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in the field of journalism as a writer, editor, and newspaper owner; in business as an airlines executive, in education as an author, faculty member, administrator, and trustee at several institutions; and in philanthropy, as a foundation trustee and adviser.

"His ties with Davis and Elkins College have been particularly close since 1925. In that year he joined the faculty teaching public speaking and journalism; was faculty adviser to the student newspaper; coached the debating team; prepared news releases and was in charge of the College News Bureau. During the six years that he was associated with the College he is perhaps best remembered for his leadership as athletic director. Working closely with the athletic staff, he developed an intercollegiate program that became well-known throughout the United States. From 1938 through 1961 he was a member of the Board of Trustees, and since 1962 he has served as Honorary Trustee.

"Following his election to the House of Representatives in 1952, he left Davis and Elkins College to begin a long and distinguished career as a statesman and public servant.

"During his seven terms of office in the House of Representatives, he was noted for his support of liberal and progressive national legislation. Since 1958, when he was elected to the United States Senate, meaningful programs in health, education, training, and public facilities have been fashioned through the dedicated efforts of Senator Randolph, which reflect his humanitarian philosophy of life. He was the principal sponsor and Senate floor manager of the Appalachian Regional Development Act of 1965, which authorizes a program of regional economic development in all of West Virginia and parts of 11 other states.

"He has long been an active sponsor of legislation to develop increased educational and training opportunities and was a strong force in the passage of the Higher Education Facilities Act, Library Services and Construction Act, the Elementary and Secondary Education Act, the Manpower Development and Training Act, and the Economic Opportunity Act.

Davis and Elkins College is proud to honor the man who has come to be known as "Mr. Small College." As former Senator Wayne Morse recently said of Senator Randolph: "the entire Senate recognizes the Senator from West Virginia as the best informed member of the State on the problems of our small colleges."

"We are honored to present to you the recipient of the Fourth Annual Founders Award, the Honorable Jennings Randolph, United States Senator from West Virginia."

Speaking today at the Founders Day ceremony of dedication of "Jennings Randolph Hall"—the Davis and Elkins College Library with its new \$140,000 addition—was Dr. L. Quincy Mumford, Librarian of Congress and an Eisenhower appointee who was continued in office through two Democratic administrations.

Dr. Mumford, the first professionally-trained librarian to fill the post of the nation's chief librarian, is a native North Carolina, graduate of Duke University and Columbia University School of Library Science.

He served as director of the Cleveland Public Library before his appointment as Librarian of Congress in 1954, and was president of the American Library Association the year he was selected by the late former President Dwight D. Eisenhower.

When Dr. Mumford was appointed Librarian of Congress in 1954, the Democratic Washington Post and Times Herald in Washington, D.C. observed, "This is manifestly a merit selection by the President and deserves the warmest public approbation. The Library of Congress is, in respect to the number of volumes it embraces, the world's greatest

library today. It ranks among the greatest libraries of the world by every other standard as well . . ."

LEADER FOR LIBRARY LEGISLATION

All legislation introduced in Congress for the development of library services and construction since Sen. Randolph has been in Congress has had his leadership, sponsorship or support.

As a member of the Subcommittee on Education, the West Virginia Senator has participated in the formulation of the landmark measures for library assistance which have been approved by Congress in the 1960s.

In commenting on his advocacy of improved library facilities, Randolph said: "An equipped library is becoming with every passing day more indispensable. The challenges of our society are interrelated with the sheer magnitude of the information which is pouring forth, from every quarter of the globe in every tongue and dialect on every scientific and scholarly subject. There must be ready access to this knowledge if our problems are to have solutions."

"But," the Senator observed, "we must make the commitment to develop new library systems and to expand existing ones. This is a critical year of decision for the future of library programs, since the Budget Bureau request contains no funds for library construction and only a \$44.2 million request for program development. This is extremely disappointing. The House of Representatives has approved \$9 million for construction and \$113 million for programs. I am hopeful that the Senate will concur in or increase the House level of funding. I shall work toward that end."

The laws providing assistance for libraries, in which Senator Randolph has been active, include: the Library Services and Construction Act, the Elementary and Secondary Education Act, the Higher Education Act, and the Higher Education Facilities Act.

SPECIAL GUESTS AT CEREMONY

Randolph's wife, Mary, and their two sons, Jay and Frank, and his sister, Mrs. Ernestine Carr of Washington, D.C., attended the Founders Day celebration today. Mrs. Randolph and Frank arrived from Washington Saturday accompanied by Miss Marie Lantz, administrative assistant to the Senator. Jay, a sportscaster for NBC, flew from Kansas City to Pittsburgh last night after broadcasting a game and arrived in Elkins just past midnight.

