

direct would-be researchers to the literature of survey methods for a more detailed explanation of techniques. Our primary purpose here has been one of overview rather than in depth presentation. However, to the extent that a rather rudimentary set of guidelines has been rendered, perhaps the state-of-the-art in terms of administrative policy development has been advanced somewhat. Also, we are hopeful that the general utility of survey research has been adequately portrayed. In this age of accountability, surveys may forge a vital link between the public and public policy. As provisions for "Sunset" (periodic review) and "Sunshine" (public intervention) become more explicit, the survey may well become standard practice in the planning, evaluation, and renegotiation of programs and policies.

### Notes

1. Mark Schneider, "The Quality of Life and Social Indicators Research." *Public Administration Review*, vol. 36 (May/June, 1976), pp. 297-305. Also note: Judith Innes de Neufville, *Social Indicators and Public Policy* (New York: Elsevier Scientific, 1975).
2. Thomas Heberlein, "Some Observations on Alternative Mechanisms for Public Involvement," *Natural Resources Journal* (January, 1976), p. 204.
3. Cited in: Kenneth Webb and Harry P. Hatry, *Obtaining Citizen Feed-back* (Washington, D.C.: The Urban Institute, 1973), p. 10.
4. For a more detailed discussion of Strategic Planning see: Robert C. Stuart, "Strategic Planning," Module No. 1 in: *Policy/Program Analysis and Evaluation Package* (Washington, D.C.: HUD/NTDS, 1979) available through the National Technical Information Service; also note: Gregory A. Daneke, *Administrative Policy and the Public Interest* (Boston, Mass.: Allyn and Bacon, 1980), chapter 6.
5. Webb and Hatry *op cit.*, pp. 15-27.
6. For a more elaborate discussion of the role of evaluation in implementation note: Gregory A. Daneke and Alan W. Steiss, "Implementation," Module No. 10 in: *Analysis Package* *Op. cit.*
7. Taken from Harry P. Hatry, "Measuring the Quality of Public Services, in: Willis D. Hawley and David Rodgers, eds. *Improving Urban Management* (Beverly Hills: Sage Publications, 1974), p. 7.
8. See: Gregory A. Daneke, "Community Evaluation: Survey Research and Citizen Involvement," *Proceeding of the Conference of the Council of University Institutes of Urban Affairs* (Newark, Delaware: College of Urban Affairs and Public Policy, Univ. of Delaware, 1977).
9. Note: Sherry Arnstein, "A Working Model of Public Participation," *Public Administration Review*, vol. 35 (January/February, 1975), pp. 70-73.
10. Harry P. Hatry, et al., *How Effective are Your Community Services? Procedures for Monitoring the Effectiveness of Municipal Services* (Washington, D.C.: The Urban Institute, 1977), p. 217.
11. Andre L. Delbecq, et al., *Group Techniques for Program Planning* (Glenview, Illinois: Scott, Foresman and Company, 1975).
12. Department of Regional Community Affairs, *Surveying Community Attitudes* (Columbia: Univ. of Missouri, 1977), pp. 7-9.
13. Sampling error is a statistically discernable margin, or probability of error. For a straightforward discussion of its calculation see: G. David Garson, *Handbook of Political Methods* 2nd edition (Boston: Holbrook Press, 1976), pp. 151-154.
14. For a table of 90 per cent confidence intervals see: Webb and Hatry, *op. cit.*, p. 100.
15. Norman Nie, et al., *Statistical Package for the Social Sciences* (New York: McGraw-Hill, 1975).
16. For a more detailed yet introductory presentation see: Hubert M. Blalock, *Social Statistics* (New York: McGraw-Hill, 1975); also note: Hebert F. Wiseberg and Bruce D. Bowen, *Introduction to Survey Research and Data Analysis* (San Francisco: W. H. Freeman, 1977).
17. The variable used to operationalize support of public housing has been defined in terms of the allocation of funds. This approach is more likely to generate a decision based upon the ratio of costs and benefits related to housing issues, and thus may provide a more reliable measure.

## THE MANY MEANINGS OF RESEARCH UTILIZATION

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This is a time when more and more social scientists are becoming concerned about making their research useful for public policy makers, and policy makers are displaying spurts of well publicized concern about the usefulness of the social science research that government funds support. There is mutual interest in whether social science research intended to influence policy is actually "used," but before that important issue can profitably be addressed it is essential to understand what "using research" actually means.

A review of the literature reveals that a diverse array of meanings is attached to the term. Much of the ambiguity in the discussion of "research utilization"—

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and conflicting interpretations of its prevalence and the routes by which it occurs—derives from conceptual confusion. If we are to gain a better understanding of the extent to which social science research has affected public policy in the past, and learn how to make its contribution more effective in the future, we need to clarify the concept.

