Behavioral and Social Sciences: NAS Report Stresses Applications

The latest of the major surveys of scientific fields inspired by the National Academy of Sciences was published this week by the Behavioral and Social Sciences Survey Committee (BASS).* The authors are occupationally concerned with human behavior and relationships, of course, and the report opens with the declaration, "We are living in a social crisis," so it is hardly surprising that the report places much greater emphasis than its predecessors on "social-problem-relevant research."

Since the survey covers the full range of social and behavioral sciences, the report's perspective is broad and its tone ecumenical. The report released this week contains a panoramic survey and general recommendations and will be followed by reports on individual disciplines, to be published later. Separate panels on anthropology, economics, geography, history, linguistics, political science, psychiatry, psychology, and sociology and a special panel focused on statistics, mathematics, and computation are scheduled to report. Responsibility for preparing the general report was carried by a triumvirate made up of BASS committee chairman Ernest R. Hilgard, professor of psychology and education at Stanford; cochairman Henry R. Riecken, president of the Social Science Research Council (SSRC); and executive secretary Stephen Viederman, National Academy of Sciences—National Research Council. These three and the chairmen and cochairmen of the separate panels† formed a central planning committee which reviewed the evolving report and reached consensus on its recommendations.

The report is sponsored and approved by both the Committee on Science and Public Policy of the Academy and the corresponding committee in the SSRC. The 300-page-plus report, therefore, was written not *by* a committee but *for* a committee, and seems to reflect mainstream views in academic behavioral and social sciences.

The BASS committee, as a matter of fact, appears to have reached conclusions very like those embodied in the recommendations of the committee which last year produced the Academy-sponsored report "The Behavioral Sciences and the Federal Government" (*Science*, 13 September 1968). The BASS report reflects a strong concern with the ways in which the federal government acquires and uses social and behavioral sciences data; the report recommendations, in fact, are dominated by this concern.

The BASS committee, for example, stresses both the need for developing improved social indicators and the difficulty of developing such qualitative units of value. What the committee recommends is that an annual "social report," analogous to the Economic Report, be developed outside government —presumably with federal and foundation funds—until it is possible to develop a set of social indicators which "do indeed signal meaningful changes in the quality of life."

The committee also advises against creation of a council of social advisers—the proposal has been a gleam in the eye of many a social scientist—until the social report is brought along to the point at which it can provide information as solid as that available to the President's Council of Economic Advisers.

The committee is emphatic, however, in asking that the representation of behavioral and social scientists be substantially increased at the level of the President's Science Advisory Committee and the Office of Science and Technology and in other groups which influence science policy and broader public policy matters.

Caution also reigns in the committee's comments on creation of a free-standing National Social Science Foundation. No agreement seems to have been possible on a specific course of action, but at this point the committee would like to see funding agencies, and particularly the National Science Foundation, be more liberal with funds, and more imaginative in dealing with applicants in the behavioral and social sciences.

One federal initiative which the committee urges is action toward establishing a "National Data System" to centralize data gathered by federal agencies and make it maximally useful to researchers. Here the committee runs into the burgeoning problem of confidentiality, and in a background paper on the report Hilgard, Riecken, and Viederman comment on the problem directly as follows. "Our position is clear: *while the social scientist's right to information has to be recognized, if this right comes into conflict with the freedom of the individual, it is up to the scientist to find methods to circumvent the intrusion of privacy; in other words an individual's freedom should take precedence over the scientist's desire for information about him.*"

To deter Big Brother, the committee urges creation of a high-level commission, perhaps an interagency body containing nongovernment members, which would investigate problems of anonymity and prescribe action to solve such problems.

As regards overseas research and the sort of problems which led to the uproar over project Camelot and to last year's report on the behavioral sciences and the federal government, the BASS committee affirms the benefits of "cross-national exposure" and suggests that "collaborative research," involving American and foreign behavioral and social scientists—with sources of funds clearly identified—is the best policy.

The body of the BASS report is a survey of the way in which the behavioral and social sciences are organized and financed for teaching and for basic and applied research and development.

Total federal funds available for the social and behavioral sciences increased from $40 million in 1958 to $297 million in 1967 and to an estimated $321 million in 1968. Growth relative to other fields of science was fairly rapid, although it should be noted that the

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* *The Behavioral and Social Sciences: Outlook and Needs* (Prentice-Hall, New York, 1969); $7.95.