From Clarksburg came his cousins, Byron Randolph, West Virginia counsel and trustee for Benedum Foundation and Mrs. Jack Thrasher and her husband. Other relatives on hand were the Senator's aunt, Mrs. Myrtle Moore of Clarksburg and a cousin, Nelle Edgell of Salem, accompanied by Mr. and Mrs. Jean Lowther of Salem. Lowther was best man at Randolph's wedding.

In addition to Miss Lantz, other members of the Senator's staff here from Washington are James Harris, his executive assistant; Phillip McGance, legislative assistant; and Mrs. William Sargent, his personal secretary, accompanied by Mr. Sargent. They were joined by Mrs. Ruth McGraw of Clarksburg, his state secretary.

Representing the Senate Public Works committee of which Randolph is chairman was Richard Royce, staff director.

Senator Randolph spoke Sunday afternoon at the dedication of the Concord College Fine Arts Center and was accompanied from Bluefield to Elkins last night by former Gov. and Mrs. Hulett C. Smith who attended today's activities. Arriving late Sunday was Joseph E. Casey, former U.S. Representative from Massachusetts who entered the House of Representatives with Senator Randolph in 1933.

At least six college presidents were among the distinguished guests today: K. Duane

Hurley, president of Salem College; Easton K. Feaster, president of Fairmont State College; Stanley Martin, president of West Virginia Wesleyan College; William J. L. Wallace, president of West Virginia State College and Dr. John P. Mauer, president of Southeastern University, Washington, D.C., where Senator Randolph was dean and a teacher.

Dr. David Johnson and Miss Betty Bailey represented the Benedum Foundation at Pittsburgh which contributed \$40,000—the largest single gift—toward the construction of the new addition to the library.

Heading the list of industrial and business leaders were: John Jones, assistant to the president of Weirton Steel, Weirton; Charles Van Horn, assistant to the vice president, Baltimore and Ohio Railroad of Baltimore and a native of Harrison County, W. Va., and Herbert Richey, president of Valley Camp Coal Co., Cleveland, Ohio, whose company employs more than 2,000 West Virginians.

Other special guests were Arthur Dunlap, executive director of the W. Va. Foundation for Independent Colleges, and Mrs. Davis Ratliff of Foxsell, Va.

BEHAVIORAL SCIENCES SURVEY URGES SOCIAL REPORTING

Mr. MONDALE. Mr. President, as chairman of the Special Subcommittee on Social Program Planning and Evaluation of the Senate Committee on Labor and Public Welfare, I wish to discuss an extraordinarily important report that has just been issued, and which parallels and confirms findings that have emerged in the hearings my subcommittee is holding.

This report is entitled "The Behavioral and Social Sciences: Outlook and Needs." This report was produced under the auspices of the National Academy of Sciences and the Social Science Research Council, and was drafted by the Behavioral and Social Sciences Survey Committee. A more authoritative or impressive authorship and sponsorship of a report of this kind could hardly be imagined. The report is the product of about a score of the Nation's most eminent social scientists, representing every discipline in the social and behavioral sciences. The joint sponsorship of the National Academy of Sciences and the Social Science Research Council provide further testimony to the scientific importance and nonpartisan character of this report.

The first recommendation of the report is this:

The Committee recommends that substantial support, both financial and intellectual, be given to the efforts under way to develop a system of social indicators and that legislation to encourage and assist this development be enacted by Congress.

I am happy to say that some time ago I introduced, with a score of my distinguished colleagues in this body, legislation that would in fact have specifically encouraged and assisted the development of social indicators, or measures of the quality of life. Our Full Opportunity Act, S. 5, specifically provides for the collection, analysis, and dissemination of social indicators. It is by no means surprising that this distinguished body of social scientists should emphasize the need for better information on our social

problems and the extent to which—if at all—they are changing in response to changing public policies and different levels of public expenditure. Testimony before my subcommittee has suggested that the lack of information about what our programs accomplish is simply scandalous. We spend billions of dollars on public programs, but pennies, if anything at all, to learn what, if anything, they actually accomplish.

The report also advocates an annual social report, which would call public attention to changes in the condition of a society and analyze the policies the Nation faces. Again, the Full Opportunity Act would make such an annual report, prepared by a council of social advisers, mandatory. Whereas the bill, as presently worded, would call for the prompt establishment of a council of social advisers, and immediate attempts to begin preparing annual social reports, the behavioral and social science survey, with characteristic academic caution, recommends prior experiment with social reports issued by private foundations. Its authors argue that such privately issued social reports would help develop the social scientist's capabilities to make recommendations about concrete policy problems. From the perspective of the Senate, I am inclined to think that involvement in the policy process is the best way to insure that social scientists consider practical policy problems. I am also conscious of the immediacy of the Government's need for more information and analysis concerning policy alternatives. But this is merely a question of timing and tactics, on which a generally satisfactory compromise can easily be found. The basic point is the agreement on the need for social reporting, and that point has emerged, not only in the hearings I have been holding, but also in this distinguished and nonpartisan body of social scientists. The Department of Health, Education, and Welfare has indeed already taken the beginning step here. It issued "Toward a Social Report," the first step toward social reporting, in January of this year, and then recommended that the Federal Government begin issuing regular social reports within 2 years.