Upon examination, the use of social science research in the sphere of public policy is an extraordinarily complex phenomenon. Authors who have addressed the subject have evoked diverse images of the processes and purposes of utilization. Here I will try to extract seven different meanings that have been associated with the concept.

### The Knowledge-Driven Model

The first image of research utilization is probably the most venerable in the literature and derives from the natural sciences. It assumes the following sequence of events: basic research → applied research → development → application. The notion is that basic research discloses some opportunity that may have relevance for public policy; applied research is conducted to define and test the findings of basic research for practical action; if all goes well, appropriate technologies are developed to implement the findings; whereupon application occurs.<sup>1</sup>

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*Whether or not the best and most relevant research reaches the person with the problem depends on the efficiency of the communications links. Therefore . . . the usual prescription for improving the use of research is to improve the means of communication to policy makers.*

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Examples of this model of research utilization generally come from the physical sciences: biochemical research makes available oral contraceptive pills, research in electronics enables television to multiply the number of broadcast channels. Because of the fruits of basic research, new applications are developed and new policies emerge.<sup>2</sup>

The assumption is that the sheer fact that knowledge exists presses it toward development and use. However well or poorly this model describes events in the natural sciences,<sup>3</sup> in the social sciences few examples can be found. The reasons appear to be several. Social science knowledge is not apt to be so compelling or authoritative as to drive inevitably toward implementation. Social science knowledge does not readily lend itself to conversion into replicable technologies, either material or social. Perhaps most important, unless a social condition has been consensually defined as a pressing social problem, and unless the condition has become fully politicized and debated, and the parameters of potential action agreed upon, there is little likelihood that policy-making bodies will be receptive to the results of social science research.

I do not mean to imply that basic research in the social sciences is not useful for policy making. Certainly many social policies and programs of government are based, explicitly or implicitly, on basic psychological, sociological, economic, anthropological, and political scientific understandings. When they surface to affect government decisions, however, it is not likely to be through the sequence of events posited in this model.

### Problem-Solving Model

The most common concept of research utilization involves the direct application of the results of a specific social science study to a pending decision. The expectation is that research provides empirical evidence and conclusions that help to solve a policy problem. The model is again a linear one, but the steps are different from those in the knowledge-driven model. Here the decision drives the application of research. A problem exists and a decision has to be made, information or understanding is lacking either to generate a solution to the problem or to select among alternative solutions, research provides the missing knowledge. With the gap filled, a decision is reached.

Implicit in this model is a sense that there is a consensus on goals. It is assumed that policy makers and researchers tend to agree on what the desired end state shall be. The main contribution of social science research is to help identify and select appropriate means to reach the goal.

The evidence that social science research provides for the decision-making process can be of several orders. It can be qualitative and descriptive, e.g., rich observational accounts of social conditions or of program processes. It can be quantitative data, either on relatively soft indicators, e.g., public attitudes, or on hard factual matters, e.g., number of hospital beds. It can be statistical relationships between variables, generalized conclusions about the associations among factors, even relatively abstract (middle-range) theories about cause and effect. Whatever the nature of the empirical evidence that social science research supplies, the expectation is that it clarifies the situation and reduces uncertainty, and therefore, it influences the decision that policy makers make.

In this formulation of research utilization, there are two general ways in which social science research can enter the policy-making arena. First, the research antedates the policy problem and is drawn in on need. Policy makers faced with a decision may go out and search for information from pre-existent research to delimit the scope of the question or identify a promising policy response. Or the information can be called to their attention by aides, staff analysts, colleagues, consultants, or social science researchers. Or they may happen upon it in professional journals, agency newsletters, newspapers and magazines, or at conferences. There is an element of chance in this route from problem to research to decision. Available research may not directly

fit the problem. The location of appropriate research, even with sophisticated and computerized information systems, may be difficult. Inside experts and outside consultants may fail to come up with relevant sources. The located information may appear to be out-of-date or not generalizable to the immediate context. Whether or not the best and most relevant research reaches the person with the problem depends on the efficiency of the communications links. Therefore, when this imagery of research utilization prevails, the usual prescription for improving the use of research is to improve the means of communication to policy makers.

A second route to problem-solving use is the purposeful commissioning of social science research and analysis to fill the knowledge gap. The assumptions, as with the search route, are that decision makers have a clear idea of their goals and a map of acceptable alternatives and that they have identified some specific informational needs to clarify their choice. This time they engage social scientists to provide the data, analytic generalizations, and possibly the interpretations of these generalizations to the case in hand by way of recommendations. The process follows this sequence: definition of pending decision → identification of missing knowledge → acquisition of social science research → interpretation of the research for the decision context → policy choice.

