

SOCIAL INDICATORS: A REVIEW OF RESEARCH
AND POLICY ISSUES (INCLUDING ANNOTATED
BIBLIOGRAPHY)

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I. INTRODUCTION

Proposals for the development of social indicators and a social accounting system began to be heard during the 1960's following publication of Social Indicators, edited by Professor Raymond Bauer of Harvard University. This study was the first to result from activities co-supported by the American Academy of Arts and Sciences and the National Aeronautics and Space Administration to evaluate the impacts of the space program on society. Bauer and his co-authors said, in substance, that the effects of space technology on society, and indeed the achievements and deficiencies of other social and technical programs, could not be ascertained without better and more refined social data or "social indicators." The complex problem of defining social indicators will be discussed in the second chapter of this study. They are, in essence, data series on the condition of society; they are intended to describe and measure social changes in relation to public programs, government decisions, and national goals. Such a set of social measurements would, if achieved and maintained, provide the President and the Congress with "hard" quantitative information on the effectiveness of administration of social programs to improve the "state of the Nation."

Bauer's seminal work, and the subsequent recognition by social scientists and policy-makers of serious inadequacies in currently collected social data series and techniques of social measurement, generated a significant amount of research and a growing body of scholarly literature in this field.

The U.S. Senate has also indicated interest in social indicators. During 1967, Senator Fred R. Harris introduced a proposal to create a Council of Social Advisors in the Executive Office of the President. Using social indicators, the proposed Council would provide information to the President enabling him to prepare an annual social report on the "quality of life" of the Nation.

The Senate passed this bill, in slightly modified form, in both the 91st and 92nd Congresses, under the principal sponsorship of Senator Walter F. Mondale.

Executive branch interest in social accounting and social indicators takes several forms. Funds for the support of basic and applied research in social indicators are awarded by both the National Science Foundation, the Nation's major scientific research support agency, and by other Departments and agencies which administer Federal social programs. The NSF estimates that it will award grants totalling almost \$5 million in the fiscal year 1973 for social indicators research under both the social science program and the program of Research Applied to National Needs.

Both President Lyndon B. Johnson and President Richard M. Nixon have expressed interest in furthering the development and nationwide use of social indicators. The Nation's first official social audit, Toward a Social Report, prepared by the Department of Health, Education and Welfare, was released shortly before President Johnson left office. President Nixon has requested the Office of Statistical Policy in the Office of Management and Budget to prepare a dictionary of social indicators. This report, to be released early in 1973, will recommend to Federal agencies which social indicators they should collect and use to describe and analyze program achievements and deficiencies.

This paper summarizes, for Members of Congress and their staffs a number of issues relating to research, funding, and requirements for the future use of social indicators in public-policy making. It explains the concept of social indicators, cites reasons for developing these new forms of data, and reviews problems social scientists and policy-makers encounter in developing indicators. Mention is made of possible impacts of indicators in hastening the development of social sciences as sciences. Issues have been raised regarding the possible secondary advantages and disadvantages of indicators. Several of these are noted, such as immediate and long-range utility in program planning and program evaluation, invasion of privacy, and determination of a consensus on national goals. Reference is given

throughout to notable social indicators activities and developments in particular substantive areas, such as education, health, and technology.

The availability of valid, reliable, and policy-relevant social indicators is unlikely without long years of in-depth research largely supported with Federal funds. Important questions have been raised about priorities for research and development of social indicators. These issues are reviewed. Consideration is given also to appropriate roles for both R and D support agencies and mission-oriented agencies which fund and conduct in-house research on social indicators.

The appendix consists of a capsule legislative history of the proposal to create a Council of Social Advisors; an annotated bibliography, arranged by subject, of literature and research reports on social indicators; and a list of NSF sponsored research in social indicators for the fiscal years 1971 and 1972.

II. WHAT IS A SOCIAL INDICATOR?

Social indicators are still in an exploratory and experimental phase of development. In fact, researchers working in this field are not in complete agreement on the precise meaning of the term "social indicator." Eleanor B. Sheldon and Howard E. Freeman, formerly with the Russell Sage Foundation, a prime support agency for research on the topic, once said:

The term social indicator must be regarded as an elusive concept. Moreover, the boundaries of the indicator movement are amebic, and partisans to the cause come and go, often deserters to it quietly returning only to slip away again. But the existence of the movement is real...." 1/

Social indicators are intended to overcome the inadequacies of currently collected social and economic statistics and to provide for measurement of qualitative or "soft" social factors. Current research in social indicators is designed to develop indicators which would reflect the following properties:

(1) social indicators would give a more realistic representation, than do current data series, of the phenomena or causes and effects which they purport to represent. For instance it has been said that the expansion of food programs for the needy does not adequately indicate whether hunger and malnutrition are being eradicated. Alternative data would describe the effects of such programs on such factors as improvements in health among populations served by food distribution and funding programs. 2/

1/ Eleanor Bernert Sheldon and Howard E. Freeman. "Notes on Social Indicators," (unpublished manuscript, Russell Sage Foundation [1969]), p. 3.

2/ According to Dr. R. Mendelsohn, director of community pediatrics, University of Illinois College of Medicine, there are several widely used, but misleading, indicators of whether hunger and malnutrition are being conquered. These include: expansion of plans for food stamp distribution programs; increased appropriations for school lunch programs, and increased funding of anti-poverty programs. As an alternative Dr. Mendelsohn contends that we should collect and measure the possible short and long-term effects of such programs. These new data series would include information on: decrease in infant mortality rates between families who are supported by these programs and those that are not; differences in height between poverty program children and those

(2) social indicators would differ from currently collected social statistics because they would measure disaggregated and often subjective factors, such as the amount of happiness or health in different racial or ethnic groupings scattered throughout the country;

(3) social indicators would be normative and indicate changes in the quality of life. The fact that attention is given to the collection of data about the purity or impurity of the air, city by city, or region by region, can be interpreted as an indication that the society collecting this information recognizes purity of air as a social goal.

(4) social indicators would be comparable, longitudinal and additive. For instance the value of job satisfaction to a particular individual would be measured or weighed against the satisfaction or pleasure he derives from having ready access to recreational facilities. Time series data, or data collected over a number of years, would indicate whether one or another type of satisfaction is more important at some particular time such as in youth, middle age, or old age.

Numerous recent conferences have addressed these topics, such as the "Conference on Social Indicators," held by the Organisation for Economic Cooperation and Development in 1970; 3/ the 1971 NSF-sponsored "Conference on Social Indicators;" 4/ the 1972 annual meeting of the Division of Behavioral Sciences, National

not on poverty programs; incidence of serious infections between those on and off poverty programs; and prevalence of mental retardation between those on and off poverty programs. (Testimony of Dr. Mendelsohn, Select Committee on Nutrition and Human Needs. In "Malnutrition and its effects," Statement of the Hon. Charles Percy on the Floor of the Senate. Congressional Record, (April 30, 1970), p. S 6414.

3/ Organisation for Economic Cooperation and Development. Manpower and Social Affairs Directorate. Social Indicators Development Programme, (Paris; April 21, 1971).

4/ Report on the Social Indicators Conference, held at George Washington University, November 5-6, 1971, sponsored by the National Science Foundation, Conference Chairman, Dr. Elliott R. Morss, (Non-published), 85 pages, plus appendices.

Academy of Sciences; 5/ and the September 1972 "Conference on the Quality of Life," sponsored by the Environmental Protection Agency. 6/ Much of the current social indicators research and development, both in and out of the government, is directed to refining the concept and exploring its development and utility.

A. Social Indicators are Designed to Overcome Inadequacies of Currently Collected Federal Statistics

The compelling impetus behind the social indicators movement was realization by social scientists and some legislators and executive branch administrators that currently collected Federal statistics do not adequately reflect the monumental changes taking place in American society. Furthermore they said that data now in use are invalid guideposts on which to design and evaluate progress of major Federal social programs.

Criticisms of currently collected Federal statistical series center on the inadequacies of both social and economic data.

1. Inadequacies of Currently Collected Social Data Series

Dr. Raymond Bauer's description of the deficiencies of currently collected social data represents a consensus of those holding this view. According to Bauer: "...Many of the measures we are accustomed to using are in varying degrees only approximations of what we are interested in.... The inadequacies are selectively biased against the noneconomic aspects of life... science, technology, and various

5/ Annual Meeting of the Division of Behavioral Sciences, May 19-20, 1972. Among the social indicators papers given at the meeting are: Brian J.L. Berry, "Social Accounting Systems: Problems in Conceptualization and Realization;" C.W. Parsons, "Social Change and Social Measurement: As Treated in the BASS Survey;" L.H. Hicks and S. Ross, "National Facilities and Services for Research in the Behavioral and Social Sciences and the Generation and Use of Social Data: As Treated in the BASS Survey;" N.M. Bradburn, "The Generation and Utilization of Social Data."

6/ U.S. Environmental Protection Agency. An Anthology of Selected Readings for the Symposium on "The Quality of Life Concept: A potential new tool for decision-makers." August 29, 30, 31, 1972. Warrenton, Virginia.

concepts of the quality of our personal lives." 7/ Wilbur J. Cohen, Under-Secretary of Health, Education, and Welfare, has given an example of this problem in describing the inappropriateness of federally collected educational statistics:

When we survey the voluminous, yet unsuitable, data now available for assessing the products of our education, we must conclude that practically none of it measures the output of our educational system in terms that really matter (that is, in terms of what students have learned). Amazement at this revelation of the tremendous lack of suitable indicators is almost overshadowed by the incredible fact that the Nation has, year after year, been spending billions of state and local dollars on an enterprise without knowing how effective the expenditures are.... 8/

As another example Bauer reports deficiencies in the types of data collected by the National Center for Health Statistics:

Until the mid-1950's, our primary concern was with our ability to keep people alive at various ages; mortality was the relevant criterion of health. Since then, considerable attention has been devoted to morbidity or departures from health of a nonfatal sort. But unhealth is not as clearcut a proposition as death.

...If we are concerned directly with [an individual's] ability to contribute to the society (or conversely with the effect of sickness in general... on economic production or on the conduct of the day-to-day business of the society), then a measure of the extent to which people are able to perform their roles [as for instance, workers, housewife, students, mother, father] is the most relevant criterion of health we can have. 9/

Another of the major problems of currently collected social data stems from the fact that most of these data series are the by-products of typical administrative activities of the particular agency. "Categories, area boundaries, and unit measures of such data may fit sensibly the laws, regulations, or administrative practices of some organizations..." but provide little direct measurement of social phenomena. 10/

7/ Raymond A. Bauer, with R.S. Rosenbloom and Laure Sharp. Second-Order Consequences: A Methodological Essay on the Impact of Technology, (Cambridge, The M.I.T. Press, 1969), p. 53.

8/ Wilbur J. Cohen. "Education and Learning." The Annals of the American Academy of Political and Social Science, (May, 1967), pp. 79-101.

9/ Second-Order Consequences, op. cit., pp. 52-3.

10/ Albert D. Biderman. "Social Indicators and Goals." In Social Indicators, ed. Raymond A. Bauer. (Cambridge, The M.I.T. Press, 1966), p. 81.

On this point Cohen has said:

Unfortunately most government statistics...tell us more about the operation of government than the condition of society. For example, we know how many people receive public assistance, and how much they receive, but very little about those who somehow manage to do without. We know how many doctors there are, but not how much illness they cure. 11/

As another illustration of this problem: in support of the NASA project to evaluate the impact of the space program on society, Albert D. Biderman compared the statements of 81 national goals formulated in 1960 by the President's Commission on National Goals with two main sources of trend statistics: The Statistical Abstracts of the United States, 1962, and Historical Statistics of the United States: Colonial Times to 1957. Biderman discovered that there were data or indicators for only 59 percent of the goal statements outlined in the report. Summarizing his findings Biderman further reports:

Certain goal areas are rather well covered. Of five educational goals mentioned...all five are covered. Nine goals pertaining to economic growth are all represented in the existing statistics series, as are ten health goals and four out of five goals in the area of agriculture.

...Arts and sciences and technology are poorly represented. A total of 13 goals are suggested in these two categories, and only three are to be found in the trend data offered. Also poorly represented are goals pertaining to the democratic process, the democratic aspects of the economy, the status of the individual, and living conditions. 12/

2. Inadequacies of Currently Collected Economic Data Series

Most supporters of the social indicators movement assert that currently collected economic and fiscal statistics, against which the achievements of many large scale social programs are compared, are inadequate barometers of social conditions and needs. Several reasons are given to support this contention.

11/ Wilbur J. Cohen. "Social Indicators: Statistics for Public Policy." Presented at the Annual Meeting of the American Statistical Association, Pittsburgh, 20 August 1968. The American Statistician, October 1968, p. 14.

12/ Second-order Consequences, op. cit., p. 48; the author is citing a study reported by Biderman in Social Indicators, op. cit.

The first is that national income statistics are subject to a large amount of error. Bertram Gross, citing a critique by the economist Oskar Morgenstern, notes three principal sources of error in national income statistics: "(1) inadequate basic data, (2) the fitting of the data to the concepts, and (3) the use of interpolation and imputation to fill the gaps." Gross continues that problems posed by these propensities for error are greatly magnified as economists begin to measure "qualitative variables." 13/

A second deficiency of national income statistics is that they omit measurement of many important subtleties and nuances of change in society. "...The national income statistics," according to Dr. Mancur Olson, principal author of the first social report prepared by the Department of Health, Education and Welfare, "don't tell us what we need to know about the condition of American society." Such data, Dr. Olson continues,

***leave out most of the things that make life worth living. They leave out the learning of our children, the quality of our culture, the advance of science, the compatibility of our families, the liberties and democratic processes we cherish. They neglect the pollution of the environment, the depadations of crime, and the toll of illness. 14/

National economic and census statistics have been further criticized for being too aggregated for policy-making purposes. 15/ On this point the National Commission on Technology, Automation and Economic Progress reports:

13/ Raymond A. Bauer. "Detection and Anticipation of Impact: The Nature of the Task." In Social Indicators, op. cit., summarizing Chapter 3 of this study: Bertram M. Gross, "The State of the Nation: Social Systems Accounting," pp. 36-7. Morgenstern's critique is included in: Accuracy of Economic Observations (Princeton, Princeton University Press 1963), pp. 242-282.

