovers associated with these public goods can, in fact, be made to accrue to those who produce them.

To the fifth criterion, fragmentation of operational responsibility, should be added fragmentation of fiscal responsibilities. In the presence of complicated intergovernmental fiscal relations it might become extremely difficult, even though extremely important, to apply program budgeting techniques as a means of improving decisions.

This leads me to the last criterion, the income distribution characteristics of an activity. It appears important not to give up on these issues merely because the program areas are often dominated by Congress. Admittedly, congressmen often do not want revealed who benefits and who loses. However, some important features of program budgeting are that it permits an identification of preferred solutions and indicates the effects of a program's activity on specific income,

racial, geographic and other groups in terms of their gains and losses.

This brings me directly to my next point. After reading Harry Rowen's suggestive paper I am left with the impression, and possibly without good reason, that his main concern is with the application of systematic decisions as a means of increasing economic efficiency. While this might be the single most important purpose, it seems desirable to explore also the relevance of systematic decision making to economic growth, income distribution, and other objectives.

Finally, if the question posed in this paper constitutes the most crucial criterion for the application of PPBS, a significant policy implication emerges. Since apparently very few government activities are of a nature that PPBS assures success in improving decision making about them and yet many trade-off decisions are possible among sub-programs of different programs, select analytic studies of high quality, where appropriate, should take precedence to a governmentwide program budget. In many respects, this would have turned back the clock to the days before the Presidential directive of August 1965, in whose writing Harry Rowen played such a key role. It would lead us to seek better select analytic studies. Perhaps there are other criteria that support efforts at constructing department- and even governmentwide program budgets to be used in conjunction with analytic studies.