† Other committee members are Kenneth E. Clark, University of Rochester; James A. Davis, Dartmouth; Fred R. Eggan, University of Chicago; Heinz Eulau, Stanford; Charles A. Ferguson, Stanford; John L. Fischer, Tulane; David A. Hamburg, Stanford; Carl Kaysen, Institute for Advanced Study; William H. Kruskal, University of Chicago; David S. Landes, Harvard; James G. March, University of California, Irvine; George A. Miller, Rockefeller; Carl Pfaffmann, Rockefeller; Neil J. Smelser, University of California, Berkeley; Allan H. Smith, Washington State; Robert M. Solow, M.I.T; Edward Taaffe, Ohio State; and Charles Tilly, University of Michigan.

social and behavioral sciences started late and from a relatively small base. In 1958 they claimed about 3.7 percent of total federal R & D expenditures; in 1967 the percentage was 5.6. Categories are porous, but economics and psychology account for nearly two-thirds of total expenditures in this field.

One interesting detail noted by the committee is that, in the universities, R & D funds in the social and behavioral sciences are divided about equally among (i) the departments; (ii) the institutes, and research centers outside the departments; and (iii) the professional schools. (The authors say that professional schools of business, education, and medicine in general have a tradition of research in the behavioral and social sciences but that schools of law and social work do not.) But the authors find the departments too absorbed in their disciplines to work effectively on social problems; the institutes characteristically depend on part-timers and have little control over the graduate students who work within them, and the professional schools are too narrowly focused in their research.

Consequently the committee's main recommendation for change in the organization of academic behavioral and social science is that "a new university organization should be created for training and research on social problems." They would describe it as a Graduate School of Applied Behavioral Science. Training would be multidisciplinary, and although graduate education would be an important element, it is implied, at least, that the products of the school would have interests and loyalties which transcend the established disciplines. The committee recommends that the pattern of the schools should vary with local situations.

One of the problems facing the authors of this report and of earlier ones in astronomy, chemistry, mathematics, plant sciences, and physics has been the question of whether to address producers or consumers, colleagues or patrons. Inevitably, it seems, such reports mix shoptalk with a fairly glowing estimate of what scientists in a particular field can do for their country.

As a group of behavioral and social scientists, the BASS committee indulges in some telling self-criticism, but within limits. The report, for example, reflects concern about unrest in the society, but its concern about unrest in the social sciences is less clear.

The BASS report, however, is useful in general in providing an up-to-date map of the behavioral and social sciences and in particular in warning against sectarian tendencies in the field (chairman Hilgard calls it the "disease of the disciplines") and stressing that social and behavioral scientists will have a better chance of tackling social problems effectively if they really learn to cooperate.—JOHN WALSH

Denmark: A Late but Hurrying Entry in Science Policy Planning

Copenhagen. Denmark, although highly prosperous and scientifically and technologically advanced, is one of Europe's laggards in government attempts to orchestrate research, education, and industry. The Danes, with a population of only 4.8 million, however, have no illusions about how things are shaping up in a world that is increasingly dominated by a few economic giants. Nor are they unaware that many of the problems of modern society, particularly environmental problems, require in large part centrally applied, highly technical treatment. As a result, they have now embarked on a well-traveled but still very difficult course, with the goal of producing harmony among a variety of institutions that have evolved independently over a long span of years. In a sense, they are engaged in a microscopic replay of the United States' and other nations' experiences of the past two decades. And, therefore, there are lessons and patterns from which they can benefit. But the Danes readily admit that, because they did not do too badly with the old system, they are very late in attempting to work out government mechanisms in this area, and that, as a consequence, there is much encrustment of old ways to be dealt with.

Even lacking, though now about to be produced, is a reasonably accurate statistical picture of the amount and location of total national expenditures for research and development. Preliminary figures indicate a total of about $150 million a year, divided more or less equally among industry, institutions of higher education, and government-owned or government-assisted research centers. The amount is estimated to be 1.2 percent of gross national product, a figure which, if accurate, makes Denmark low man, by far, relative to its neighbors. The preparation of a statistical picture is one of the major undertakings of the government's principal instrument for science policy making, the Danish Science Advisory Council, a 15-member body established in 1965 but just now emerging as a center of influence. The Council, headed by the chairman of the economics institute of the University of Copenhagen, P. Nøregaard Rasmussen, is as close as Denmark comes to having anything resembling the U.S. Office of Science and Technology or the President's Science Advisory Committee. It is the topmost advisory body of its kind in the country, and its members are drawn from the scientific community, from industry, and from government. But organizationally it occupies a somewhat nebulous position in the government hierarchy. It is appointed by the Minister of Education and serves as adviser to that Ministry, but it is also supposed to perform an advisory function for all other ministries, as well as for the Parliament. Its secretariat, numbering about seven full-time professionals, is drawn, however, from the disciplinary research councils that function as granting agencies for academic science.

Far away on the organization chart, and with no direct connection to the Science Advisory Council, is the institution that is likely to be of greatly increasing importance in a time of concern over the relationship between research and industrial growth—the Academy of Technical Sciences, founded in