14/ Mancur Olson, Jr. "Toward a Social Report: Its Plan and Purpose." (Mimeo, [1969]), pp. 2-3.

15/ "Too aggregated" means encompassing large categories, such as by sex or geographic area, or State, etc. More disaggregated data would differentiate the data collected into smaller categories, such as by age, occupation, or level of income within, for instance, the general category of sex.

... Aggregated as they are [these data] tell us little about pockets of poverty, depressed communities, sick industries, or disadvantaged social groups. National data, averaged out, provide few clues or little information relevant to regional or local problems. 16/

The inability of national economic data to provide policy-makers with information about the social benefits and costs of new programs has also been criticized.

For instance:

Technological advances create new investment opportunities which are expected to be paid for out of the enhanced earnings they produce. But clearly there are losses as well: e.g., the displacement [to the worker] caused by technological change.... Or, a new plant in an area may create new employment opportunities, yet its byproducts---water pollution and air pollution---may create additional costs for the community. Thus, there is often a divergence between the private cost borne by an entrepreneur and the social cost of production. 17/

Further, according to some critics economic data do not effectively assist policy-makers in designing programs which root out the causes of major social problems. "Every society pays a huge price for crime, juvenile delinquency, and disruption of the family," reports the National Commission on Technology and American Economy. "But, there are no simple causes of such social ills as unemployment."

The Commission concluded: "Although data on crime, health, dependent children and the like are collected by Federal agencies, there is rarely any effort to link these problems to underlying conditions, nor is there a full measure of the cost of these ills. Systematic analysis of such data might suggest possible courses of remedial action." 18/

16/ National Commission on Technology, Automation, and Economic Progress. Technology and the American Economy. Vol. 1, February 1966, Report of the National Commission on Technology, Automation and Economic Progress. (Washington, U.S. Government Printing Office, 1966), p. 96.

17/ Ibid., p. 97.

18/ Ibid., pp. 97-8.

III. PROPOSED FUNCTIONS OF SOCIAL INDICATORS, IN DETAIL

Social indicators are generally intended to serve two functional purposes. The first is to provide social scientists with better social data to further advance the state-of-the-art of the social sciences. The second intended use is to provide policy-makers and social advisors with information to improve decision-making.

A. Advancement of the Social Sciences

A summary of broad changes since 1960 in the relative emphasis on major fields of science within the federally supported research budget indicates that the social science budget, excluding psychology, has increased two and one-half times, and is the fastest growing field of support of all fields of scientific research. Nevertheless, criticisms continue to be heard, within both the social science community, and government, about the difficulties social scientists encounter in providing policy-makers with answers to fundamental questions about the causes and effects of social problems. Summarizing some of the difficulties of the social sciences, Harold Orlans of the Brookings Institution has written:

Too much of the research is either not clearly relevant to national and/or government needs or of such a nature that even if the subject is relevant, the findings are unlikely to make any difference to anyone but the investigator. This is because the work is small scale, fragmented, inconsequential, non-additive, and therefore unutilized, or even unutilizable, to advance either basic knowledge or practical action. ...Research is often not undertaken on important but politically sensitive matters and, ...if it is, the findings may not be fully published. Independent research evaluating the effectiveness of government...programs...is particularly lacking. The findings of good... research...are inadequately utilized...^{19/}

Recently several advisory groups have undertaken to evaluate research needs and priorities to hasten the development of the social sciences. Many of these reports recommend development of social indicators to overcome serious deficiencies

^{19/} Harold Orlans. "Making Social Research More Useful to Government." Social Science Information, (Vol. 7, No. 6, December 1968), p. 152. Orlans' article consists of the conclusions he derived from a study he conducted for the Research and Technical Programs Subcommittee, House Committee on Government Operations: The Use of Social Research in Federal Domestic Programs.

in the social sciences: inappropriate data, inadequate understanding of cause and effect relationships, and imprecision in explaining large scale changes in society. Typical of these reports is that the Committee on Behavioral and Social Sciences, National Academy of Sciences, which observed:

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. ...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 socio-economic groups.

...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 the 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. 20/

...The difficulties of the task are such that it will take years to refine the indicators and to realize the full range of their usefulness. Conceptual development is as important as the need for new and better data.

...The need for fundamental research on techniques of measurement is essential if we are to develop indicators that relate in a valid way to important states of society and conditions of individuals and that, at the same time, are sensitive to change over relatively short time spans. 21/

20/ The Behavioral and Social Sciences: Outlook and Needs. A Report by the Behavioral and Social Sciences Survey Committee under the auspices of the Committee on Science and Public Policy, National Academy of Sciences and the Committee on Problems and Policy, Social Science Research Council. (Englewood, Cliffs, Prentice-Hall, 1969), pp. 5-6.

21/ Ibid., pp. 104-5. See also: "Behavioral Scientists Urge Establishment of Council of Social Advisers." Remarks of the Hon. Walter F. Mondale on the floor of the Senate, Congressional Record, (August 4, 1971), pp. S13107-13; "Summary of Conclusions and Recommendations from the Symposium on Applying Knowledge from the Behavioral Sciences to Social Legislation Programs," Conducted by the Brookings Institution, at the request of the U.S. Office of Education, Department of Health, Education, and Welfare, October 28-31, 1970, 12 pages, (this report recommends development of a system of social indicators and creation of a Council of Social Advisers.); Knowledge into Action: Improving the Nation's Use of the Social Sciences. Report of the Special Commission on the Social Sciences of the National Science Board, (Washington, U.S. National Science Foundation, 1969), (which recommends specific priorities for social indicators research to both improve the field and also the contribution of social scientists to governmental policy making).

B. The Potential Contribution of Social Indicators to Decision-making

The second functional purpose of social indicators is to provide program administrators and policy makers with more accurate and valid social data which they can draw upon to evaluate social programs and to prepare annual balance sheets describing the social state of the nation.

1. History of Proposals Legislative recognition of this need is reflected in "The Full Opportunity and Social Accounting Act," which was approved in the Senate in both the 91st and 92nd Congresses, and reintroduced in the 93rd Congress.^{22/} The proposal provides for creation of a Council of Social Advisors in the executive office of the President. The Council "would be responsible," according to Senator Walter F. Mondale, the bill's principal sponsor, "for monitoring, on an on-going basis, specific actual conditions in the country which affect the 'social opportunity' of our people." "Developing a system of social indicators," the Senator continues, "would be a principal task of the Council." Utilizing data generated by the Council of Social Advisors, the President would be required to report annually "on the nation's social status." The following areas would receive priority: "education, health, alienation, political participation, personal security, and social mobility." ^{23/} Such a system is necessary, Senator Mondale says, to give "societal knowledge visibility of the sort that only presidential involvement can generate, "and to provide Congress and the President with better data on which to make more informed decisions. "Put succinctly," the Senator continues:

hunch, intuition, and good intentions have been the heavy artillery of social problems-solvers to a far greater extent than anyone has recognized. ...So critical is the range of social problems confronting our country

^{22/} S.5., "The Full Opportunity and National Goals and Priorities Act," statement on the floor of the Senate by Sen. Walter F. Mondale, Congressional Record (January 4, 1973), pp. S52-56.

^{23/} Walter F. Mondale. "Social Advisors, Social Accounting and the Presidency." Law and Contemporary Problems (Duke University School of Law, Summer 1970), p. 497.

that we can no longer afford the idle luxury of what John Gardner has so eloquently and tellingly termed 'stumbling into the future.' 24/

In his message to the Congress on Domestic Health and Education, March 1, 1966, President Lyndon B. Johnson underscored the need to develop social indicators for improved policy making:

To improve our ability to chart our progress, I have asked the Secretary [of Health, Education, and Welfare] to establish within his office the resources to develop the necessary social statistics and indicators to supplement those prepared by the Bureau of Labor Statistics and the Council of Economic Advisors. With these yardsticks, we can better measure the distance we have come and plan for the way ahead.25/

To implement this directive, a Panel on Social Indicators was formed within the Department of HEW, coordinated by William Gorham, Assistant Secretary for Program Coordination, and directed by Dr. Mancur Olson, Jr., an economist, who became Deputy Assistant Secretary of Health, Education, and Welfare for Social Indicators. The group reported to the President in January 1969, Toward a Social Report. 26/ Reflecting the formidable obstacles to the development of social indicators, the group presented only a preliminary evaluation of research and data needs to provide for indicators on health and illness; social mobility; physical environment; income and poverty; public order and safety; learning, science, and art; and participation and alienation.

President Richard M. Nixon has also recognized the need to develop refined social data to improve policy making. On July 13, 1969, the President announced the formation of the National Goals Research Staff to collect, correlate, and

24/ Ibid., pp. 499, 502.

25/ President Lyndon B. Johnson. "Message to the Congress on Domestic Health and Education," (March 1, 1966).

26/ U.S. Department of Health, Education, and Welfare. Panel on Social Indicators. Toward a Social Report. (Washington, U.S. G.P.O., 1969), 110 pages.

process data relating to social needs and the projection of social trends. One of the specific functions of the Staff was to "develop and monitor social indicators that can reflect the present and future quality of American life, and the direction and rate of change." 27/ This group, too, found difficulty in developing appropriate social indicators, and in its report, Toward Balanced Growth: Quantity with Quality, isolated serious data inadequacies in the areas of education, the environment, population growth, science and technology, growth of the economy, and consumerism.

The Administration's most recent effort in support of developing social indicators for policy and program purposes takes the form of preparation by the Office of Management and Budget of a proposed dictionary of social indicators. This volume, which will be released early in 1973, will recommend to Federal agencies, fruitful social indicators they could use in generating data about the quality of programs administered.

Other groups outside the government have also recommended development of social indicators and a social accounting system to provide better data to understand and solve particular social problems. Such recommendations have been made, for instance, by the National Commission on Technology, Automation and Economic Progress; 28/ the Committee on Social and Behavioral and Urban Research, National Research Council, in a report prepared for the Department of Housing and Urban Development; 29/ the National Commission on the Causes and Prevention of Violence; 30/

27/ Toward Balanced Growth: Quantity with Quality. Report of the National Goals Research Staff. (Washington, The White House, July 4, 1970), pp. 219-221.

28/ Technology and the American Economy, op. cit., pp. 95-7.

29/ A Strategic Approach to Urban Research and Development: Social and Behavioral Science Considerations. Report of the Committee on Social and Behavioral Urban Research, Division of Behavioral Sciences, National Research Council to the Department of Housing and Urban Development, (Published by the National Academy of Sciences, Washington, D.C., 1969), passim.

30/ To Establish Justice, To Insure Domestic Tranquility. Final Report of the National Commission on the Causes and Prevention of Violence, (Washington, U.S. G.P.O., 1969), pp. 30-31.

the Research and Policy Committee of the Committee for Economic Development; 31/ the Advisory Council on Public Welfare 32/, and the American Society of Civil Engineers. 33/

2. Methodological Requirements Social indicators research is now extensively supported and conducted by the Federal Government, foundations, State and local governments, and some sectors of industry. Most of the published reports on this work illustrate that although progress is being made in developing indicators which can be used in policy-making, the problems surrounding such development are formidable.

Eleanor B. Sheldon, President of the Social Science Research Council, an advisory group to the disciplines of political science, economics, history, psychology and sociology, and Dr. Kenneth B. Land, her former colleague at the the Russell Sage Foundation, recently published a short review of state-of-the-art developments in social indicators research. According to Drs. Sheldon and Land, social scientists are now concentrating upon developing three types of social indicators:

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- 31/ Improving Federal Program Performance. A Statement on National Policy by the Research and Policy Committee of the Committee for Economic Development, (September 1971), pp. 30-31.
- 32/ Having the Power, We Have the Duty. By the Advisory Council on Public Welfare. Report to the Secretary of Health, Education, and Welfare, (Washington, U.S. G.P.O., 1966, Chapter 9.
- 33/ Technology and Decisions in Airport Access. Prepared by R.F. Baker and R.M. Wilmottee for the Urban Transportation Research Council (New York, American Society of Civil Engineers), 1970, 152 pages.

"(1) problem-oriented or direct policy indicators which are intended for direct use in policy and programs decisions;

(2) descriptive indicators intended primarily to describe the state of society and the changes taking place within it; and

(3) analytic indicators that serve as components of explicitly conceptual and causal models of the social systems or some particular segment thereof."^{34/}

Each of these types of indicators has a different potential application but all of them would be policy-oriented. All would reflect characteristics of social indicators: they would be time-series data; ^{35/} they would be disaggregated; ^{36/} and they would reflect both "(1) 'objective' conditions of society and persons and (2) 'subjective' perceptions of life experiences."^{37/}

^{34/} Eleanor Bernert Sheldon and Kenneth C. Land. "Social Reporting for the 1970's: A Review and Programmatic Statement." Policy Sciences, (3, 1972), p. 139.

^{35/} "which would allow comparisons over an extended period and would permit one to grasp both long-term trends as well as unusually sharp fluctuations in rates." ("Notes on Social Indicators: Promises and Potential," op. cit., p. 1.)

^{36/} "...By relevant attributes of either the persons or conditions measured (such as skin color or year of construction), and by the contextual characteristics that surround the measure (such as region or city size.)" ("Notes on Social Indicators: Promises and Potential," op. cit., p. 1.)

^{37/} "Social Reporting for the 1970s," op. cit. Drs. Sheldon and Land define objective and subjective in the following terms: "Objective: here the reference is to (a) conditions of the environment and includes concern with pollution, housing, recreational resources, etc., and (b) some attribute of persons such as health, educational achievement, family stability and the like. Subjective: here the reference is to aspects of personal experience such as frustrations, satisfactions, aspirations, and perceptions." (Idem.)

The authors list also special criteria which social indicators should meet if they are to be policy-relevant. Among these are the following: 38/

- there must be agreement that the measure or the indicator reflects the problems of concern;

- the data collected must appropriately reflect the underlying cause and effect explanation or model of the social process and or condition which it purports to represent;

- such indicators should be based on a "set of social goals or objectives that define the preferred states in areas identified for the indicators;" and

- the indicators must incorporate prescriptions for remedies, approaches, programs or technologies to effect the desired change.