The expectation is that research generated in this type of sequence, even more than research located through search procedures, will have direct and immediate applicability and will be used for decision making. In fact, it is usually assumed that the specific study commissioned by the responsible government office will have an impact and that its recommendations will affect ensuing choices. Particularly the large-scale government-contracted policy study, tailored to the specifications set by government staff, is expected to make a difference in plans, programs, and policies. If the research goes unused, the prescription to improve utilization that arises from this imagery is to increase government control over both the specification of requested research and its conduct in the field. If the research had actually met decision makers' information needs, it is assumed, it would have been used.

Even a cursory review of the fate of social science research, including policy research on government-defined issues, suggests that these kinds of expectations are wildly optimistic. Occasional studies have direct effect on decisions, but usually on relatively low-level, narrow-gauge decisions. Most studies appear to come and go without leaving any discernible mark on the direction or substance of policy. It probably takes an extraordinary concatenation of circumstances for research to influence policy decisions directly: a well defined decision situation, a set of policy actors who have responsibility and jurisdiction for making the decision, an issue whose resolution depends at least to some extent on *information*, identification of the requisite informational need, research that provides the information in terms that match the circumstances within which choices will be made, research findings that are clear-cut,

unambiguous, firmly supported, and powerful, that reach decision-makers at the time they are wrestling with the issues, that are comprehensible and understood, and that do not run counter to strong political interests. Because chances are small that all these conditions will fall into line around any one issue, the problem-solving model of research use probably describes a relatively small number of cases.

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However, the problem-solving model remains the prevailing imagery of research utilization. Its prevalence probably accounts for much of the disillusionment about the contribution of social science research to social policy. Because people expect research use to occur through the sequence of stages posited by this model, they become discouraged when events do not take the expected course. However, there are other ways in which social science research can be "used" in policy making.

### Interactive Model

Another way that social science research can enter the decision arena is as part of an interactive search for knowledge. Those engaged in developing policy seek information not only from social scientists but from a variety of sources—administrators, practitioners, politicians, planners, journalists, clients, interest groups, aides, friends, and social scientists, too. The process is not one of linear order from research to decision but a disorderly set of interconnections and back-and-forthness that defies neat diagrams.

All kinds of people involved in an issue area pool their talents, beliefs, and understandings in an effort to make sense of a problem. Social scientists are one set of participants among many. Seldom do they have conclusions available that bear directly and explicitly on the issue at hand. More rarely still do they have a body of convergent evidence. Nevertheless, they can engage in mutual consultations that progressively move closer to potential policy responses.

Donnison describes this interactive model of research use in the development of two pieces of legislation in Great Britain. He notes that decisions could not wait upon completion of research but had to be made when political circumstances compelled.

Research workers could not present authoritative findings for others to apply; neither could others commission them to find the "correct" solution to policy problems: they were not that kind of problem. Those in the four fields from which experience

had to be brought to bear [politics, technology, practice, and research] contributed on equal terms. Each was expert in a few things, ignorant about most things, offered what he could, and generally learnt more than he could teach.<sup>4</sup>

In this model, the use of research is only one part of a complicated process that also uses experience, political insight, pressure, social technologies, and judgment. It has applicability not only to face-to-face settings but also to the multiple ways in which intelligence is gathered through intermediaries and brought to bear. It describes a familiar process by which decision makers inform themselves of the range of knowledge and opinion in a policy area.

### Political Model

Often the constellation of interests around a policy issue predetermines the positions that decision makers take. Or debate has gone on over a period of years and opinions have hardened. At this point, decision-makers are not likely to be receptive to new evidence from social science research. For reasons of interest, ideology, or intellect, they have taken a stand that research is not likely to shake.

In such cases, research can still be used. It becomes ammunition for the side that finds its conclusions congenial and supportive. Partisans flourish the evidence in an attempt to neutralize opponents, convince waverers, and bolster supporters. Even if conclusions have to be ripped out of context (with suppression of qualifications and of evidence "on the other hand"), research becomes grist to the mill.

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Social scientists tend to look askance at the impressment of research results into service for a position that decision-makers have taken on other grounds. They generally see it as an illegitimate attempt to "use" research (in the pejorative sense) for self-serving purposes of agency justification and personal aggrandizement. Using research to support a predetermined position is, however, research utilization, too, in a form which would seem to be neither an unimportant nor improper use. Only distortion and misinterpretation of findings are illegitimate. To the extent that the research, accurately interpreted, supports the position of one group, it gives the advocates of that position confidence, reduces their uncertainties, and provides them an edge in the continuing debate. Since the research finds ready-made partisans who will fight for its implementation, it stands a better chance of making a difference in the outcome.<sup>5</sup>

One of the appropriate conditions for this model of research use is that all parties to the issue have access to the evidence. If, for example, bureaucrats monopolize research that would support the position of clients, then equity is not served, but when research is available to all participants in the policy process, research as political ammunition can be a worthy model of utilization.