My subcommittee is also most interested in funding for basic research in the social sciences, and in this connection is most interested in the imaginative proposal, first put forth by my distinguished colleague FRED HARRIS, and which I have cosponsored along with other Senators. The report recommends that funding for research in the social science increase at 12 to 18 percent per year. Its members are divided on whether a separate social science foundation, or combined support for physical and social sciences through the National Science Foundation, would be best, but their recognition of the need for improved and expanded support for social science research is unmistakable.

In view of the importance of the report at issue, I ask unanimous consent that its "Summary and Major Recommendations," and the Washington Post article about it, be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

SUMMARY AND MAJOR RECOMMENDATIONS

We are living in social crisis. There have been riots in our cities and in our universities. An unwanted war defies efforts to end it. Population expansion threatens to overwhelm our social institutions. Our advanced technology can destroy natural beauty and pollute the environment if we do not control its development and thus its effects. Even while scientific progress in biology and medicine helps to relieve pain and prolong life, it raises new problems relating to organ transplants, drugs that alter behavior, and the voluntary control of genetic inheritance.

At the root of many of these crises are perplexing problems of human behavior and relationships. The behavioral and social sciences, devoted to studying these problems, can help us survive current crises and avoid them in the future, provided that these sciences continue to make contributions of two kinds: first, in increased depth of understanding of human behavior and the institutions of society; and, second, in better ways to use this understanding in devising social policy and the management of our affairs. Recommendations for achieving such growth are the central concern of this survey and this report.

Social problems are most visible during crisis, but they persist even in relatively calm times, for the human needs that underlie them are continuous. Our concerns must include health and access to medical care, raising children to become effective and satisfied adults. We want a society that provides educational services in classrooms, museums, libraries, and the mass media, and that offers abundant opportunity for satisfying and productive work without fear of unemployment. People need pleasant, livable housing, efficient and economical means of transportation, and opportunities for esthetic outlets and the appreciation of nature. The social order must provide safety for citizens and freedom of movement without fear of attack or molestation. It must encourage individuality and cultural diversity, while reducing intergroup tensions; and it must progress toward international understanding and the elimination of war as an instrument of national policy.

These are large issues, involving values and goals as well as means. The job of the social scientist is clear. He can keep track of what is happening, work at understanding the sources of conflict and resistance to change, and try to determine both the intended and unintended consequences of problem-solving actions. Through the development of general scientific principles and the analysis of specific instances, social scientists seek to illuminate the ways in which the society is working.

This survey was undertaken to explain the behavioral and social sciences and to explore some of the ways these sciences could be developed and supported so that their potential usefulness to society can be realized. The survey is directed to two tasks: first, to assess the nature of the behavioral and social science enterprise in terms of its past growth, present size, and anticipated development; and second, to suggest ways in which these sciences might contribute both to basic understanding of human behavior and to effective social planning and policy-making.

THE SCOPE OF THE BEHAVIORAL AND SOCIAL SCIENCES

This survey embraces nine behavioral and social science disciplines: anthropology, economics, geography, history, linguistics, political science, psychiatry, psychology, and sociology. It also takes into account the social science aspects of statistics, mathematics, and computation. The survey recognizes the contributions to behavioral and social science by professionals in business, education, law, public health, medicine, and social work, although it does not cover these fields in detail. The importance of collaborative work in solv-

ing social problems emphasizes the links between these sciences and engineering, architecture, and the biological and physical sciences.

The behavioral and social sciences have shared in the rapid expansion of knowledge common to all fields of scholarship over the last decade and have attracted an increasing number of trained workers (Figure SR-1). Increasing proportions of bachelor's and master's degrees were granted in these fields between 1957 and 1967, and the trend will probably continue. The relative proportion of doctorates may decline slightly, not because of a slowing down in their production but because of very rapid increases in other fields, notably in engineering. Ironically, despite the increase in the number of degrees granted (Figure SR-2) [Not printed in the RECORD], the social sciences face manpower shortages because of the upsurge of interest in them.

FIGURE SR-1.—Degree production in the behavioral and social sciences as percentages of degree production in all fields

[In percent]	
Bachelor's:	
1957	14
1967	21
1977 ¹	31
Master's:	
1957	9
1967	12
1977 ¹	15
Doctorates:	
1957	19
1967	19
1977 ¹	17

¹ Projected.

Source: Tables 9-1, 9-3, 9-5.