3. Inadequacies in the State-of-the-Art of Social Indicators According to Drs. Sheldon and Land, "Progress in these areas has been proceeding unevenly."39/ These researchers and others have fully documented many of the present obstacles to developing and applying social indicators. Among the most important are the following.

According to most students of social accounting, identification and development of a consensus on accepted social values and goals is an essential prerequisite --- and basic missing element --- of attempts to develop social indicators. Without this consensus it is difficult to determine desirable social conditions or to evaluate movement of society or some part of society toward or away from a particular social state. As Raymond Bauer has pointed out, the most important questions in the design of social indicators and a social accounting system are: "What should

38/ Paraphrased from Ibid., p. 140.

39/ Ibid., p. 140.

be measured? How should it be measured?" And he added: "Neither question could or should be answered neatly at this point in time." ^{40/}

Difficulties in generating a formal consensus on social goals and means to attain them derive basically from the pluralistic nature and democratic system of policy-making in the United States. American society presents a mosaic of varying political philosophies and notions about what constitutes progress with respect to individuals, particular regions, and the Nation as a whole. The U.S. Constitution provides a philosophical and institutional framework for determination by the President and by the Congress of ways to achieve democratic, continuous and equitable growth and change. The American electoral process itself adds dynamic input to the continuous, albeit sometimes unsystematic, resolution of value and goal conflicts.

Several suggestions have been made to provide for systematic goal formation to underpin the development of social indicators.

For instance, upon introducing the proposal to create a Council of Social Advisors, Senator Mondale suggested that "full opportunity" should be the major social goal indicators should be designed to measure:

My first major concern is to declare full social opportunity for all Americans as a national goal. This is not a matter of rhetoric. In 1946 this Nation declared the national goal of full employment."

Operationally such a goal, according to the Senator, would mean that

"...our national policy is the elimination of social injustice and the development of equal opportunity to participate in the Nation's bounty. Such a declaration implies a systematic and coordinated effort to implement that goal." ^{41/}

^{40/} Second Order Consequences, op. cit., p. 53.

^{41/} U.S. Cong., Sen., Comm. on Government Operations. Full Opportunity and Social Accounting Act. Hearings before the Subcomm. on Government Research on S. 843. Part 1. (Washington, U.S. Government Printing Office, 1968), pp. 31-2.

Sponsors of the Full Opportunity Act, recognizing the difficulties of engendering consensus on national goals, amended the proposal so that when it passed the Senate it also created a Commission on National Goals and Priorities to assist the Council of Social Advisors in determining priorities. Both agencies, working together, would also promote efforts to meet methodological requirements of measuring goals and designing indicators.

Sheldon and Land did not discuss the means by which a consensus might be reached in formulating social goals to underpin development of social indicators with policy import. However, they suggested that if any such statement of goals is to be relevant to development of indicators it must include: acknowledged social goals, emerging national goals (i.e., protection of a worker from noxious fumes may be an acknowledged social goal but the goal of intrinsic job satisfaction is only an emerging social goal); and the potentiality for change, (i.e. counting homicides does not reduce the likelihood of murder; however the counting and subsequent alleviation of intergroup and interpersonal relations may result in lowering the crime rate.)" 42/

Sheldon and Land identified the most significant developments in social indicators research, despite the absence of goal consensus, as the collection and assembly of descriptive measures. Although these data are "...inadequate for policy purposes and focus on objective reality," they are "...tremendously valuable." 43/ Most of these data, which are time-series "and can be disaggregated to provide analysis of sub-group differences, e.g. education, family, status of women and health," permit description of "the state of some sectors of the social system [and] also describe the direction and rate of change in these sectors."

42/ Sheldon and Land, op. cit., pp. 141-2.

43/ Ibid., p. 141.

Descriptions of changes in sectors, according to this critique, permit both the raising of "new questions pertinent to the analysis of change," and the potential for "developing models of relationships among the measures." Understanding of cause and effect relationships underpinning changes in society is another criterion which must be met before social indicators can become useful for policy-making. However "the state of the art with respect to the development of explanatory relationships is especially deficient." ^{44/} Summarizing research reports and research needs on this topic, Sheldon and Land observed:

We are just now beginning to build discrete sets of relationships in some social sectors (Coleman, 1966; Duncan, 1967, 1968; Land, 1971) --- work that is requisite to the development of larger explanatory networks. Much remains to be done on experimenting with models at the levels of health, work, education and the like prior to developing linkages among them. In turn, this model construction of particular segments of society will feed back to the descriptive level of indicators, calling for revisions, refinements, and additions. Building gradually from the interplay of those two processes (the production of time - series measures and the development of linkage models at the sector level), larger explanatory models may eventually emerge." ^{45/}

Several other problems are discussed in literature treating the policy-making uses of social indicators. One of the most important of these problems is the issue of invasion of privacy. Longitudinal or time-series data, in some cases, require annual interviews of the same persons on particularly sensitive questions. It is entirely conceivable that individuals would resist questions by government officials regarding happiness, marital problems, and the like. Furthermore, objections have been raised in many quarters to collection by Government agencies of disaggregated data which invades protection of fundamental civil rights. A case in point is the disagreement with some current federal agency objectives of equalizing employment by race, religion and sex. Some persons object to the

^{44/} Idem.

^{45/} Ibid., p. 141. Emphasis in original.

establishment of goals or quotas of this nature, and to the collection and possible evaluation of these data.

Hard-to-measure, subjective data are frequently collected by means of survey research. This technique, according to Albert D. Biderman, has serious limitations which should be remedied before it can be employed on a large scale in social indicators research:

... The only currently available means of securing data for indicator systems is through interview and questionnaire surveys. Although the nation has vast resources for carrying out such surveys, only a small proportion of these conform to the exacting standards of, for example, the Census Bureau. ...Prevailing standards of survey practice are incompatible with meeting even loose criteria of validity... I cannot see the goals of current grant proposals for social indicator systems being met without considerable qualitative and quantitative upgrading of the survey industry...46/

Another especially difficult problem, and one that policy-makers rarely consider, is the issue of social experimentation. In conducting their research, all scientists need to observe and accumulate "observational" data on the phenomena they are studying. In contrast with physical and natural scientists, social scientists encounter almost insurmountable problems in obtaining observational data especially in repeated sequences. This problem stems from the mobility of the American people and their aversion to being "watched, studied, or observed," and from the difficulty of formulating and controlling experimental conditions which re-create social phenomena being evaluated. The design and conduct of social experiments, which overcome some of the problems of survey techniques, are of especial importance to social indicators researchers. It is conceivable that the difficulties of accumulating data needed for development of social indicators would necessitate social experimentation on a large scale. In this way researchers

46/ Albert D. Biderman. "Social Indicators -- Whence and Whither." A paper prepared for presentation to the First Annual Social Indicators Conference. American Marketing Association, February 17-18, 1972, (Washington, D.C., unpublished), p. 17.

will be able to control some experimental conditions, permitting the exclusion of extraneous variables which might otherwise by chance, adversely influence the outcome of the problem they are studying. Some attention has been devoted to problems of experimentation, social ethics, and fruitful methodologies, but far more is needed.^{47/}

Several notable objections have also been raised to the implementation or policy invocation phase of social indicators activity. Peter Henroit, a widely published student of social indicators, notes that more and better social information does not necessarily lead to better decision-making. Political decision-making, based upon bargaining and compromise of competing interests, occurs, he says, regardless of the level of sophistication of data generated by different decision-making bodies. As a case in point, he reports that:

Public housing was placed where it was in Chicago primarily because of political pressures against dispersion and no amount of information about social costs was likely to have made any difference.^{48/}

As a variant of this caveat, Frank J. Popper has warned that social indicators, especially the choice of indicators and values upon which they are based, would lead to elitist decision-making far different in tenor from the democratic pluralism characteristic of the United States. As an illustration of this notion, Popper says:

Toward Balanced Growth, the first social report of the Nixon Administration avoided discussing such issues as national priorities, race relations,

^{47/} On this point see: Alice M. Rivlin. Systematic Thinking for Social Action. (Washington, D.C., the Brookings Institution, 1971).

^{48/} Peter J. Henroit. "Political Questions About Social Indicators." The Western Political Quarterly, (Vol. XXIII, No. 2, June 1970), p. 244.

urban decay and minority dissent, and its (discussion on) the consumer movement did not mention the activities of Ralph Nader. 49 /

49/ Frank J. Popper. "The Social Meaning of Social Accounting." Polity, (Vol. 4, Autumn 1971), p. 86.

IV. RESEARCH REPORTS

A. Policy-oriented Social Indicators

Although there are no widely agreed-upon social indicators, research in this field has generated many fruitful and provocative heuristic results (i.e. to clarify research needs). 50/ Policy-making units at many levels of government are engaged in developing indicators, or in asking new questions, refining data needs and collection procedures, and improving data manipulation techniques to produce information more relevant to program and policy concerns. Especially notable among these activities are:

- development of urban indicators for Los Angeles, 51/ Dayton, 52/ New York City, 53/ Albuquerque, 54/ Washington, D.C. 55/;
- development of social indicator balance sheets in several states, including Michigan, 56/ and Iowa 57/;

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- 50/ A recently published partially annotated bibliography on social indicators includes approximately 1000 citations for literature in this field. See: Leslie D. Wilcox, et. al., Social Indicators and Societal Monitoring, (San Francisco, Jossey-Bass, Inc., Publishers, 1972), 464 pages. Includes citations for the following subjects: definition; concept; general theory; methodology; policy and planning; application; criticism and state of the art; bibliography and related sources.
- 51/ The State of the City - Los Angeles, 1970, prepared by Community Analysis Bureau, (Los Angeles, California, 1970), 4 volumes.
- 52/ Social Profile, Dayton Metropolitan Area, Community Welfare Council of the Dayton Area, (Dayton).
- 53/ Irving Levison. "Neighborhood Social Indicators: Uses, Framework and Development", New York City Planning Commission, (1970).
- 54/ Social Reporting for Albuquerque: Development of a Social Indices System. (Albuquerque Urban Observatory, New Mexico, October 1, 1971), 93 pages.
- 55/ H.V. Jones and N.J. Flax. The Quality of Life in Metropolitan Washington, D.C.: Some Statistical Benchmarks, (Washington, The Urban Institute, March 1970), 82 pages.
- 56/ Center for Urban Studies, Wayne State University. Social Reporting in Michigan: Problems and Issues. HUD Project No. P-272. (January 1970), 236 pages.
- 57/ The Quality of Life in Iowa: An Economic and Social Report to the Governor for 1970, (Office of Planning and Programming, Des Moines, 1970), 112 pages.

- attempts to develop indicators at the national level and to rank States on the basis of their "quality of life." Examples of work in this area include: reports of the Midwest Research Institute, 58/ the Department of Labor, 59/ and of the National Planning Association 60/; and

- the extensive programs of multinational and international social indicator development, carried out by the Organisation for Economic Cooperation and Development, 61/ and by the United Nations. 62/

National efforts to develop indicators relevant for legislative or executive branches of government include those of the U.S. Office of Management and Budget, 63/; the work of the British government, 64/ and French government and private sector activities. 65/

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- 58/ J. Wilson. Quality of Life in the United States - An Excursion into the New Frontier of Socio-Economic Indicators. (Midwest Research Institute, Kansas City, 1969), 42 pages.
- 59/ U.S. Department of Labor, Workplace Standards Administration. State Economic and Social Indicators, 1970, 96 pages.
- 60/ N. Terleckyj. Goals Accounting Project: Description of Status, (National Planning Association, in-house, November 3, 1971), various pagings.
- 61/ Organisation for Economic Cooperation and Development. Manpower and Social Affairs Directorate. Social Indicators Development Programme. Paris, April 21, 1971
- 62/ Discussed in Organisation for Economic Cooperation and Development. Manpower and Social Indicators in International Organizations (especially the United Nations in Western Europe), (Paris, February 25, 1971), 14 pages.
- 63/ See page 2 .
- 64/ H. Nissel, ed. Social Trends, No. 1, 1970, 182 pages; and Social Trends No. 2, 1971, 200 pages, (London, H.M. Stationery Office). See also: "SSRC Conference on Social Indicators." SSRC Newsletter, (June 1971), p. 2.
- 65/ "French Experience in Respect of Social Indicators. Case Study presented by France at the Seventh Meeting of Senior Economic Advisers to Economic Commission for Europe." November 12, 17-22, 1969, (Mimeo), 23 pages; and Jacques Delors. Les Indicateurs Sociaux, (S.E.D.E.O.S., Futuribles, Paris, 1971), 392 pages.

Some social indicators work is taking place in the industrial sectors. The major emphases at this point, however, are to: (1) define the meaning and ramifications of the concept of "social responsibility of business," and (2) to develop data categories and measurements which would characterize such responsibilities. 66/

At least two banks have published preliminary reports of indicators which might detail both short and long-range social, economic, and environmental issues relevant to the communities they serve. 67/ Several companies are preparing social balance sheets or social audits for incorporation in their annual reports. ABT Associates Inc., for instance, has quantified factors such as social benefits and costs to staff, to community, to the general public, and to their clients. 68/

B. Research Reports from the Social Science Community

Social scientists have not yet developed any methodologically precise and policy-relevant indicators. 69/ However, some have made fruitful and noteworthy breakthroughs in social indicators research. Such developments consist of those studies which assess the content and quality of currently collected statistics in specific subject areas, evaluate their deficiencies, and recommend both additional research on cause-and-effect and collection of alternative data to represent more appropriately the phenomena under study.

66/ Eli Goldston. The Quantification of Concern: Some Aspects of Social Accounting, (Carnegie-Mellon University, 1971), 75 pages.

67/ ABT Associates, Inc. Annual Report and Social Audit, 1971. (Cambridge, 1972), 32 pp.

68/ First National Bank, Minneapolis, 1971 Annual Report; and John J. Corson. "The Great What-Is-It: The 'Social Audit.'" Nation's Business, (July 1972), pp. 54-56.

