Approaches to Policy Sciences

AAAS Symposium 28 December 1969 Boston

The search for help from science for treating social problems and increasing conscious control by humanity over its future fate is as old as *Homo sapiens*. Magic, astrology, and oracles present early attempts in that direction. Scientific advisory systems, applied social research, systems analysis, management sciences, and planning-programming-budgeting constitute contemporary efforts to use science for improving social policies. But it is only now that a new interdiscipline, which focuses on the study of policy-making and its improvement is emerging—namely, Policy Sciences.

First proposed by Harold D. Lasswell more than 15 years ago, the emergence of policy sciences had to wait for recent advances in scientific knowledge and recent experience in application of rationality approaches to complex problems on one hand, and increasing awareness by scientists of their social responsibility on the other hand. But, at present, all conditions are ripe for the emergence and accelerated development of policy sciences as a distinct interdiscipline. Signs of the rapidly increasing interest in policy sciences and the intense work being done to advance them include, for example, the establishment of new university programs in policy sciences; publication of an increasing number of books in policy sciences and establishment of a new professional periodical called *Policy Sciences: Policy Analysis, Systems Approaches, and Decisionmaking* (to start publication in 1970 by American Elsevier, together with a series of texts, monographs and databooks in policy sciences); a growing number of panels, symposia, and workshops devoted, explicitly or in effect, to policy sciences; and rapid development of various types of policy research organizations, which serve as pioneers of policy sciences knowledge and their application to reality.

The main features of policy sciences can be tentatively summarized as follows:

1) Policy sciences are an interdiscipline, focusing on public policy-making.

2) Policy sciences are based on behavioral sciences and analytical approaches, relying also on decision theory, general systems theory, management sciences, conflict theory, strategic analysis, systems engineering, and similar modern areas of study. Physical and life sciences are also relied upon, insofar as they are relevant.

3) Fusing pure and applied research, policy sciences are mainly concerned with improving policy-making on the basis of systematic knowledge and structural rationality.

4) Policy sciences, as with all applied scientific knowledge, are, in principle, instrumental-normative in the sense of being concerned with means and intermediate goals rather than absolute values. But policy sciences are sensitive to the difficulties of achieving "value-free sciences" and try to contribute to value choice by exploring value implications, value consistencies, value costs, and the behavioral foundations of value commitments.

5) Policy sciences emphasize meta-policies (that is, policies on policies), including modes of policy-making, policy analysis, policy-making systems, and policy strategies. While the main test of policy sciences is better achievement of considered goals through more effective and efficient policies, policy sciences as such do not deal with discrete policy problems, but do provide improved methods and knowledge for doing so.

Main foci of concern for policy sciences include, for example, (i) policy analysis, which provides heuristic methods for identification of preferable policy alternatives; (ii) policy strategies, which provide guidelines for postures, assumptions, and main guidelines to be followed by specific policies (for example, with respect to incrementalism versus innovation, attitudes to risk and time, comprehensive versus shock policies, and goal-oriented versus capacity-oriented policies); (iii) evaluation and feedback, including, for instance, social indicators, social experimentation, and organizational learning; and (iv) improvement of the system for policy-making—by redesign and sometimes novadesign (designing anew), including changes in input, personnel, structure, equipment, external demands, and so forth.

Policy sciences are a tough interdiscipline, very demanding on scholars, students, and practitioners alike. Surely, policy sciences do not lead to a transformation in policy-making; the basic characteristics of policy-making in the United States—such as pluralism, bargaining, multiplicity, complexity, diversity, diffusion, and differential rates of change—are insensitive to progress in policy sciences. More important, the basic roles of politicians—with respect to value judgment, consensus maintenance, opinion leadership, and so forth—are not only not weakened but also reinforced by policy sciences (because of, for instance, clearer choice between alternatives, better control of implementation, more reliable feedback, and so forth). But politicians and senior executives must change some of their patterns of thinking and decision-making in order to avail themselves of the contributions of policy sciences. The emergence of policy sciences also has far-going implications for the scientific community and its social role, especially in providing better frames-of-appreciation and channels for increasing and improving the contributions of systematic knowledge and structured rationality to human affairs.