Behavioral and social scientists are more inclined to pursue academic careers than are many other scientists, although a trend toward greater nonacademic employment is apparent. Approximately half of all professional behavioral and social scientists work in universities or four-year colleges. Many others work in other educational settings, such as junior colleges and secondary schools, and in public-school administration. The rest are employed in government, hospitals, research centers, and industry; economists and psychologists find more employment outside universities than do others.

SCIENCES OF BEHAVIOR AND THE PROBLEMS OF SOCIETY

All sciences make some distinctions between basic research, applied research, and the development of products, processes, or services based on research. The history of science shows that the relationship between basic and applied science is complex, with basic research sometimes lagging behind, and sometimes leading applied research. But the scientific method can be applied to problems of a practical nature, whether or not the applications can be derived from the basic science of the time.

The third category of scientific activity—development—is more difficult to define for the behavioral and social sciences. The result of development in the physical sciences or in engineering is usually a tangible product, such as a color television set or a space capsule, and it is relatively simple to determine developmental costs. Although there are some tangible products of behavioral and social science, such as computerized instructional systems, many useful ones are services or processes in the public domain, such as a parole system, a new form of welfare payments, or a form of psychotherapy.

If the usefulness of social-problem-relevant research is to grow, the scale of social science research will have to expand, because many problems can be studied only on a national or international level. As this scale increases, the basic sciences of human behavior should benefit, much as the natural sciences have benefited from increases in the scale of their own research.

The Committee has considered several steps to strengthen the behavioral and social sciences, both as sciences and as contributors to public policy.

One step is to develop improved social indicators: measures that reflect the quality of life, particularly in its noneconomic aspects. Some data for constructing social indicators now exist. We have data on educational opportunities, adequacy of housing, infant mortality, and other statistics bearing on health, highway accidents and deaths, violent crimes, civil disorders, reflections of cultural interests (library use, museum and theater attendance), and recreational activities. We now need a major effort to find indicators that can accurately reflect trends for the nation as a whole as well as differences among regional, sex, age, ethnic, and socioeconomic groups. Most social changes are gradual. A sensitive social indicator should tell us whether, in the area to which it pertains, things are getting better or worse, and to what degree.

Social indicators should help us measure the effects of social innovations and changes in social policy as well as assess their unintended by-products. New methods of construction as well as changes in building codes could be reflected in changes in indicators of the quality of housing. Broad programs for increasing highway safety might affect accident indicators and also the consumption of alcohol under certain circumstances.

Indicators that measure our economic state are in use, but they are not precisely analogous to the social indicators we are proposing. Economic values can be expressed in dollars, and economic indicators can be aggregated to produce a single economic unit, such as the gross national product (GNP). There is no corresponding unit of value by which to measure the quality of life. This is not an obstacle to the development and use of separate quantitative indicators, each of which measures some aspect of the quality of life, even though it may not be possible to combine them into a single number.

The development of a useful system of social indicators is not simply a matter of measuring many aspects of society. The central problem is to decide which among many measurable attributes most truly represent the fundamental characteristics with which we are concerned. Thus, progress toward valid indicators will depend largely on the understanding we obtain from research into the basic structure and processes of our society. Conceptual and theoretical work at the highest level is necessary if we are to interpret the changes taking place.

To expedite the development and use of a system of social indicators, we offer the following recommendation:

Recommendation: Social Indicators—The Committee recommends that substantial support, both financial and intellectual, be given to efforts under way to develop a system of social indicators and that legislation be enacted to encourage and assist this development be enacted by Congress.

We believe that the resources of the federal government will have to be called upon to develop successful indicators. The estimated annual cost of running an organization to carry on developmental work is \$1.5 million. Access by such an organization to data routinely collected by federal agencies would facilitate its work. Because the effort would be in the national interest, we suggest that the task of developing social indicators be undertaken directly by the government; in Chapter 6 we discuss several alternatives for locating an indicator agency within the federal system.

If social indicators are to be useful to society, they will have to be interpreted and then considered in conjunction with the making of social policy. Just as the annual Economic Report of the President interprets economic indicators, an annual social report

should eventually be produced that will call attention to the significance of changes in social indicators.

Because of the particular problems involved in developing sound, workable social indicators, we are hesitant to urge an official social report now. We favor, instead, a privately sponsored report during the next few years, perhaps through the initiative of either the National Research Council or the Social Science Research Council, or through a joint effort of the two.

If such an annual social report proves substantial after reasonable experimentation, it might then become a government responsibility like the annual economic and manpower reports now made for the President. This approach is also discussed in Chapter 6, where we offer the following recommendation.

Recommendation: A privately developed annual social report—The Committee recommends that behavioral and social scientists outside the government begin to prepare the equivalent of an "Annual Social Report to the Nation," to identify and expedite work toward the solution of problems connected with the eventual preparation of such a report on an official basis. Support for this endeavor should come from private foundations as well as from federal sources.