69/ On this point see the "Summary of Conference Proceedings," Report on the Social Indicators Conference, held at George Washington University, November 5-6, 1971, sponsored by the National Science Foundation. Dr. Elliott Morss, conference chairman reports that there was a "broad consensus [among attendees] that . . . it will take some time for work on social indicators to realize its full potential." (Page 4). See also Dr. Henry David, Executive Secretary, Division of Behavioral Sciences, National Academy of Sciences, "Social Indicators: Reverent and Irreverent Observations," Prepared for the NATO Advanced Study Institute on Technology Assessment, Gargnano, Italy, September 13-29, 1972, who expresses "prudent caution and skepticism . . . with respect to the important promise of social indicators as a 'social technology' of the future . . ." (Page 15).

A considerable number of compilations of this nature have been published. ^{70/} Each of them has generated useful lists of priorities for additional research. (For example, Appendix B consists of an overview of social indicator data gaps and needs that resulted from an extensive program of research undertaken for the American Academy of Political and Social Science).

An especially valuable compendium along these lines provided the Russell Sage Foundation with guidance for its extensive program of social indicators research. The first volume in the Russell Sage series, Indicators of Social Change: Concepts and Measurement, evaluated the conceptual basis of a number of social indicator subject areas and noted data inadequacies. Subsequent Foundation-supported work consisted of pilot indicator studies designed to rectify these data gaps. The resulting publications are:

- Indicators of Trends in American Education, 1969;
- Indicators of Change in the American Family, 1970;
- Indicators of Change in the Status of American Women, 1971;
- Indicators of Change in American Health Status (forthcoming).

Sheldon and Land have illustrated the genesis and evolution of a social indicator, from identification of data inadequacies, to determination of appropriate alternative social indicator data requirements. For example, a number of persons have criticized use of the FBI's Crime Index as a measure of the incidence of crime in society.

^{70/} See the citations under particular subject categories in the attached bibliography. General collections include: Bertram M. Gross, and Michael Springer, eds. Political Intelligence for America's Future, Annals of the American Academy of Political and Social Science, (Vol. 388, March 1970) whole issue; Eugene D. Perle, ed., "Urban Indicators." Urban Affairs Quarterly, (Vol. 6, December 1970); Academy of Political and Social Science, "Social Goals and Indicators for American Society, Vol I, Special Issue of the Annals of the American Academy of Political and Social Science, (Vol. 371, May 1967); Social Goals and Indicators for American Society, Vol II. Special Issue of the Annals of the American Academy of Political and Social Science, (Vol. 373, September 1967); and Eleanor B. Sheldon, and Wilbert E. Moore, eds. Indicators of Social Change: Concepts and Measurement, (New York: Russell Sage Foundation, 1968), 304 pages plus index.

The Crime Index consists of measures of the objective dimensions of criminality, such as rates per 100,000 population for reported crimes in such categories as homicide, rape, aggravated assault, robbery, burglary, larceny, and auto theft. Such measurements are faulty in themselves, 71/ furthermore, they do not provide information which social scientists and some policy makers consider necessary to understand the causes of crime and the social characteristics of criminals, factors essential to eradicating crime in society.

In recognition of these problems, Toward a Social Report, the report of the Panel on Social Indicators, Department of Health, Education, and Welfare, noted in 1969:

To assess the quality of American life, we must consider the impact of crime on our society. 72/

Recognition of data gaps in the Crime Index led the President's Crime Commission to initiate the practice of taking sample surveys of the victims of crime to assess the rate of and impacts of criminal activity in the Nation. "Such 'victimization surveys generally show," Sheldon and Land report, "that at least twice as much victimization occurs within a period of time as is officially recorded by the police." 73/ The surveys are a far more valid and sensitive barometer of crime than the Crime Index, because they generate information on "such social characteristics as the age, sex, race, and income of the victims."

71/ To support this point Sheldon and Land cite a study by Albert D. Biderman who reports the following weaknesses in the Crime Index: "(1) The errors and biasing factors affecting the Crime Index largely operate to show spurious increases, rather than decreases, in the rate. (2) The Crime Index does not provide a sound basis for determining whether criminal behavior is increasing, or decreasing. . . (3) The Crime Index is highly sensitive to social developments that are almost universally regarded as improvements in the society. Thus, it is altogether possible that year-to-year increases in crime rate may be more indicative of social progress than of social decay. (Citing: "Social Indicators and Goals," in Social Indicators, op. cit., p. 115).

72/ Sheldon and Land, op. cit., p. 143, emphasis added.

73/ Idem.

Victimization surveys are now being widely used. Sheldon and Land have made several recommendations to improve upon them. First, "For the immediate future we recommend the continuation and expansion of victimization surveys and their analysis."

Among the more salient analytical needs are:

- the need to compare police records and rates computed from victimization surveys to explain the nature of underreporting of crime, by community, police organization characteristics and season of the year; and

- the need to develop "rigorous analytical models of the distribution of victimization by social variables" leading to explanation of the impacts of victimization on subsequent behavior attitudes.

Second, they recommend "as a possible short-term development the expansion of victimization surveys into more general survey of the criminal justice system." Such surveys should provide essential information on the "relative satisfaction of citizens with their police and judicial services."

Third, in support of generating better information on the causes of crime, or motivation for criminal acts, the authors "recommend as a long-term development the continued study of the social and psychological causes of criminal behavior."

Elaborating, they report:

. . . We need considerably more knowledge of the motivations (rational or irrational) which lead to the selection of criminal behavior as contrasted with other forms of behavior and of possible ways in which the situation may be changed . . . Continued work on these problems is necessary to the more complete understanding of spatial and temporal variations in [social] indicators of criminality as well as to the development of [ways to change the outcome] of such indicators. 74/

V. CONCLUSION

A number of important program and policy questions have been raised about the conduct and quality of social indicators research. Those of possible interest to the Congress are summarized below.

Of all Federal agencies, the National Science Foundation probably supports the greatest amount of federally-supported, university-conducted social indicators research. (See Appendix C listing NSF awards for social indicators research in fiscal years 1971 and 1972.) The Foundation considers social indicators research to be of special significance meriting consideration as a separate project funding area with line-item status in the agency's budget. However, at the recent NSF-sponsored "Conference on Social Indicators," Dr. Murraray Aborn, Division of Social Sciences, NSF, reported that progress in social indicators has not developed as quickly as the Foundation had expected. Aborn cautioned the social scientists in attendance that the program might lose its special status and be absorbed into the agency's regular social science funding apparatus if "significant progress is not made in the near future." This reverse would be financially disadvantageous to social indicators researchers since their proposals would have to compete for funding with other social science projects. 75/

Perhaps as a partial response to the challenges Aborn posed, a number of social scientists have given consideration to program and policy priorities which might hasten the development of social indicators. Probably the most significant

75/ Elliott R. Morss. Summary of the Conference. Chapter II in Report on the Social Indicators Conference, Held at George Washington University, November 5-6, 1971, sponsored by the National Science Foundation, (non-published), Chapter II, p. 1.

of these are the recent proposals raised by Sheldon and Land. ^{76/} The most fruitful sequence for social indicators R and D, they say, would consist of the following:

First, a review should be made of existing series of social data produced by governmental and other agencies.

Second, this review should generate recommendations as to which data series should be retained, eliminated, revised, modified, or substituted.

Next, needed "indicators which are not yet available should be developed and analyzed." Notable deficiencies warranting priority attention probably are the subjective dimensions of social welfare functions. For instance, in the area of employment, such measures would treat "...job satisfaction, occupation aspirations, and perception of career opportunities." Special emphasis should be given to "...measures transcending any given area of life experience, ...such as those pertaining to---alienation, happiness, and values."

^{76/} Drs. Sheldon and Land were with the Russell Sage Foundation when they drew up a list of recommendations for supporting the future development of social indicators. According to their published material, these proposals resulted from consultations with a number of colleagues preeminent in the field of social indicators. In addition it can be assumed that these proposals were given considerable thought, since the Russell Sage Foundation has conducted and supported extensive social indicators research.

The importance of Dr. Sheldon's conclusions is further underscored since she was recently named President of the Social Science Research Council, an advisory body to the social science disciplines. In addition, the National Science Foundation recently awarded the SSRC almost \$200,000 to establish a Center for the Coordination of Research on Social Indicators in Washington, D.C. The Center "...will seek to stimulate, facilitate and guide research on social indicators by providing a locus and source of information on research underway, and by encouraging communication among and between researchers and the broad constituency that has need for their output. The task is to encourage the application of the best social science methods to the problems of social indicators and to bring developments of potential significance to the attention of policy planners who can make use of them and statistical agencies that could assume responsibility for their regular production and analysis. "New SSRC Center for Coordination of Research on Social Indicators Opens in Washington." Social Science Research Council Items. (September 1972), pp. 25-6.

Available funds and time, they continue, should be devoted to conducting in-depth investigations on significant social indicator topics and needs. These investigations should be based on a regular periodic schedule of five years duration. 77/

One of the most important questions raised about social indicators research is the appropriate division of labor between Government, research organizations, and universities. This topic has not been fully explored and probably warrants additional consideration by research funding, support, and government agencies.

Sheldon and Land contend that Government agencies which support or conduct work in social indicators would be interested in producing only objective indicators relating directly to their policy and program needs. These agencies, they say, probably would not be interested in promoting the development of subjective indicators or those with potential political sensitivity. 78/ Furthermore, such agencies would not be concerned with basic research and development in social indicators. All such work, most likely will be performed by social scientists outside of the Government. 79/

Sheldon and Land recommend the formation of a social science/government commission to advise funding and support agencies in determining priorities for both in-depth five-year research programs and in providing guidance on the appropriate division of labor among government research, staffs of research organizations, and university-based social indicators researchers. 80/

77/ Sheldon and Land, op. cit., pp. 146-8.

78/ Ibid., pp. 148-9.

79/ Idem.

80/ Ibid., pp. 149-150.

Policy-makers interested in the proposal to create a special social indicators commission and in the general governance of the development and application of social indicators may find it useful also to consider the specific issues raised in the body of this paper. They are:

- adequacies and limitations of currently collected data series in generating social indicators capable of describing hard-to-measure qualitative social trends;
- potential contributions of social indicators research to advancement of the state-of-the-art of the social sciences;
- issues relating to the invasion of privacy;
- utility of social indicators data series to improved public policy-making;
- methodological requirements for the development of social indicators, such as social experimentation, development of new time-series data compilations, difficulties in building models to explain cause-and-effect relationships in social systems, and improvements in the techniques of survey research; and
- the costs and benefits of duplicate research programs.

Data presented above indicate also that several related issues should be resolved before additional mechanisms are created to determine policies for social indicators, e.g.:

-Have social scientists adequately explored and identified significant difficulties and opportunities in the development and application of social indicators?

-Current social indicators research support and application efforts are based on the premise that determination of policy and program requirements should proceed incrementally; are these activities, which include the Office of Management and Budget's survey, and the operations of the SSRC Center for the Coordination of Research on Social Indicators, adequate mechanisms to govern the development and application of social indicators?

-As a practical matter are social indicators of such imposing potential benefit and consequence to compel social scientists and the government to formulate a conscious and deliberate program of national priorities for such research?

APPENDIX A

LEGISLATIVE HISTORY OF THE PROPOSAL TO CREATE A COUNCIL OF SOCIAL ADVISORS

Senate1967:

S. 843, the "Full Opportunity and Social Accounting Act," introduced by Mr. Harris, 90th Congress, 1st sess., 1967; seminar and hearings held by Subcommittee on Government Research, Committee on Government Operations, June 26, July 19, 20, 26, and 28, 1967. The bill would create a Council of Social Advisors in the Executive Office of the President, a social accounting system; and a Joint Congressional Committee to receive the social report required from the President. Hearings published in 1968, 531 pages. The bill was not reported.

1969:

S. 5, "The Full Opportunity Act," introduced by Mr. Mondale, January 15, 1969. The introduced bill was identical to S. 843, considered in the 90th Congress, 1st and 2nd sessions. Hearing held by Special Subcommittee on the Evaluation and Planning of Social Programs, Committee on Labor and Public Welfare, July 7, 8, and 10, 1969, and March 13, 1970. Hearings published in the 91st Congress, 2nd Session, 439 pages.

1970:

S. 5 was reported July 1, 1970, (Senate Report No. 91-998), and passed on the floor of the Senate in an amended version, September 10, 1970. (Congressional Record September 10, 1970, pp. S15160-67). The amendments consisted of the following: deletion of the provision to create a Joint Congressional Committee on the Social Report; addition of Title II to create a Commission on National Goals and Priorities. The new bill was called the "Full Opportunity and National Goals and Priorities Act."

1971:

S. 5, "The Full Opportunity and National Goals and Priorities Act," introduced by Mr. Mondale, January 25, 1971. The bill was identical to the bill passed by the Senate in 1970. Hearings held by the Special Committee on the Evaluation and Planning of Social Programs, Committee on Labor and Public Welfare, July 13, 1971; published.

1972:

S. 5 was passed in the Senate, July 23, 1972 (Congressional Record July 25, 1972,

1973:

S. 5, "The Full Opportunity and National Goals and Priorities Act,"

introduced by Mr. Mondale, January 4, 1973. The bill was sent to the Committee on Labor and Public Welfare.

HOUSE

1969:

H.R. 9483, "The Full Opportunity Act," introduced by Rep. Pepper, March 25, 1969 and sent to the Rules Committee. No action.

1971:

H.R. 10816, "The Full Opportunity and National Goals and Priorities Act," introduced by Rep. Pepper, September 22, 1971, and sent to the Rules Committee. No action.

APPENDIX B
TABLE—Indicator Suggestions

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Electoral participation (Chpt. 4)	Bureau of Census: bi-yearly estimates by states of numbers of citizens of voting age eligible under state law to vote.	More detail in statistical abstract on Negro voter registration. Compilation of state and local registration and voting statistics.	Research on: (1) factors affecting turnout and registration; (2) characteristics of those who run for office; and (3) influence of turnout on parties and local government.
Civil Liberties (Chpt. 5)	Continued utilization of presidential and congressional commissions to explore the most pressing problems in the area of civil liberties.		Research on: (1) effectiveness of fair housing, employment, and education acts; (2) the exercise of academic freedom; and (3) the effects of pornography. Development of tools to evaluate such complex questions as the relationship between non-violent demonstrations and respect for law. More research by such institutions as Columbia's Center for Research and Education in American Liberties. 81/

81/ Excerpted from: Bertram M. Gross, and Michael Springer. "Developing Social Intelligence." In Bertram M. Gross, ed. Social Intelligence for America's Future: Explorations in Societal Problems, (Boston, Allyn and Bacon, 1969), pages 5-16. Copyright by Allyn and Bacon, Inc., permission to reproduce granted.