### Tactical Model

There are occasions when social science research is used for purposes that have little relation to the substance of the research. It is not the content of the findings that is invoked but the sheer fact that research is being done. For example, government agencies confronted with demands for action may respond by saying, "Yes, we know that's an important need. We're doing research on it right now." Research becomes proof of their responsiveness. Faced with unwelcome demands, they may use research as a tactic for delaying action ("We are waiting until the research is completed. . .").

Sometimes government agencies use research to deflect criticism. By claiming that their actions were based on the implications and recommendations of social science research studies, they may try to avoid responsibility for unpopular policy outcomes. Or support for a research program can become a tactic for enhancing the prestige of the agency by allying it with social scientists of high repute. Some agencies support substantial amounts of research and in so doing, build a constituency of academic supporters who rally to their defense when appropriations are under congressional review. These are illustrations of uses of research, irrespective of its conclusions, as a tactic in bureaucratic politics.

### Enlightenment Model

Perhaps the way in which social science research most frequently enters the policy arena is through the process that has come to be called "enlightenment."<sup>6</sup> Here it is not the findings of a single study nor even of a body of related studies that directly affect policy. Rather it is the concepts and theoretical perspectives that social science research has engendered that permeate the policy-making process.

There is no assumption in this model that decision makers seek out social science research when faced with a policy issue or even that they are receptive to, or aware of, specific research conclusions. The imagery is that of social science generalizations and orientations percolating through informed publics and coming to shape the way in which people think about social issues. Social science research diffuses circuitously through manifold channels—professional journals, the mass media, conversations with colleagues—and over time the variables it deals with and the generalizations it offers provide decision makers with ways of making sense out of a complex world.

Rarely will policy makers be able to cite the findings of a specific study that influenced their decisions, but

they have a sense that social science research has given them a backdrop of ideas and orientations that has had important consequences.<sup>7</sup> Research sensitizes decision makers to new issues and helps turn what were non-problems into policy problems. A recent example is child abuse.<sup>8</sup> Conversely, research may convert existing problems into non-problems, e.g., marijuana use. Research can drastically revise the way that policy makers define issues, e.g., acceptable rates of unemployment, the facets of the issue they view as susceptible to alteration, and the alternative measures they consider. It helps to change the parameters within which policy solutions are sought. In the long run, along with other influences, it often redefines the policy agenda.

Unlike the problem-solving model, this model of research use does not assume that, in order to be useful, research results must be compatible with decision makers' values and goals. Research that challenges current verities may work its way into official consciousness<sup>9</sup> and, with support from dissident undergrounds, overturn accustomed values and patterns of thought.

The notion of research utilization in the enlightenment mode has a comforting quality. It seems to promise that, without any special effort, truth will triumph; but the enlightenment process has its full share of deficiencies. When research diffuses to the policy sphere through indirect and unguided channels, it dispenses invalid as well as valid generalizations. Many of the social science understandings that gain currency are partial, oversimplified, inadequate, or wrong. There are no procedures for screening out the shoddy and obsolete. Sometimes unexpected or sensational research results, however incomplete or inadequately supported by data, take the limelight. As an environmental researcher has noted, "Bad science, being more newsworthy, will tend to be publicized and seized on by some to support their convictions."<sup>10</sup> The indirect diffusion process is vulnerable to oversimplification and distortion, and it may come to resemble "endarkenment" as much as enlightenment.

Moreover, the enlightenment model is an inefficient means for reaching policy audiences. Many vital results of social science research never penetrate to decision-making centers. Some results take so long to come into currency that they are out-of-date by the time they arrive, their conclusions having been modified, or even contradicted, by later and more comprehensive analysis.

Finally, recent reviews of research on poverty, incomes, unemployment, and education suggest that social science research has not led to convergent conclusions.<sup>11</sup> As more studies are done, they often elaborate rather than simplify. They generate complex, varied, and even contradictory views of the social phenomena under study, rather than cumulating into sharper and more coherent explanation. The effect may be to widen and enrich our understanding of the multiple facets of reality, but the implications for policy are *less* simple and clear-cut. When the diverse research conclusions enter the policy arena, the direction they provide for policy is confused. Advocates of almost any policy

prescription are likely to find some research generalizations in circulation to support their points of view.