A natural next step would be to establish a council of social advisers to consider the policy implications of the report. We do not recommend the establishment of such a council until the annual social report shows that social indicators do indeed signal meaningful changes in the quality of life.

For the present, we urge full participation of behavioral and social scientists in the Office of Science and Technology and in the President's Science Advisory Committee, as well as in the numerous advisory bodies attached to administrative agencies and the Office of the President (see Chapter 5).

Behind the development of social indicators and an annual report lie some basic steps: to gather better social data and to store it in usable form, with the necessary safeguards against invasion of privacy. Fortunately, we have the experience of the Decennial Census and the Current Population Survey, without which a great deal of social science, particularly demography, could not have been developed. There are also many sample surveys that deal with employment and other economic factors and statistical reports on agriculture, health, and other aspects of life.

Even in a non-Census year, the federal government spends more than \$118 million on statistical programs. Data are scattered through government agencies in many forms, and suggestions for centralizing those data in some form of national data system have been made several times. We see many problems in such plans and therefore recommend that the President appoint a special commission with a full-time professional staff and a broad-based advisory committee to make a detailed study with recommendations. Suggestions should come from data-collection agencies of government, from representatives of the various behavioral and social sciences, from computer specialists, and from the public.

Further specification of the task of the proposed commission is given in Chapter 7. We summarize our position in a recommendation:

Recommendation: A national data system—The Committee recommends that a special commission be established to investigate in detail the procedural and technical problems involved in devising a national data system designed for social scientific purposes; that it recommend solutions for these problems and propose methods for managing a system that will make data maximally useful, while protecting the anonymity of individuals.

Protecting respondents' anonymity is very

important and may prove to be among the most difficult problems to be dealt with. We propose, therefore, that it be faced in advance of the report that the special commission on a national data system may issue, and that some method be found for continuing to monitor the data systems as new methods of data storage and retrieval are created. The benefits of having policy guided by accurate information about the welfare and quality of life of the citizen can be very great, but it would be a sad consequence if, in the process of obtaining this information, the availability of data about individuals became a limitation on their freedom. To this end we offer the following recommendation.

Recommendation: Protection of anonymity—The Committee recommends the establishment within an appropriate agency of the federal government, or as an interagency commission, of a high-level continuing body, including nongovernmental members, to investigate the problems of protecting the anonymity of respondents, to prescribe actions to resolve the problems, and to review the dangers that may arise as new techniques of data-matching are developed.

BEHAVIORAL AND SOCIAL SCIENCE RESEARCH IN UNIVERSITIES

In PhD-granting universities, research in the behavioral and social sciences is conducted in departments of colleges or arts and sciences, in professional schools, and in institutes and research centers that exist outside the departments. Research funds are almost equally divided among these three administrative units, although departments employ more behavioral scientists because they have teaching responsibilities as well as research assignments (see Figure SR-3).

FIGURE SR-3.—Distribution of behavioral and social science research funds and research personnel among departments, institutes, and professional schools, Ph. D.-granting universities, fiscal year 1967

[In percent]	
ALLOCATION OF ORGANIZED RESEARCH FUNDS, FISCAL YEAR 1966, \$225,556,000	
Departments	34
Institutes ¹	35
Professional schools	31
BEHAVIORAL AND SOCIAL SCIENTISTS ON UNIVERSITY STAFFS, N=18,498	
Departments	71
Institutes ²	10
Professional schools	19

¹ Multiple-discipline institutes account for 80% of the total institute research expenditures.

² Multiple-discipline institutes account for 75% of full-time research personnel within all institutes.

Source: Questionnaire survey.

Doctorate-granting departments are usually heavily committed to research, whereas professional schools are more variable in the extent to which they foster organized research in the behavioral and social sciences. Many schools of business, education, and medicine have fairly well established traditions of research relating to the behavioral and social sciences. Schools of law and schools of social work, however, give less attention to organized research in these sciences. Neither of these has anything like the behavioral and social science research expenditure per school that is found in schools of business, education, or medicine.

Law schools have not had sufficient access to research funds, their faculties have had little free time for research, and they have not developed a pattern of employing research technicians as schools of business, education, and medicine have. A growing number of law schools desire to change this state of affairs and to introduce more social science research; in Chapter 11 we offer a

recommendation for inducements to aid them in doing so.

University institutes devoted wholly or in part to behavioral science research have proliferated for a number of reasons, including administrative convenience, exploration of interdisciplinary work, and concentration on research on social problems. Approximately a fourth of the scientists working in institutes and a fifth of the research money are in institutes representing only one discipline. The rest of the personnel and funds are in interdisciplinary institutes. Approximately one fifth of all institutes are oriented toward research contributing to the solution of social problems, as in the many urban institutes that have recently been formed in universities.