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Democratic Participation (Chpt. 6)	Data on size of professional and paraprofessional groups and on community organizations by locality. Collection and analysis of electoral participation data for local and state elections.	New section in <i>Statistical Abstract of the United States</i> on role of women and minority groups in political, social, and economic institutions. Better assembly of international comparative data on major forms of participation.	Research on: (1) extent of participatory democracy in schools, business firms, government agencies, community groups, and the like; (2) "participation of the poor"; (3) sensitivity of officials to the demands upon them; (4) expectations that are associated with various forms of participation; (5) how many Americans feel a loss of sense of belonging; (6) examination of international rate of participation in terms of resources, constraints, capabilities, and cultural ideals.

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Individual and Group Values (Chpt. 7)		Compilation of non-government attitude surveys.	Research on: (1) intensity of commitment to particular values and beliefs; (2) relation between apparent reduction of ethnocentrism and growth of more intellectual evaluations; (3) extent of concern over leisure; (4) extent of loss of belongingness, loss of norms, uprootedness, etc.; and (5) relationship between overt acts and expressed values.
Learning and Education (Chpt. 8)	Collection of educational expenditure data for the "nonestablish- ment" sectors of education, so that total educational expenditures can be computed. Implementation of new Carnegie plan for assessment of educational performance.	Improved estimates on "learning force" as a whole, particularly those enrolled in "nonestablish- ment" educational programs.	Research on: (1) educational administration at all levels; (2) costs and benefits of alternative training methods for the same job; (3) impact of education (longitudinal studies); and (4) student culture and social system of schools (<i>in situ</i> studies).

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Science and Technology (Chpt. 9)	Substantive content classification of scientific and technological research (in output-program budget terms).	More sustained and comprehensive presentation and analysis of basic series on scientific personnel, organizations, expenditures, publications, and the like. Link reports on substantive content of scientific activities with information- retrieval facilities.	Research on: (1) time lags between basic science findings and technological implementation by the industrial sector; (2) extent of technological spillover from space and military Research & Development (R&D) programs; (3) role of scientific organizations; (4) evaluation of the quality of scientific output; and (5) how to estimate the social impacts of technological innovations.
The Mass Media (Chpt. 10)	Federal Communications Commission to publish national and local time series on the proportion of advertising and news time by the networks and broadcasters, the size of listening audiences, and the types of programs.		Professional appraisals of extent of depth reporting systems and editorial professionalism. Research into the effect of mass media on values and behavior, where people get information, and functions of newspapers.

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Art and culture (Chpt. 11)	Annual data on audience size for performing arts, including semiprofessional, by areas. Recurring Census of the Arts to include economic and institutional data covering not only the high arts but also the amateur movement and popular entertainment.	Compilation of federal, state, and local expenditures on the arts. Art and Culture section in <i>Statistical Abstract of the United States</i> .	Research on: (1) the type of musical education provided in primary and secondary schools; (2) the costs of the tools and media used by artists; (3) the administration of artistic enterprises; (4) the recruitment and training of professional artists; (5) the decline in recitals; and (6) the scope of the "amateur movement."
Poverty and Inequality (Chpt. 12)	Regular publication of Gini index for both wealth and income distribution.	Serial data in <i>Statistical Abstract of the United States</i> on the extent of population below minimum standards of income, assets (liquid and fixed), and unpaid-for services (public and private).	Developments of new statistical profiles of wealth and income, for example, top-bottom ratios. Research on the psychological and sociological dimensions of the self-image of the poor.

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
<p>Employment Goals and the "New Economics" (Chpt. 13)</p>	<p>Periodic reports on location of job openings in the fifty largest Standard Metropolitan Statistical Areas (SMSA's).</p>	<p>Regular and improved reporting on subemployment in low-income areas. This includes not only regular application of traditional unemployment measures, but also: estimates of those (1) working part-time and looking for full-time work; (2) earning sub-standard wages; (3) labor force dropouts because of lack of openings; and (4) not ordinarily counted.</p>	<p>Research on: (1) changes taking place in length the work week; (2) recruitment into skilled and semiskilled trades; (3) relationships between education and occupational mobility; (4) relationship between productivity gains and employment rates; and (5) future employment trends.</p>
<p>Discrimination against Negroes (Chpt. 14)</p>	<p>Separate orientals from "nonwhite" category. Statistics of intermarriage. Publication of Equal Opportunity Commission data on Negro employment by sectors of industry and by job category.</p>	<p>Bureau of Census and other agencies</p> <p>Publication of key indicators on conditions of Negroes (i.e., employment, income, housing, education, voter registration, etc.)</p> <p>School segregation status for all regions (not just the South).</p> <p>More extensive group</p>	<p>More extensive analysis of existing ecological data.</p> <p>Repeated standardized field observation studies of Negro communities and problem areas (for race relations).</p>

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Social Breakdown (Chpt. 15)	<p>Divorce Registration Area to be representative of entire country with data on divorce, separation, and remarriage (including time interval between divorce and remarriage).</p> <p>Incorporation into official series of suicide data from insurance companies.</p> <p>More systematic methods for estimates of users of illegal drugs including "week-end" user, regular user, and seller.</p>	<p>Relate divorce and separation data to existing information on extended duration of marriages (with increased life expectancy).</p>	<p>Studies on better classification of alcoholics by state agencies.</p> <p>Research on: (1) number of those arrested for public intoxication who are chronic alcoholics; (2) various forms of violence; (3) physiological and psychological effects of marijuana use; (4) changes in premarital sex practices; and (5) <i>in situ</i> studies of deviant behavior.</p> <p>All states to require doctors to report cases of "battered children."</p>

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
Crime and Delinquency (Chpt. 16)	Survey to determine whether offenses are reported to police and, if so, with what consequences. Surveys of corporations, government agencies, etc., to determine extent of white-collar crime. Surveys of women to determine incidence of rape.	Periodic reports on separate categories of crime to include thorough analysis of data. Revision of FBI <i>Uniform Crime Reports</i> to include: (1) comparison of police and survey data on particular offenses and (2) adequate assessment of crime rates for similar offenders who received diverse judicial and correctional treatment.	Assessment of alternative crime control measures, including their unintended consequences, such as other kinds of crimes.
Health and Well-Being (Chpt. 17)	More refined surveys of mortality and life expectancy by income groups and by localities— including major slum areas.	Readjustment of "Cause of Death" data, with improved interpretation.	More research on the development of positive measures of health and vitality.

TABLE—Indicator Suggestions (cont'd)

Area	United States Government Statistical Series		Other
	New Data	Better Use of Existing Data	
The Natural Environment (Chpt. 18)	Data on physical characteristics and contaminants in streams, estuaries, lakes, air above metropolitan areas, solid wastes, etc. Estimates of costs and benefits (social as well as economic) and other measures to achieve specified standards of quality.	Combining of existing series relating to water and air conditions; placing them on a common basis of concepts, definitions, and methods of measurement. Further efforts to standardize underlying assumptions and procedures for estimating costs and benefits associated with environmental projects and programs.	Development of statistical information on environmental quality for more effective pollution-abatement programs.
Urban conditions (Chpts. 19 & 20)	More detailed information on intercity migration. Employment data that can be disaggregated to areas within a city. Information on location of jobs within the Standard Metropolitan Statistical Area (SMSA). Segregation data for private as well as public schools. Local components of other indicator suggestions.	Census data further organized according to political jurisdictions. Taeuber indices for every SMSA in the country. Urban area data books for the nontechnical reader. Further efforts to indicate the limitations and inaccuracies of existing data.	Research on: (1) participation in all aspects of community life; (2) use of cultural facilities; (3) changing social and economic structure of low-income areas; (4) effects of urban density; and (5) patterns of educational quality within SMSA's. More extensive support of <i>in situ</i> studies of urban neighborhoods. Local components of other indicator suggestions.

NATIONAL SCIENCE FOUNDATION

DIVISION OF SOCIAL SCIENCES

Grants in Support of Research on Social Indicators Awarded in Fiscal Years 1971 & 1972*

<u>Grant No.</u>	<u>Investigator & Institution</u>	<u>Title</u>	<u>Amount</u>	<u>Duration (Months)</u>
<u>FY 1971</u>				
GS-1309 Amend. #3	D. Campbell/ Northwestern U	Quasi-Experimental Designs and Measurement Techniques	\$ 54,900	
GS-2491 Amend. #1	H. W. Guthrie/ U Illinois	Inter-Generational Economic Relationships	29,700	
GS-2674 Amend. #1	C. Tilly/ U Michigan	Social Change and Collective Violence in Europe: 1830-1930	27,300	
GS-2943 Amend. #1	J. D. Smith/ Pennsylvania St U	Estate Multiplier Estimation of the Distribution of Wealth	3,200	
GS-3045 Amend. #1	M. Rokeach/ Michigan State U	Organization and Change in Values, Attitudes, and Behavior	30,000	
GS-3149	W. E. Miller/ U Michigan	Political Indicators and Political Change	102,900	24
GS-3155	S. Verba N. H. Nie/ U Chicago	Cross-National Studies in Political Participation and Social Change	219,700	24
GS-3156	T. A. Finegan/ Vanderbilt U	Labor Market Conditions and Labor Force Participation of Minorities	14,800	12

*Does not include support for related work awarded through other Foundation programs.

<u>Grant No.</u>	<u>Investigator & Institution</u>	<u>Title</u>	<u>Amount</u>	<u>Duration (Months)</u>
GS-3168	R. E. Dawson/ Washington U	Trend Analysis of the Structural Distribution of Political Opinions	\$ 29,200	12
GS-3244	B. Strumpel G. Gurin/ U Michigan	Indicators of Change in People's Goals, Opportunities, and Economic Well-Being	201,900	24
GS-3313	J. D. Aberbach J. L. Walker/ U Michigan	Longitudinal Detroit Community Study	87,700	12
GS-3322	F. M. Andrews/ U Michigan	Development and Measurement of Social Indicators	281,200	24
GS-27146	D. S. Shoup/ Soc. Sci. Research Council	Program Development on Social Measurement	21,800	12
GS-27340	B. Latane/ Ohio State U	Social Determinants of Individual Responses	55,700	24
GS-28295	R. Kahn M. D. Blumenthal/ U Michigan	American Attitudes and Values Toward Violence	225,200	24
GS-28352	A. M. Shinn C. S. Davies/ U Texas	Measuring the Utility of Housing and Transportation	12,600	12
GS-28476X1	J. D. Singer/ U Michigan	Correlates of International War	35,500	12
GS-28534	G. A. Gebert B. P. Spring/ CUNY	Relationship Between Physical and Non-Physical Characteristics of the Urban Environment	31,700	12

<u>Grant No.</u>	<u>Investigator & Institution</u>	<u>Title</u>	<u>Amount</u>	<u>Duration (Months)</u>
GS-29032	N. Terleckyj/ National Planning Association	Development of a Goals Accounting System	\$2-3,500	24
GS-29115	A. Biderman/ Bureau of Social Science Research	Kinostatistics for Social Indicators -- An Exploratory Study	65,200	12
GS-29511	T. Suranyi-Unger/ George Washington U	New Measures of Economic Activity and Growth	35,400	12
GS-29710X	M. Flax/ Urban Institute	Social and Urban Indicators	120,200	12
<u>NOTE</u>				
GS-2458 Amend. #2	I. K. Feierabend R. L. Feierabend B. A. Nesvold/ San Diego State U	Systemic Conditions of Political Aggression	24,700	8
GS-29115 Amend. #1	A. Biderman/ Bureau of Social Science Research	Kinostatistics for Social Indicators -- An Exploratory Study	34,100	6
GS-29710X1	H. Garn M. Flax/ Urban Institute	Social and Urban Indicators	158,700	12
GS-30168	E. Morss/ George Washington U	Conference on Government-Supported Research on Social Indicators	14,400	12
GS-30273X	D. Campbell/ Northwestern U	Measurement and Experimentation in Social Settings	69,300	12

<u>Grant No.</u>	<u>Investigator & Institution</u>	<u>Title</u>	<u>Amount</u>	<u>Duration (Months)</u>
GS-30624X	E. Gargan J. Hage/ U Wisconsin	Comparative Study of Societal Stability	\$ 30,700	12
GS-30812	F. Pitts/ U Hawaii	Nationwide Factorial Urban Ecology Study of Korea	25,000	24
GS-31454	M. Olson/ U Maryland	Role of Social Indicators in the Evaluation of Social Performance-Some Problems of Nonmarket Economics	18,300	9
GS-31495	R. Alford/ U Wisconsin	Theoretical Investigation of the Requirements for Indicators of Structure and Change in the Political Economy of Western Societies	15,200	12
GS-31812	J. Shanks/ U California (B)	Development of Model Social Indicators	586,100	24
GS-31980	R. Lineberry/ U Texas	Sociospatial Distribution of Urban Public Policies	16,200	12
GS-32436	K. Back/ Duke U	Social Indicators for Self Realization	47,500	12
GS-33047	H. Freeman/ Brandeis U	Collaborative Research on Uniform Measures of Social Competence	76,400	24
GS-33048	J. Kagan/ Harvard U	Collaborative Research on Uniform Measures of Social Competence	19,900	24
GS-33049	A. Romney/ U California (I)	Collaborative Research on Uniform Measures of Social Competence	25,400	24
GS-33475	J. Thompson F. Bates/ Vanderbilt U	Life Cycle and the Environmental Context	75,800	24

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<u>Grant No.</u>	<u>Investigator & Institution</u>	<u>Title</u>	<u>Amount</u>	<u>Duration (Months)</u>
GS-33590X	F. Juster/ National Bureau of Economic Research	A Pilot Study on the Measurement of Economic and Social Performance	\$330,600	12
GS-33956	W. Miller/ U Michigan	Electoral Behavior and the Meaning of Politics	200,000	24
GS-34063	G. Orcutt/ Urban Institute	Collaborative Research on the Distribution of Income and Wealth with Microsimulation Applications	117,700	12
GS-34064	J. Smith/ Pennsylvania St U	Collaborative Research on the Distribution of Income and Wealth with Microsimulation Applications	30,800	6
GS-34219	E. Sheldon/ Social Science Research Council	Center for the Coordination of Research on Social Indicators	185,500	12

APPENDIX D: Annotated Bibliography on Social Indicators*

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*This bibliography includes new citations as well as selected items from the social accounting sections of (1) The Social Sciences and Public Policy: A Selected Annotated Bibliography, by G.J. Knezo, Revised June 1970, Congressional Research Service, Multilith 70-162 SP (out-of-print), and (2) Social Science Policies: An Annotated List of Recent Literature and Addendum, by G.J. Knezo, July 8, 1971, Congressional Research Service, Multilith 71-167 SP. A detailed, partially annotated bibliography on social indicators may be found in Wilcox, et. al., Social Indicators and Societal Monitoring: An Annotated Bibliography, op. cit.