### **Research as Part of the Intellectual Enterprise of the Society**

A final view of research utilization looks upon social science research as one of the intellectual pursuits of a society. It is not so much an independent variable whose effects on policy remain to be determined as it is another of the dependent variables, collateral with policy—and with philosophy, journalism, history, law, and criticism. Like policy, social science research responds to the currents of thought, the fads and fancies, of the period. Social science and policy interact, influencing each other and being influenced by the larger fashions of social thought.

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It is often emerging policy interest in a social issue that leads to the appropriation of funds for social science research in the first place, and only with the availability of funds are social scientists attracted to study of the issue. Early studies may accept the parameters set by the policy discussion, limiting investigation to those aspects of the issue that have engaged official attention. Later, as social science research widens its horizons, it may contribute to reconceptualization of the issue by policy makers. Meanwhile, both the policy and research colloquies may respond, consciously or unconsciously, to concerns sweeping through intellectual and popular thought ("citizen participation," "local control," spiraling inflation, individual privacy). In this view, research is one part of the interconnected intellectual enterprise.

These, then, are some of the meanings that "the use of social science research" can carry. Probably all of them are applicable in some situations. Certainly none of them represents a fully satisfactory answer to the question of how a polity best mobilizes its research resources to inform public action.

An understanding of the diversity of perspectives on research utilization may serve many purposes. For one, it may help to overcome the disenchantment with the usefulness of social science research that has afflicted those who search for use only in problem-solving contexts. For another, it may enable us to engage in empirical study of the policy uses of research with better awareness of its diverse and often subtle manifestations; if immediate impact of a specific study on a specific decision is only one indicator of use, we will have to devise more complex but more appropriate modes of study.

Finally, we may need to think more deeply about the proper role of social science in public policy making.

There has been much glib rhetoric about the vast benefits that social science can offer if only policy makers paid attention. Perhaps it is time for social scientists to pay attention to the imperatives of policy-making systems and to consider soberly what they can do, not necessarily to increase the use of research, but to improve the contribution that research makes to the wisdom of social policy.

### Notes

1. An example is R. G. Havelock, *Planning for Innovation through Dissemination and Utilization of Knowledge*, Ann Arbor, Mich.: Institute for Social Research, 1969, Chapter 1.
2. See Julius H. Comroe, Jr. and Robert D. Dripps, "Scientific Basis for the Support of Biomedical Science," *Science* (April 9, 1976), vol. 192, pp. 105-111 for a review of basic research that led to important clinical advances in treatment of cardiovascular and pulmonary diseases.
3. There is some evidence that even in areas of need in the natural sciences, basic research does not necessarily push toward application. For example, Project Hindsight indicated faster, and probably greater, use of basic science when it was directed toward filling a recognized need in weapons technology. C. W. Sherwin et al., *First Interim Report on Project Hindsight* (Summary), Defense Documentation Center, June 1966. Also C. W. Sherwin and Raymond S. Isenson, "Project Hindsight," *Science*, vol. CLVI (June 23, 1967).
4. David Donnison, "Research for Policy," *Minerva*, vol. 10, no. 4 (1972), pp. 519-36, citation p. 527.
5. Carol H. Weiss, "Where Politics and Evaluation Research Meet," *Evaluation*, vol. 1, no. 3 (1973), pp. 37-45.
6. Morris Janowitz, "Professionalization of Sociology," *American Journal of Sociology*, vol. 78 (1972), pp. 105-35; Elisabeth T. Crawford and Albert D. Biderman, "The Functions of Policy-Oriented Social Science," in Crawford and Biderman (eds.), *Social Scientists and International Affairs* (New York: Wiley, 1969), pp. 233-43.
7. See, for example, Nathan Caplan, Andrea Morrison, and R. Stambaugh, *The Use of Social Science Knowledge in Policy Decisions at the National Level*, Ann Arbor, Mich.: Institute for Social Research, 1975.
8. Janet Weiss, "Using Social Science for Social Policy," *Policy Studies Journal*, vol. 4, no. 3 (Spring 1976), p. 236.
9. Henry Aaron, *Politics and the Professors*, Washington, D.C.: Brookings, 1978.
10. Cyril Comar, "Bad Science and Social Penalties," *Science* (June 16, 1978), vol. 200, p. 1225.
11. Aaron, *op. cit.* Also David K. Cohen and Janet A. Weiss, "Social Science and Social Policy: Schools and Race," in C. H. Weiss (ed.), *Using Social Research in Public Policy Making*, Lexington, Mass.: Lexington/Heath, 1977, pp. 67-83.

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