Despite the variety of administrative arrangements discussed above, universities are still often handicapped when trying to do fully satisfactory research into social problems.

Disciplinary departments in universities, which grant most of the PhD degrees, are often better suited to basic research than to applied research. Their faculties sometimes cooperate with other departments and institutes on research, but such work usually lacks the continuity and staffing necessary for applied research. Furthermore, disciplinary values tend to favor research oriented toward problems of particular disciplines. Departments try to achieve a balance between specializations in the disciplines, which, while admirable in itself, presents problems in organization of large task forces to study significant social problems.

Institutes usually have limited full-time staffs and rely heavily on part-time workers from the disciplines. Consequently, they have little control over the education of most of their workers. The result is that much of their research leads back to disciplinary interests because that is where professional advancement lies. Moreover, the availability of research funds for institutes is unstable by nature, and the level and character of research fluctuates according to the money available.

Professional schools are concerned with particular kinds of applied research related to their professional foci; thus many general social problems tend to lie outside the sphere of any single school.

Professional schools also have the mixed blessing of a close relationship with client systems (such as hospitals, businesses, courts, or legislatures). This linkage is helpful in directing research to significant problems, but it also tends to limit the research to the interests of its clients. Further, research goals must compete with the primary task of training a body of professional workers. Often research suffers.

In view of these limitations, we believe a new university organization should be created for training and research on social problems. To clarify the essential elements of this organization, we have proposed a new school, which we call a Graduate School of Applied Behavioral Science.

Recommendation: A graduate school of applied behavioral science—The Committee recommends that universities consider the establishment of broadly based training and research programs in the form of a Graduate School of Applied Behavioral Science (or some local equivalent) under administrative arrangements that lie outside the established disciplines. Such training and research should be multi-disciplinary (going beyond the behavioral and social sciences as necessary), and the school should accept responsibility for contributing through its research both to a basic understanding of human relationships and behavior and to the solution of persistent social problems.

Such a recommendation should, of course,

be adapted to local situations. However, such a school should be of scientific stature commensurate with that of the best medical and engineering schools. It should have a core faculty with tenure, like any professional school, and it should not be organized along disciplinary lines. Disciplinary departments would, of course, continue outside the new school. If the school develops topical subdivisions (such as urban research centers, or centers studying the development of new nations), these subdivisions should be terminated when they are no longer pertinent.

The new school should have its own PhD program, and it should attempt to educate its students for inventive development relevant to social problems. In other words, the school should do empirical research on significant social problems and train professionals to carry on this kind of research.

Such a school will require considerable planning, and it will face many obstacles. Among these is the problem of developing professional identity for its graduates. Many of them will probably be employed in non-academic settings, and the university-professorship model of career aspirations will not serve. It may be necessary, therefore, to create a new professional society and new journals devoted to applied behavioral science in order to define a new professional identity.

The word "applied" in the title promises that the school will cover that end of the spectrum, but, of course, it must also be concerned with basic research. A high-level applied school will inevitably work on basic problems of data-collection and analysis, model-building, and simulation. Work on social indicators, even on a local scale, could improve the statistical basis of the indicators and investigate how to combine them or substitute one for another. Beyond such methodological problems, each Graduate School of Applied Behavioral Science should have some specialized areas of research, for the whole of applied behavioral science is too broad to tackle all at once. The problems of the cities, of poverty, of crime, of nation-building, of conservation, of regional governments, of individual growth and development, of early education—any one of a range of problems—could serve among the specialties in one school.

Instructive precedents in a number of universities exhibit many qualities of the proposed new type of school; Chapter 12 discusses these and the proposed school at greater length.

BEHAVIORAL AND SOCIAL SCIENCES OUTSIDE THE UNIVERSITY

Substantial numbers of social scientists work in nonacademic settings for federal, state, and local governments, for business and industry, and for nonprofit research organizations. Their functions, however, are not too different from those of their university colleagues.

The federal government estimates an 18.4 percent growth in federal social science employment from 1967 to 1971, and a similar growth is reported by state governments and nonprofit organizations. The percentage growth in federal social science employment is greater than the growth in overall federal employment and total federal scientific employment for the same period. Chapter 13 reports the limited data we have collected.

One indication of the amount of nonacademic research in the behavioral and social sciences is the amount of federal funds for nonacademic research performers, both to private research organizations and to the government. Roughly half of the federal funds go to nonuniversity research, and it is divided about equally between the government, on the one hand, and industrial firms and nonprofit institutions on the other (Table SR-1).