1. General

Abrams, Irving, et. al. "Improving the Quality of Life." In extension of remarks of the Hon. Frank Annunzio. Congressional Record, November 24, 1971, pp. E12650-56.

Indicators, problems and solutions "that reduce the quality of child health, education and welfare."

Gross, Bertram M., ed. A Great Society? New York, Basic Books, Inc., Publishers, 1966, 1967, 1968, 350 pages plus index.

"This volume is the first serious and concerted effort by members of the American university community to appraise the actual and potential contents behind the political slogan of a 'Great Society' in America." It consists of a series of papers presented at faculty seminars, Syracuse University, with the assistance of professors elsewhere, to provide policy alternatives to various questions developed in consultation with President Johnson. One of the proposals made, and discussed in detail is that of developing an "annual Social Report of the President which, together with the Economic Report, will contribute to an over-all assessment of the state of the nation." This book contains innovative treatments by social scientists, combining academic scholarship with recommendations for improving policy-making at the international, national, state, and local government levels. Essays are: "The President's Questions--and Some Answers," Bertram M. Gross and Michael Marien; "A Model of Society--The American Case," Robin M. Williams, Jr.; "The Individual in the Great Society," Herbert Marcuse; "Local Private Initiative in the Great Society," Hans J. Morgenthau; "The Adequacy of Our Concepts," Daniel Bell; "New Political Alignments in the Great Society," Peter F. Drucker; "Reflections of Great Societies," Frank E. Manuel; "The Great Society in a Small World--Dampening Reflections from the Dismal Science," Kenneth E. Boulding, "Science in the Great Society," Don K. Price, "The Politics of the Impossible--Art and Society," Alvin Toffler; "Arthur E. Bentley--Fashioner of Social Tools," Disney Ratner; and "Some Questions for Presidents," Bertram M. Gross.

Gross, Bertram, "Let's Have a Real State of the Union Message," Challenge, 3. May-June 1966.

Gross, Bertram M., ed. "Social Goals and Indicators For American Society. Vol. I." The Annals of the American Academy of Political and Social Science. Vol. 371, May 1967. Contains: Bertram M. Gross and Michael Springer, "A New Orientation in American Government"; Robin M. Williams, Jr., "Individual and Group Values"; Milton P. Konvitz, "Civil Liberties"; Richard M. Scammon, "Electoral Participation"; Andre Fontaine, "The Mass Media--A Need for Greatness"; Otis Dudley Duncan,

"Discrimination Against Negroes"; Daniel Glaser, "National Goals and Indicators For the Reduction of Crime and Delinquency"; Joseph L. Fisher, "The Natural Environment"; Barry Gottehrer, "Urban Conditions: New York City"; and Daniel P. Moynihan, "Urban Conditions: General."

For a description of articles contained, please see the annotated citations for each author, included in this bibliography.

Gross, Bertram M., ed. "Social Goals and Indicators for American Society, Volume II." The Annals of the American Academy of Political and Social Science. Contains: "Some Dangers in 'Valid' Social Measurement"; S. M. Miller, Martin Rein, Pamela Roby, and Bertram M. Gross, "Poverty Inequality, and Conflict"; Sidney Verba, "Democratic Participation"; Wilbur J. Cohen, "Education and Learning"; Leon H. Keyserling, "Employment and the 'New Economics'"; John McHale "Science, Technology and Change"; Alvin Toffler, "The Art of Measuring the Arts"; Nathan Goldman, "Social Breakdown"; Raymond A. Bauer, "Societal Feedback"; Philip R. Lee, "Health and Well-Being"; and Bertram M. Gross and Michael Springer, "New Goals for Social Information."

For a description of articles contained, please see the annotated citations for each author included in this bibliography.

Gross, Bertram M., ed. Social Intelligence for America's Future: Explorations in Societal Problems. Boston, Allyn and Bacon, Inc., 1969, 510 pages plus index.

This book presents in " * * * reorganized and slightly revised form " reprints of articles on social accounting originally appearing in "Social Goals and Indicators for American Society," special issues of the Annals of the American Academy of Political and Social Science, 1967. A new essay "Developing Social Intelligence" by Bertram M. Gross and Michael Springer, updates the review of social accounting activities originally described in the 1967 volumes.

For a description of material included, see the citation beginning: Gross: "Social Goals and Indicators for American Society * * *."

Hauser, Philip M. "Social Accounting." Printed article In U.S. Congress. Senate. Committee on Government Operations. Full Opportunity and Social Accounting Act. Hearings before the Subcommittee on Government Research of the * * * on S. 843, A Bill to Promote the Public Welfare and to Create Council of Social Advisors, a Social Report of the President, and a Joint Committee on The Social Report. Part 3, July 28, 1967. Washington, U.S. Government Printing Office, 1968, pages 423-446.

This material details the history of the development and use of social statistics by the Federal Government. Written by a renowned social scientist, an official of the Bureau of the Census (Deputy Director, later acting Director), it emphasizes especially the contributions of sociologists to public policy making.

Helmer, Olaf. "Report on the Future of the Future-State-Of-The Union Reports."

Sponsored by the Russell Sage Foundation. Middletown, Connecticut, Institute for the Future, October 1970, 42 pages, R-14.

The Institute for the Future intends to publish an annual "State-of-the-Union" series. This report presents a preliminary outline of the format and content of such a volume and provides some guidance for the data collection and analysis that must precede its writing and publication. This report, in the form of an outline includes the following factors: content requirements, problems of describing the state of the Union; satisfaction indices; ranking by importance, description of the present state of the Union; forecasts, cross-impacts, societal options, and feedback via questionnaire.

Linowes, David F. "Socioeconomic Accounting." Reprinted from The Journal of Accountancy, November 1968. In Footnote: Journal of the HEW Audit Agency. No. 1, 1969, pages 9-15.

Discussion of the need for socio-economic accounting and for accountants to become familiar with the objectives and requirements of social science methodology and social accounting.

Olson, Mancur, Jr. "Toward a Social Report: Its Plan and Purpose." Mimeo, Non-published, [1969?], 17 pages.

This paper was written by the principal author of the H.E.W. study, "Toward a Social Report." In it Dr. Olson discusses some of the problems which beset his group while gathering information for and writing that document. Problems relate to the inadequacies of currently collected data and present organizational mechanisms for interagency cooperation in work of this nature. He also discusses various needs and potential

uses of social accounting and relates this discussion to on-going policy planning mechanisms in the government. Dr. Olson then cautions: ". . . a complete system of social reporting requires a wider range of information, and more subtle analysis, than the existing PPB System, which is itself only in a primitive stage of development. It will be many years, if not many decades, before the full potential of social reporting can be exploited. It will require not only more information, but vastly better theories of cause-and-effect relationships as well."

Otten, Alan L. "Measuring Progress--The Government Seeks New Tools To Evaluate Its Social Programs--Poverty, Crime and Pollution Efforts Seen Benefiting From More Precise Data--Critics Fear More Controls." In remarks of the Hon. Walter Mondale. Full Opportunity for All Americans. Remarks in the Senate. Congressional Record (daily ed.), vol. 113, July 18, 1967, pages S9817-8.

Plessas, Demetrius J. and Ricca Fein. "Review Article: An Evaluation of Social Indicators," AIP Journal, January 1972, pp. 43-51.

A well-balanced review of current issues and research in social indicators. Treats: the state of the art; theory; measurement, goals; social system definition; uses and misuses of indicators in a policy framework.

"Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, 132 pages.

"This is the third issue of The Annals devoted to the discussion of social indicators and social reports. . . . This volume is addressed to ". . . important policy issues in social accounting: What is to be the focus of a social report? What is to be included under the label social indicators? And how is this social knowledge to be linked to the process of policy-formulation?" According to the editors, "The resolution of these issues will determine whether the development of social indicators and reports will become a sterile academic ritual or a key focus of a contemporary social science of imagination and relevance." Many of the articles in this issue are based on papers and panel discussions on social indicators held at the 1969 annual meeting of the American Political Science Association.

Articles included are: "Social indicators, reports and accounts: toward the management of society," Michael Springer; "The intelligence of Congress: information and public policy patterns," Edward Schneier; "Indicators of the capacities for societal guidance," Amitai Etzioni; "Indicators of change in political institutions," Norton E. Long; "Intelligence in industry: the uses and abuses of experts," Harold L. Wilensky; "Perceptions aspirations, frustrations, and satisfactions: an approach to urban indicators," Ross Stagner; "Cultural indicators: the case of violence in television drama," George Gerbner; "Indicators for America's linkage with the changing world," Bruce M. Russett. "Values as social indicators of poverty and race relations in America," Milton Rokeach and Seymour Parker; "An Analytic framework for social reporting and policy analysis," Mancur Olson; and "Social Indicators: selected reading," Carol Agocs.

For annotations on each of these items see the author listing in this bibliography.

Rice, Stuart A. "Social Accounting and Statistics for the Great Society." Public Administration Review. Vol. 27, June 1967, pages 167-174.

"The variety of approaches and subject in this volume reflects the information explosion in social indicators. Current expansion of social indicator activity has been given impetus by: (1) the growing awareness of the contributions and limitations of economic information; (2) the implementation of the Planning-Programming-Budgeting System within the federal government; and (3) specific proposals for increased utilization of social information, such as the Technology Commission's call for social accounting, annual Social Reports of the President, and a 'Full Opportunity and Social Accounting Act.' Normative concerns require that our 'data system' remain unsystematic, with promotion of both multiple sources and dissonance. Furthermore, the development and use of social information should not be thought of solely in executive agency terms--there is a creative role for Congress in this area."

Shonfeld, Andrew and Stella Shaw, eds. Social Indicators and Social Policy, London, Heinemann Educational Books, 1972.

Taeuber, Karl E. "Review of Toward a Social Report." RAND, Santa Monica, April 1970, 12 pages, P-4356.

"Toward a Social Report," issued by the Panel on Social Indicators, Department of Health, Education and Welfare, 1969, "lacks social perspective and policy relevance." Other government reports, concentrating on one social problem area, and recommending improved social indicators, are more useful documents.

U.S. Department of Health, Education, and Welfare. Panel on Social Indicators, Toward a Social Report. Washington, U.S. Government Printing Office, 1969, 101 pages.

In March 1966, President Lyndon Johnson "* * * directed the Secretary of Health, Education and Welfare to search for ways to improve the Nation's ability to chart its social progress." In particular the President asked the Department "to develop the necessary social statistics and indicators to supplement those prepared by the Bureau of Labor Statistics and the Council of Economic Advisers." "With these yardsticks," he added, "we can better measure the distance we have come and plan for the way ahead." A Panel on Social Indicators was convened in the Department. Composed of in-house and consultant social scientists the group attempted to develop a trial-run social report. This study is the result of that effort.

According to the authors, "the present volume is not a social report. * * * The report represents an attempt * * * to look at several important areas and digest what is known about progress toward generally accepted goals." Subject areas treated are: health, social mobility, the condition of the physical environment, income and poverty, public order and safety, and learning, science and art. The study was handicapped by lack of appropriate Federal statistics and measures of social change. Included are recommendations for the collection of better quantitative and qualitative information on the quality of life in America.

Despite the weaknesses in this governmental attempt to develop social indicators, the group concluded: "A social report with a set of social indicators, could not only satisfy our curiosity about how well we are doing, but it could also improve public policymaking in at least two ways. First, it could give social problems more visibility and thus make possible more informed judgments about national priorities. Second, by providing insight into how different measures of national well-being are changing, it might ultimately make possible a better evaluation of what public programs are accomplishing."

2. Concept, Methodology, Measurement

Bauer, Raymond, A., ed. Social Indicators. Cambridge, Massachusetts, The M.I.T. Press, 1966, 357 pages.

This volume was prepared under the direction Raymond A. Bauer, by the American Academy of Arts and Sciences for the National Aeronautics and Space Administration as part of NASA's study into the impact of the space program on American society. The study is one of the earliest and most comprehensive treatments of the conceptual foundation of social accounting.

It contains: Earl P. Stevenson "Forward"; Bertram M. Gross, "Preface : An Historical Note on Social Indicators"; Raymond A. Bauer, "Detection and Anticipation of Impact: The Nature of the Task"; Albert D. Biderman, "Social Indicators and Goals"; Bertram M. Gross, "The State of the Nation; Social Systems Accounting"; Albert D. Biderman, "Anticipatory Studies and Stand-by Research Capabilities"; and Robert A. Rostenthal and Robert S. Weiss, "Problems of Organizational Feedback Processes."

"The four major chapters of this volume are directed at assessing the present state of the art, and exploring what would be required in the form of an improved informational system.

The task was broken into four units:

"1. Albert Biderman looks at the existing social indicators from the point of view of their relationship to those national goals which have been set forth, the ways in which such statistical series originate, and the multiple uses to which they are put.

"With a recognition of the fact that much of social criticism is based on an unwarranted complacency about the evidence available, one of Biderman's objectives is to convince the reader that the problem is indeed a serious one, and that we are not concerned with trivial 'technical niceties.'