Some main problems and perspectives of policy sciences will be presented at the forthcoming AAAS meeting, in a symposium organized by Yehezkel Dror on Approaches to Policy Sciences. The symposium will be held on Sunday, 28 December 1969, in the Sheraton Boston Hotel, Hampton Room. The participants and the subjects of their papers are as follows:

Davis B. Bobrow, Acting Director, Behavioral Sciences, Advanced Research Projects Agency: "Decision Information, Computers, and the Policy Sciences";

Timothy Costello, Director, Doctorate Program in Policy Sciences, State University of New York at Buffalo (final subject is not yet formulated);

Yehezkel Dror, Senior Staff Member, RAND Corporation (on leave from the Hebrew University of Jerusalem): "Prolegomenon to Policy Sciences: From Muddling Through to Meta-Policymaking";

William Gorham, President, Urban Institute: "Comments on Policy Sciences Applications";

Erich Jantsch, Consultant on Planning and Forecasting: "From Forecasting and Planning to Policy Sciences";

Herman Kahn, Director, Hudson Institute: "The Increasing Problem of Trained Incapacity";

Harold Lasswell, Professor, Yale University: "The Emerging Conception of Policy Sciences";

Harry Rowen, President, RAND Corporation: "Policy Analysis in Action: The Implications of Experience";

Melvin Webber, Head, Social Policy Planning Program, University of California, Berkeley: "Some Problems of a General Theory of Planning."

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Recommended Readings

Raymond A. Bauer and Kenneth J. Gergen, Eds., *The Study of Policy Formation* (Free Press, New York, 1968).

Yehezkel Dror, *Public Policymaking Reexamined* (Chandler, San Francisco, 1968).

Yehezkel Dror, *Ventures in Policy Sciences* (Elsevier, New York, in press).

Harold D. Lasswell, "Policy Sciences," in *International Encyclopedia of Social Sciences*, vol. 12, pp. 181–189.

Daniel Lerner and Harold D. Lasswell, Eds., *The Policy Sciences: Recent Developments in Scope and Methods* (Stanford University Press, Stanford, Calif., 1951).

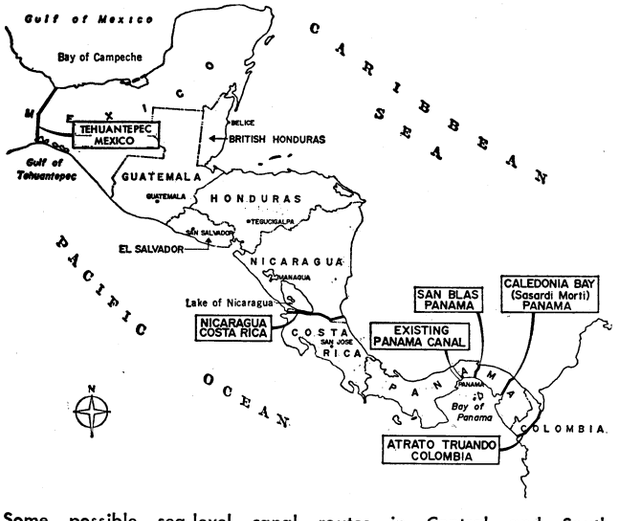
E. S. Quade and W. I. Boucher, *Systems Analysis and Policy Planning: Applications in Defense* (Elsevier, New York, 1968).

Sea-Level Canal Symposium

AAAS Symposium • 30 December 1969 • Boston

A symposium entitled "The Sea-Level Panama Canal: Marine Biological Effects" will be presented 30 December 1969 at the AAAS Meeting in Boston. It will be jointly sponsored by the Society of Systematic Zoology and the American Society of Zoologists. In view of the current controversy about the possible effects of the construction of a sea-level canal on the marine fauna that exists on each side of the Isthmus of Panama, it is anticipated that the presentation will be of considerable interest to the general scientific public as well as biologists and conservationists.

The symposium will include eight individual papers followed by a summary and then a general discussion. It is intended that the coverage of the topic be broad enough so that the major problems posed by a sea-level canal, and possible solutions, can be identified.



Some possible sea-level canal routes in Central and South America.

The speakers and their topics are listed in order of appearance:

Echinoderm Migrations through the Tertiary Panama Seaway: H. B. Fell (Harvard University).

Interoceanic Canals—Their Influence on the Distributions of Marine Bryozoa, N. A. Powell (National Museum of Canada).

Possible Effects on Central American Molluscan Faunas, K. J. Boss (Harvard University).

Suez and Panama: A Zoogeographical Contrast, R. W. Topp (Harvard University).

Possible Effects of a Sea-Level Canal on the Distribution of Sea Grasses and Benthic Algae, H. J. Humm (University of South Florida).

Analysis of the Marine Communities of the Shelf and Slope Areas of the Caribbean-Panama Region of the Isthmus of Panama (with suggestions for further studies), G. L. Voss (University of Miami).

Physical Characteristics of the Proposed Sea-Level Isthmian Canals, J. P. Sheffey (Atlantic-Pacific Interoceanic Canal Study Commission).

The Nature of Zoogeographic Barriers and the Sea-Level Panama Canal Problem, J. C. Briggs (University of South Florida).