TABLE SR-1.—FEDERAL OBLIGATIONS FOR BASIC AND APPLIED RESEARCH IN BEHAVIORAL AND SOCIAL SCIENCES, FISCAL YEAR 1967, BY PERFORMER

(Dollar amounts in millions)

	Federal obligations for basic and applied research		Behavioral and social sciences as percent of total obligations
	All fields of science	Behavioral and social sciences	
Intramural (within Government departments and agencies).....	\$1,574	1,577	9
Extramural, nonuniversity:			
Industrial firms.....	1,437		
Nonprofit institutions..	269	177	3
Others.....	646		
Total, nonuniversity..	3,925	154	4
Universities.....	1,348	2143	11
Grand total.....	5,273	297	6

¹ Estimated from residual funds after removing amounts to universities.

² Estimated from the Survey.

Source: Federal Funds for Research, Development, and Other Scientific Activities: Fiscal Years 1967, 1968, 1969, NSF 68-27 (Washington, D.C.: National Science Foundation, 1968), vol. 17, pp. 124, 130.

THE FINANCING OF RESEARCH

In 1966-1967, some 3.4 percent of the nation's total research and development expenditure was spent on the behavioral and social sciences—about \$803 million. This was more than double the amount spent for social science research and development in 1961-1962 (Table SR-2).

TABLE SR-2.—SUPPORT OF RESEARCH AND DEVELOPMENT IN THE BEHAVIORAL AND SOCIAL SCIENCES, 1962, 1967 BY SOURCE

(Dollar amounts in millions)

Source of funds	1961-62	1966-67
Federal Government:		
Basic research.....	\$46	\$132
Applied research.....	74	159
Development.....	68	97
Subtotal.....	188	388
State governments.....	5	15
Industry.....	130	289
Colleges and universities.....	24	48
Foundations.....	23	24
Nonprofit institutions.....	14	39
Total, behavioral and social sciences.....	384	803
Total, all fields of science.....	15,604	23,686
Behavioral and social sciences as percent of total science.....	2.5	3.4

Source: Table 1-2 and table A-8, appendix.

Between 1959 and 1968, federal support of behavioral and social science research increased at an average rate of approximately 20 percent a year. Since today's social problems are so urgent, it is important to maintain growth at least close to this level. We distinguish between normal projected growth (no increase in the scale of research operations) and projected new programs (the addition of new large-scale research). In Chapter 14 we discuss the matter more fully and offer the following recommendation concerning normal research support.

Recommendation: Rate of Federal funding for normal research support—The Committee recommends an annual increase in funds available from the federal government for support of basic and applied research in the behavioral and social sciences of between 12 and 18 percent to sustain the normal growth of the research enterprise over the next decade.

To sustain normal growth in the behavioral and social sciences, the indicated increase in research funds will be needed, and a corresponding increase will also be needed for instructional funds, student aid, space, and equipment. Our recommendation also applies to funding for behavioral and social science research outside the universities.

The costs of projected new programs are not included in the normal-growth projections, for they are of a different character from the steady and gradual increase required by the increases in the number of social scientists and the growing sophistication of research techniques. However, the new programs require abrupt increases in funding, with each program having minimum start-up costs. The operating costs of the various new programs, when they are in full swing, are likely to total an additional \$100 million annually, as explained in Chapter 14.

The agencies supporting the behavioral and social sciences are chiefly the Department of Health, Education, and Welfare (primarily through the Office of Education, the National Institutes of Health, and the National Institute of Mental Health), the Department of Defense, the Department of Agriculture, and the National Science Foundation. We welcome their continued support and believe that other agencies should expand their use of behavioral and social science research, through both intramural and extramural support. In short, we endorse the principle of pluralistic support for the social sciences.

Proposals to establish a national social science foundation pose some problems concerning the role of the National Science Foundation. The implication that social science is important enough to warrant a special foundation is gratifying, but the issues are complex, and the members of the Committee are somewhat divided in their views. Because the charter of the National Science Foundation has recently been enlarged to permit support of applied research, and explicitly to support the social sciences, we favor giving it the opportunity to exercise its new functions. However, we also suggest that, if the National Science Foundation is unable to exercise its new obligations in social sciences, then a new foundation may be needed. Recommendations bearing on the National Science Foundation appear in Chapter 14.

Private foundations have been a significant source of support to the behavioral and social sciences through the years, frequently playing innovative roles and contributing in a variety of ways to the development of these sciences. The role of the foundations is discussed in Chapter 15.

WORLDWIDE DEVELOPMENT OF THE SOCIAL SCIENCES

Worldwide interest in the social sciences is growing, partly in response to the processes of development and modernization in new nations. Social scientists in other countries seek to strengthen their professional capabilities, and there is considerable American interest in study and research overseas.

Collaboration across national boundaries is especially important in the social sciences. Generalizations based on work in only one country may be too parochial and circumscribed, and some kinds of situations important to an understanding of human behavior cannot be studied satisfactorily in any one nation. In Chapter 16 we offer some suggestions about the relationships among social scientists on an international basis, and we discuss the strengthening of organizations devoted to furthering international social science.