"Having established the fact that there is indeed a problem, rather than hurrying to an immediate prescription for the curing of the ill, he makes an intensive sociological analysis of the existing state of affairs. He asks, for example, how do statistical series come into being under present practice? What uses are made and what justifications can be invoked in favor of present practice? What constraints are there on how we might set up an ideal set of social indicators for evaluating the state of the society? More frontally, what can we learn from the existing state of affairs that should give us sober pause in prescribing an ideal set of social indicators?

"2. Gross accepts the challenge of Biderman's analysis and sets forth in a broad scheme what such an ideal system of social statistics would look like. He takes modern national economic accounting as his point of departure, extending it to a wide concept of social accounting.

"3. Biderman, in the second of his contributions, discusses the need for stand-by research facilities to collect data on events falling outside regular statistical series. Because of the novel nature of the space program, not only is the occurrence of unanticipated events especially likely, but it is especially critical that there be facilities for their study.

"Biderman reviews experience in gathering data on such novel, un-anticipated events. He also reviews the existing facilities in this and other countries that might be mobilized into such an over-all facility.

"4. Rosenthal and Weiss turn to the final problem of what to do with the new information providing that it might become available. We phrase this in terms of the sort of feedback system a given organization might want to set up, and the consequences, both favorable and unfavorable, of reporting back data on the full range of impact of the organization's actions."

5. Bauer's essay is a critical summarization of the other chapters of the study.

Bauer, Raymond A. "Social Indicators Or Working in a Society Which Has Better Social Statistics." In Stanford Anderson, ed. Planning for Diversity and Choice: Possible Futures and Their Relations to the Man Controlled Environment. Cambridge, The M.I.T. Press, 1968, pages 237-58. (326 pages plus bibliography and index.)

This paper was presented at a conference for architects held in 1966 under the sponsorship of The Graham Foundation for Advanced Studies in the Fine Arts, the American Institute of Architects-Princeton Educational Research Project, and the Department of Architects, Massachusetts Institute of Technology.

In his paper Bauer presents a short, but valuable summary of material from his book "Social Indicators." He also develops a rationale for preference of social vs. economic statistics, treats specific indicators needed, relating to housing and urban development, and describes some of the problems faced by social and behavioral scientists working on an interdisciplinary project with physical and natural scientists, engineers and architects.

Also included is the discussion session which follows Bauer's presentation.

Bauer, Raymond A. "Societal Feedback." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 180-192.

"This essay examines the nature of a potential societal information system. If we take the modern management-control system as a prototype, the societal system would be broader based, multifunctional, and more open-ended. The general functions of any information system are detection, evaluation, diagnosis, and guidance to action. The exercise of these functions is easier, to the extent that the problems dealt with are of a relatively narrow range and a relatively repetitive nature. The problems toward which a societal information is directed are not widely varied

but also complex and unique. Given the breadth, complexity, and uniqueness of the problems, the number of actors and evaluators whose information needs must be met, and the lack of consensus on any model of our society, one cannot devise a set of social indicators closely tailored to more than a few of the potential uses to which they are to be put. In the selection of the indicators themselves, one must to a large extent rely on consensus that certain aspects of the society are "important" regardless of the societal model one holds. A system such as this is highly reliant on rapid feedback [but] because of it is weak on providing anticipations of the full range of consequences of one's actions. Furthermore, the causal relations between one's actions and changes measured by a broad societal information system are indirect and diffused. A good deal of ad hoc analytic research is required to bridge the gaps of inference in such a system."

Biderman, Albert D. "Information, Intelligence, Enlightened Public Policy:

Functions and Organization of Societal Feedback." Policy Sciences, Vol.

I, 1970, pages 217-230. (Portions of this paper were presented at the

65th Annual Meeting of the American Political Science Association, New

York, 1969 and at a Colloquium on Urban Intelligence Systems at the Center

for Urban Studies, Wayne State University, 1969).

"Normative properties which make social statistics useful as social indicators are illuminated by considering the functions systematic social knowledge has at various levels of social organization and the involvements of actors at these various levels in roles which result in such knowledge. Modes and degrees of generalization which make knowledge useful for action at the lowest levels of social organization ("information") or for administration at intermediate bureaucratic levels ("intelligence") are not necessarily applicable to the formation of broad social policy ("policy knowledge") or for affecting the general conceptions of the social world held by broad public ("enlightenment"). The latter two functions are not always well served by data which have been collected and ordered by systems primarily responsive to the former two functions."

Biderman, Albert D. "Kinostatistics for Social Indicators." Washington, D.C.,

Bureau of Social Science Research, Inc., 1971, 15 pages. (BSSR 532).

This paper explores a National Science Foundation funded project on the potential of using nonprint techniques for displaying and disseminating social statistical information. "The project will attempt to bring together the ideas of social scientists with those of specialists in the arts and technologies of communication and data display."

Brenner, M. Harvey. Time Series Analysis of Relationships between Selected Economic and Social Indicators. Vol. I, Test and Appendices. School of Medicine, Yale University. March 1971, 203 pages. Available from National Technical Information Service.

This report contains only graphs which illustrate the relationships between concomitant long-and short-term trends in unemployment and employment and earnings and the following types of indicators: health and medical care, family life and housing, population movement, and crime and correction. The entire study is directed to identifying those major areas of social behavior that may potentially be affected by changes in the manpower area. (Author)

Brenner, M. Harvey. Time Series Analysis of Relationships Between Selected Economic and Social Indicators. Vol. II. Detailed Graphic Analysis. School of Medicine, Yale University. March 1971, 212 pages. Available from National Technical Information Service.

The study focuses on measuring and evaluating the impact of problems and benefits related to short-and long-term trends in employment, unemployment and earnings. Some of the areas studied are health and medical care, family life, demographic changes and crime. The general hypothesis was that relationships between economic conditions do exist, are observable and are amenable to various types of statistical probing and analysis. The study is directed to identifying those major areas of social behavior that may potentially be affected by changes in the manpower area. (Author)

Clausen, A. W. "Toward an Arithmetic of Quality." Conference Board Record, Vol. 8, May 1971, pages 9-13.

The first step toward effective policy making must be the development of a set of social accounts, or social report, that can "identify, assess and measure those elements of national life that are essential to our well-being--and which are not, and cannot be, measured by present economic indices."

David, Henry. "Social Indicators: Reverent and Irreverent Observations." Prepared for the NATO Advanced Study Institute on Technology Assessment, Italy, September 18-29, 1972, unpublished, 16 pages.

Discusses the difficulties of developing social indicators for use in technology assessment. Good evaluation of the history of social indicators movement in the scholarly literature.

Duncan, Otis Dudley. Toward Social Reporting: Next Steps. New York, Russell Sage Foundation, 1969, 37 pages plus bibliography. (Part of the series: Social Science Frontiers: Occasional Publications Reviewing New Fields for Social Science Development, No. 2)

"* * * This memorandum, prepared at the invitation of Dr. Eleanor Bernert Sheldon of the Russell Sage Foundation * * * suggest (s) an orientation and line of action for foundation executives, administrators of research grant programs, directors of research organizations, and others concerned with making contemporary social science more useful for the function of social reporting."

Reviewing the recent literature and policy recommendations on social accounting, Mr. Duncan concludes "* * * that three attitudes are widespread: (a) dissatisfaction with the present state of the art in measuring social change, (b) appreciation of the appalling magnitude of the task of effecting significant improvement in that state, and (c) paralysis of our normal ability to take significant action. In consequence of the last," he says, "there is * * * apparently more interest in talking about it than in doing it." Several alternative strategies for appropriate action needed to develop the state of the art for social accounting are discussed. Major attention is given to the need and procedure of conducting replication of major base-line studies to provide social scientists and policy-makers with longitudinal data. Recommendations are: "1. The Bureau of the Census should be urged strongly to make available a '1-in-1,000' (or comparably large) sample of the 1970 Census in a form that maximizes comparability with the 1960 sample of this type that was made available for public use. 2. Strong representations to the appropriate government agencies should be made with a view toward replication of major base-line studies done by them. 3. The idea of creating '1-in-1,000' samples for census years prior to 1960 should be carefully explored. 4. Make a systematic canvass of expert opinion on the possibilities of replication in a wide variety of fields. 5. Convene a series of small working parties to plan replication studies in selected fields. 6. Commission a working party to plan an omnibus replication of several important studies that are sufficiently similar with respect to sampling plan and design of questionnaire. 7. Assuming encouraging results from suggestions 4-6, hold a conference or conferences looking toward the establishment of an Institute, Consortium, or Cooperative Project for the Measurement of Contemporary Social Change. 8. Sponsor a pilot project on replication studies: one sufficiently small in scale to be manageable but sufficiently ambitious to yield substantively interesting results."

Etzioni, Amitai. "Indicators of the Capacities for Societal Guidance." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 25-34.

"This paper discusses the continuation of an effort to develop indicators for macrosociological concepts. Indicators for two concepts are suggested: for the knowledge that a societal unit commands and for mobilization of its membership. The theoretical justification for focusing on these two concepts is briefly discussed, and the merits and shortcomings of various indicators are explored."

Etzioni, Amitai and Edward W. Lehman. "Some Dangers in 'Valid' Social Measurement." In "Social Goals and Indicators For American Society, Vol. II." Special Issue of The Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 1-15.

"This paper is a preliminary statement on the dysfunctions that social measurement may have for societal planning. Three problem areas associated with questions of internal validity are examined. The most general one is the area of fractional measurement, which concerns dysfunctions stemming from lack of coincidence between a social concept and its operational definition. Also examined are problems of indirect measurement and problems of formalistic aggregative measurement of collective attributes. The area of indirect measurement concerns potential negative consequences of using data collected originally for other purposes as measures of social concepts. The area of formalistic-aggregative measurement concerns dysfunctions flowing from imprecise measurement of the states of social systems. Two broad classes of dysfunctions in these three areas are identified: (1) arriving at invalid conclusions which become the bases for erroneous policy decisions and (2) ignoring those dimensions and indicators of a concept that are most susceptible to social manipulation."

Firestone, Joseph M. "The Development of Social Indicators from Content Analysis of Social Documents," Policy Sciences, Vol. 3, 1972, pp. 249-63.

Complexities surrounding development of theory and data to develop social indicators incorporating the cultural and group psychological aspects of social behavior.

Gastil, Raymond D. "Social Indicators and the Quality of Life." Public Administration Review, November/December 1970, pages 596-601.

"It is likely that highly abstract social indicators for the 'quality of life' or very broad aspects of it will be presented as aids to decision makers in the near future. The nature of the data available and past experience suggests that such indicators should be viewed with suspicion. ...There is a great deal of room for better presentation and use of social statistics in the understanding of where we are and where we are going. There should be more comparison over time and from place to place, while the less apparent variable working behind each statistic should be explored and made more explicit. Statistics used to sum together into measures of

abstractions such as quality of life should be viewed with a great deal of apprehension. Releasing statistics already gathered, such as those in education, to make possible further meaningful comparisons and analyses should be as important a goal as the gathering of new data."

Land, Kenneth C. "On the Definition of Social Indicators." Presented at the Annual Meeting of the Population Association of American, April 24, 1971.

Research needs for social indicators.

Little, Dennis and Richard Feller. "STAPOL: A Simulation of the impact of policy, values, and technological and societal developments upon the quality of life." Middletown, Connecticut, Institute for the Future, October 1970, 10 pages, Working paper WP WP-12.

"Over the past two years, the Institute for the Future has conducted research in technological and societal forecasting, social indicators, value change, and simulation gaming. This paper describes an effort to bring together parts of the above research into a simulation game ("State Policy", or STAPOL) for analysis of the impact of government policy, social values, and technological societal developments upon the quality of life in a hypothetical, highly industrialized, two-part, New England State."

Long, Norton E. (Professor, Department of Politics. Brandeis University.) "Planning for Social Change." In Planning 1968, Selected Papers from the ASPO National Planning Conference, San Francisco, May 4-9, 1968. Chicago, American Society of Planning Officials, 1968, pages 67-69.

Miller, Herman P. "Processing of Census and Sample Survey Data on Social Change and Regional Disparities in the United States." Social Science Information, Volume 7, No. 3, June 1968, pages 95-131.

National Commission on Technology, Automation, and Economic Progress, "Technology and the American Economy." Vol. 1, February 1966. Report of the National Commission on Technology, Automation, and Economic Progress. Washington, U.S. Government Printing Office, 1966.

Reviews several substantive and methodological problems encountered in measuring and understanding the impact of economic change on the social system; and among its recommendations calls for development of social indicators and a social accounting system to support research and information needs in this area.

"New Computer Mapping Program Developed." In U.S. Department of Commerce.

Bureau of the Census. Small-Area Data Notes. Volume 6, No. 6, June 1971, pages 3-4.

Describes development of a computer program, by Dr. Morton W. Scriptor, University of Idaho, for computer assisted printing of social data maps. "Data areas (e.g. States, counties, census tracts, etc.) are printed on the map according to a classification of the statistical values of their data. The user specifies the number and limits of the statistical classes and their respective print symbols. Shading can be achieved by overprinting two or more printer characters." A listing of the program and procedures is available from the Data Access and Use Laboratory, Bureau of the Census, Washington, D.C.

Olson, Mancur. "An Analytic Framework for Social Reporting and Policy Analysis."

In "Political Intelligence for America's Future." Edited by Bertram M.

Gross and Michael Springer. The Annals, Volume 388, March 1970, pages

112-126.

"Most of the agencies and departments of the federal government have planning, research, or evaluation staffs that help their administrators to deal with many of the tactical problems facing the federal government. But the President traditionally has had no comparable staff to do research into the larger or strategic social alternatives that the nation faces. There appears to be a need for such a staff, which might gain visibility and influence through the issuance of annual social reports. One difficulty is that there is no fully satisfactory intellectual framework or theory for the analysis of society-wide social problems. The main acceptable intellectual frameworks are the problem-solving approach, inherent in economic theory and operations research, and structural-functional analysis, which is common in several social sciences. This paper endeavors to show that structural-functional analysis is an incomplete version of the problem-solving approach, and that its main shortcomings can be traced to this incompleteness. The problem-solving approach * * * should be used with more concern about suboptimization, and with more interest in the softer variables characteristically considered in structural-functional analysis."