OUTLOOK FOR THE BEHAVIORAL AND SOCIAL SCIENCES

As the sciences advance and research at their growing edges becomes more demanding of special knowledge and skills, the ten-

dency toward specialization increases. This trend is important for the advancement of the frontiers of science, but it also runs counter to the demand for science to deal with problems of great complexity in an integrated way. While we recognize the legitimacy of specialization within disciplines, we recommend more attention to large-scale research concerning our rising social problems.

Our society cannot delay dealing with its major social problems. We cannot consume our resources and pollute our environment and then hope to replenish and restore them. We cannot permit international relations to deteriorate to the point of resorting to nuclear weapons. Social unrest, a result of rising expectations and frustrated hopes, will eventually reach a point of no return.

The social sciences will provide no easy solutions in the near future, but they are our best hope, in the long run, for understanding our problems in depth and for providing new means of lessening tensions and improving our common life.

[From the Washington Post, Oct. 27, 1969]
ANNUAL REPORTS URGED ON "SOCIAL CRISIS"
IN UNITED STATES
(By Stuart Auerbach)

A high-powered group of social scientists is calling for an "annual social report" to the President that would explain the behavior of Americans.

This report would offer solutions to major social problems and predict future crisis in much the same way that the President's Council of Economic Advisers analyzes economic problems in its annual report.

The report would be established immediately by private social scientists under foundation and federal grants. But by 1976 it would be issued by a newly created President's Council of Social Advisers.

The recommendations are contained in a 320-page, 2½-year study to be released today.

The study, sponsored by the National Academy of Sciences and the Social Science Research Council, recommends appropriations of at least an additional \$100 million a year for new social science projects and the establishment of a national data bank to provide the information they need.

"The social sciences will provide no easy solutions in the near future," the study concludes. "But they are our best hope, in the long run, for understanding our problems in depth and for providing new means of lessening tensions and improving our common life."

The study also reflects the twin desires of American social scientists: to help solve the nation's social problems and to boost themselves to the status that the physical biological and engineering scientists achieved in the post-Sputnik era.

Social and behavioral scientists work in the fields of anthropology, economics, geography, history, linguistics, political science, psychiatry, psychology and sociology as well as some aspects of statistics and mathematics.

"We are living in a social crisis," begins the study.

The report concludes that a full range of national crises—from urban riots and student rebellions to pollution and overpopulation—have roots in "perplexing problems of human behavior and relationships."

And, the study says, the advance of science and technology continually creates new problems—such as organ transplantation, genetic control of heredity and the use of mind-bending drugs—that social scientists can help solve.

The study acknowledges that shortcomings among social scientists now prevent them from contributing their full potential to the nation.

One flaw the study cites is the frequent inability of social research to cut across the narrow boundaries of the different fields. To correct this, the study recommends the establishment of a new kind of graduate school specializing in applied behavioral research.

Another is the lack of hard data on which social scientists can base their analysis. The study recommends "a major effort to develop improved social indicators: measures that reflect the quality of life."

This would cost about \$1.5 million, the study estimates, and should be done by the federal government.

These indicators would be reported and explained in the annual social report. Because of the problems in developing these indicators, the study says the report should be privately produced until it is solid enough "to signal meaningful changes in the quality of life."

The next step would be the formation of the Council of Social Advisers to draw up the report for the President.

The study also calls for a National Data System, with safeguards for privacy, to collect information needed by the social scientists.

To provide this new dimension for government policy-makers, the study recommends a continued increase in the funds appropriated for social science research.

In 1967, the study says, public and private sources spent \$803 million on social science research projects—double the amount spent five years earlier.

The federal share has increased about 20 per cent a year, and the study recommends that future increases should drop to about 12 to 18 per cent a year "to sustain normal growth."

Federal funding for social science research amounted to \$297 million in 1967.

The new projects recommended in the report—amounting to about \$100 million a year—would be added to the research funding.

The study was drafted by a 21-member committee, with representatives from all the social sciences, headed by Ernest R. Hilgard of Stanford University and Henry W. Riecken of Washington.

It is one of a series of studies prepared by the National Academy of Sciences surveying the status, needs and opportunities of the various sciences. The full study will be published as a book by Prentice-Hall Inc.

CONCLUSION OF MORNING BUSINESS

Mr. MANSFIELD. Mr. President, is there further morning business?

The ACTING PRESIDENT pro tempore. Is there further morning business? If not, morning business is concluded.

UNIFORM RELOCATION ASSISTANCE AND LAND ACQUISITION POLICIES ACT OF 1969

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the unfinished business be laid before the Senate.

The ACTING PRESIDENT pro tempore. The bill will be stated by title.

The BILL CLERK. A bill (S. 1) to provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by Federal and federally assisted programs and to establish uniform and equitable land acquisition policies for Federal and federally assisted programs.

The Senate resumed consideration of the bill.