Olson, Mancur, Jr. "The Relationship of Economics to Other Social Sciences; The Province of a 'Social Report.'" By Mancur Olson, Jr., then with the Department of Health, Education and Welfare. Prepared for delivery at the 1967 Annual Meeting of the American Political Science Association, Chicago, September 8, 1967, Mimeo, 47 pages.

This paper was written while the author was Deputy Assistant Secretary for Social Indicators in the Department of Health, Education, and Welfare. In it he reviews several of the more abstract approaches to measuring economic, political and social change; notions which he believes should be developed to provide a foundation for a more refined system of social accounting. He then elaborates upon his notions of applying part of the Pareto-optimality theory to exploring political and social behavior.

Olson, Mancur, Jr. "Social Indicators and Social Accounts." Rough Draft of a paper written while the author was Assistant Secretary for a Social Accounting, H.E.W., but stating "the personal opinions of the author." Mimeo, [1968], 20 pages.

Working paper, outlining and detailing the need for social accounting, its relationship to and difference from economic accounting, and the problems of data aggregation and disaggregation, measuring and weighting hard-to-quantify social variables, and the potentially valuable impact of social accounting upon policy-making.

Olson, Mancur, Jr. "Social Indicators and Social Accounts." Socio-Economic Planning Sciences, Vol. II, 1969, pages 335-346.

Olson, Mancur, Jr. "Social Reporting: Its History and Prospects." Paper prepared for delivery at meetings of the American Political Science Association, September 2, 1969, mimeo, 1969, 23 pages.

Mr. Olson looks at the similarities and differences between the functions performed by the Council of Economic Advisors and the proposed Council of Social Advisors, the need for institutionalization at the Presidential level of information gathering and assessment function, and, at the conceptual level of social accounting, potential refinement and utility of "the problem-solving approach" and the "structural-function approach" of sociological analysis.

Sheldon, Eleanor Bernert and Howard E. Freeman. "Notes on Social Indicators: Promises and Potential." [Paper presented at Statistical Users Conference, November 1969] [1969] Mimeo, 24 pages plus bibliography. (Mrs. Sheldon is with the Russell Sage Foundation; Mr. Freeman is with Russell Sage and Brandeis University.)

"Perhaps the time has come to provide a reasonably extended scrutiny of some impossible uses of social indicators and to specify in a programmatic sense the possible, if only potentially so, uses of indicators." According to Sheldon and Freeman, social indicators cannot now be used to meet certain of the objectives held by those who propose institutionalization of this system. The impossible uses of indicators are "the setting of goals and priorities, the evaluation of programs and the development of a balance sheet." Social indicators can contribute to: "improved descriptive reporting; to the analysis of social change; and to the prediction of future social events and social life." These notions are given detailed treatment, and data-base and conceptual inadequacies are outlined. Also included is a critical analysis of "Toward a Social Report," a trial-run social report issued by the Department of Health, Education, and Welfare, January 1969.

Sheldon, Eleanor Bernert, and Wilbert E. Moore, eds. Indicators of Social Change: Concepts and Measurement. New York, Russell Sage Foundation 1968, 804 pages plus index.

The book consists of a series of essays written in support of Russell Sage's project on "Monitoring Social Change." Each of the essays presents descriptive material on an aspect of society and on the state of research and currently collected statistics needed to provide for adequate measurement of that variable. According to the editors, "the indicators explored in this volume are not designed for program evaluation, although various authors * * * have noted some practical or policy-oriented implications of the trends discerned. * * * The volume is heavily weighted toward the scholarly, or analytic, side of the balance between theoretical and practical concerns focusing on large-scale structural change. It asks the primary question: What is changing?"

Essays are subsumed under various categories, identified by the editors as "* * * the component parts of a functional system--that society undergoing change." Structural changes so conceptualized and essays describing those changes are: the demographic base: "Population: Trends and Characteristics," Conrad Taeuber; structural features: "Production of Goods and Services: The Measurement of Economic Growth," A. W. Sametz; "Labor Force and Employment Trends," Stanley Lebergott; "The Measurement of Knowledge and Technology," Daniel Bell; "The Changing Politics of American Life," Joyce M. and William C. Mitchell; "The Theory and Measurement of Family Change," William J. Goode; "Trends and Anti-Trends in Religious Change," N.J. Demerath III; distributive features: "Consumption: A Report on Contemporary Issues,"

Milton Moss; "The Definition and Measurement of Leisure," Philip H. Ennis; "Problems in the Measurement of Health Status," Iwao M. Moriyama; "Trends in Output and Distribution of Schooling," Beverly Duncan; aggregative features: "Social Stratification and Mobility: Problems in the Measurement of Trend," Otis Dudley Duncan; and "Welfare and Its Measurement," Iva C. Merriam.

Sheldon, Eleanor Bernert and Kenneth C. Land. "Social Reporting for the 1970's A Review and Programmatic Statement." Policy Sciences, 3 (1972), pp. 137-151.

A definitive review of the state-of-the-art of social indicators research, recommendations for improvements, methodological, substantive, and organizational.

Sheldon, Eleanor Bernert and Wilbert E. Moore, "Toward the Measurement of Social Change: Implications for Progress." Chapter 7 In Leonard H. Goodman, ed. Economic Progress and Social Welfare. Published for the National Conference on Social Welfare by Columbia University Press, New York, 1966, pages 185-212.

This piece consists essentially of a working paper used by the authors prefatory to completion of their study "Social Indicators." In the piece the authors set out what they believe to be the major changes in American society: the demographic base, the structural base, and the distributive and aggregative features. They describe changes in these areas and pose the questions about what additional data are needed to adequately develop social indicators to monitor these social changes: "what we know retrospectively concerning trends in the area under review, with a note on whether that knowledge is quantitative or possibly quantifiable; what we know about the current state, and in combination with (the first item) about the prospective state; and what additional trend data are needed, and why."

Sheldon, Eleanor Bernert and Wilbert E. Moore. "Toward the Measurement of Social Change: Implications for Progress." In Leonard Goodman, Ed. Economic Progress and Social Change, (New York, Columbia University Press), 1966, and in Wilbert E. Moore and Eleanor Bernert Sheldon, "Monitoring Social Change; A Conceptual and Programmatic Statement," Proceedings of the Social Statistics Section, 1965 Washington, D.C.: American Statistical Association, 1966, pages 144-149.

"Social Maps, District of Columbia Population and Social Problems Characteristics: 1968, Data by Census Tract." By Applied Urbanetics, Inc., 910 17th Street, N.W., Washington, D.C., 20006.

This map is an illustration of work being done by some ADP firms in the field of social indicators. Using available Federal and other statistics, the firm prepared a map of the District of Columbia, portraying, with different areas within the District of Columbia: (1) Population - less than 70% non-white; more than 70% non-white; (2) composite social indicators including; welfare, illegitimacy, infant mortality, venereal disease, and Juvenile Court referrals - by fewer problems per capita than the D.C. average; and more problems per capita than the D.C. average.

Starr, Chauncey. "Benefit-Cost Studies in Socio-Technical Systems." Presented at the NATO Advanced Study Institute on Technology Assessment, Milan Italy, September 18-29, 1972. Unpublished, 35 pages.

Discusses relationship of social accounting and better socio-economic data to the need for cost/benefit accounting as a part of the technology assessment process.

"Survey of the State of the Art: Social, Political, and Economic Models and Simulations." Prepared for the Commission by Abt Associates, Inc., Cambridge, Massachusetts. In National Commission on Technology, Automation, and Economic Progress. "Applying Technology to Unmet Needs: Appendix Volume V, Technology and the American Economy, The Report of the Commission." Washington, U.S. Government Printing Office, February 1966, pages 203-240.

"This report presents the results of a 2-month survey of the state of the art of social, political, and economic models and simulations recently completed or well in progress in the United States as of December 1965. Seven social scientists and systems analysts of Abt Associates Inc., conducted the survey. * * * This report includes a statement of survey objectives, scope, and content; descriptive typologies of over 50 representative current social, political, and economic models, computer simulations, and human player games; staffing, time, and money requirements of these model projects; and assessment of the strengths and weaknesses of the current art and its applicability to public policy planning; and recommendations for government policy regarding the new intellectual technology of modeling."

Terleckyj, Nestor E. "Measuring Possibilities of Social Change." Looking Ahead, (publication of the National Planning Association), Vol. 18, August 1970, pages 1-11.

This article describes current work in progress by the National Planning Association on a project designed to establish national goals, set priorities among them and measure attainment of them. Techniques used include PPBS, social accounting and economic analysis. The system developed so far and described in the article is characterized by the following features: (1) setting of national goals with estimates of cost involved; (2) quantitative definition of goal outputs by the use of specific indicators of social changes selected to measure the achievement of national goals; (3) estimates of total future outputs (within the next 10 years) by which desirable social changes can be brought about; (4) distinction between new activities needed and current social activities relating to the same goals; (5) estimates of the range of alternative future outputs that are also economically feasible as determined by the availability of resources; and (6) specific recognition of the lead-time required for implementing activities and the explicit distinction between private and public outlay components of the activity cost.

The author is director, National Priorities Study, Center for Priority Analysis, National Planning Association.

Williams, Robin M. Jr. "Individual and Group Values." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 20-37.

"Because values, defined as generalized criteria of desirability, are deeply involved in all of the specialized areas treated in this volume, much of the needed analysis is implicit in other articles. There remains a need to render explicit the first-order tasks for making data on values a viable part of societal self-awareness and self-direction, in an age of

Great Societies. Values are important causal components in individual conduct and in the functioning of social systems. To develop adequate indicators for the needed analysis will require major efforts and much ingenuity. Yet practicable methods already are available for the systematic empirical study of values. Because of the lack in the past of standardized measures and comprehensive reporting, the existing data are scanty, fragmentary, and diffuse. Yet cautious and imaginative use of existing information has added to our knowledge of distinctive value patterns in the United States, and some illuminating comparisons have been made with other societies. Better data and more explicit analysis of value problems will enhance effectiveness of goal-achievement, widen the scope of awareness in decision-making, and provide enhanced capacities for sensing limits and hazards in current societal trends and policies. That new problems thereby will be created is inevitable, and not undesirable."

3. Social Indicators Data Needs

Biderman, Albert D. "Information and Intelligence and Enlightened Public Policy: Functions and Organization of Societal Feedback." A Paper Presented at the 65th Annual Meeting of the American Political Science Association, New York, September 6, 1969, 26 pages plus bibliography.

Albert D. Biderman, one of the earliest students of social accounting, further refines some of his notions about the conceptual basis of social accounting in this paper. He treats the usefulness and availability of presently collected Federal social statistics, using crime data as his major example, describes the role of social scientists in helping Federal statistics. He also discusses the basis of controversy surrounding the notion that social indicators should have "direct normative significance," and evaluates the common, as well as special statistical needs of Federal statisticians and social scientists doing research.

Bisco, Ralph L. "Social Science Data Archives: A Review of Developments." American Political Science Review, Volume LX, No. 1, March 1966, pp. 107-8.

Reviews effort by the U.S. government to provide better access to data collected or generated by its agencies. Briefly describes the 'Ruggles Committee,' the Social Science Research Council Committee on the Preservation and Use of Economic Data, the proposal for a Federal Data Center, and the Committee on Information in the Behavioral Sciences.

Bisco, Ralph L. "Social Science Data Archives: Progress and Prospects." Social Science Information. Published under the auspices of the International Social Science Council, Volume VI, No. 1, February 1967, pages 38-74.

Council of Social Science Data Archives. "Social Science Data Archives in the United States, 1967." New York, Council of Social Science Data Archives, September 1967, 45 pages.

"Social science data archives are depositories of data that scholars, policymakers, and others may use for scholarly research or for other purposes. The [Council of Social Science Data Archives] is a voluntary association of social science data archives. Through the Council, the member archives exchange information about new data sources, methods of data management and retrieval, and promising lines of secondary analysis. In addition, the Council is a vehicle for the exchange of information and experience among persons conversant with the new methods of managing, retrieving, and analyzing social science data by computer. The executive office and members of the Council provide advice to existing and planned social science data archives. * * * The work of the Council is supported by National Science Foundation grant GS-1258. * * *" This publication includes a bibliography of materials on social science data archives, a description of work and officers of the Council, and a listing of member social science data archives. The listing of member archives gives details of: date of establishment, data

stored, procedures for use, library association affiliation, type of data processing equipment, future plans, and bibliography of publications.

Conference on Data Archives in the Social Sciences. Data Archives for the Social Sciences. Edited by Stein Rokkan. Proceedings of the Paris Conference on Data Archives for the Social Sciences, 28-30 September 1964. Prepared by the International Social Science Council. Published by Mouton and Co., Paris, 1965, 213 pages.

"This volume of conference papers represents the third in a series of exploratory studies and discussions of the possibilities of strengthening the organizational and the informational infrastructure for comparative social science research. The first of these volumes, the "World Handbook of Social and Political Indicators" (New Haven and London, Yale University Press, 1964) illustrated the potentialities and documented the limitations of centralized data banks of aggregated national statistics. The second volume, "Comparing Nations," (New Haven and London, Yale University Press, 1966) brought together a set of 25 papers from a large-scale international conference on problems in the use and further development of such data banks. This third volume adds a further series of papers on the organization of data banks and data archives in the social sciences, this time with a focus on the concrete and practical problems of access, quality control, standardization and retrieval."

Articles directly or tangentially related to social accounting are: "Inventory of American Production of Sample Survey Data in 1963," Philip K. Hastings; "Inter-University Consortium for Political Research: Current Data Holdings." Warren E. Miller; "Archives for Statistical Studies on Within-Nation Differences," Stein Rokkan and Henry Valen; "Social Science Data Archives: Technical Considerations," Ralph L. Bisco; and "The U.S. National Council on Social Sciences Data Archives: Review of Archival Development, 1962-65," Ralph L. Bisco.

"The Federal Data Center: Proposals and Reactions." By Robert L. Chartrand, assisted by Louise Giovane Becker, Science Policy Research Division, Legislative Reference Service, Library of Congress, Washington, D.C., Multilith, June 14, 1968, 21 pages plus bibliography. SP 137 (rev.)

"Statistical data, sometimes augmented by interpretive commentary, have been collected, stored, and utilized by many Federal agencies. As the planning, programming, and budgeting functions of the Federal community becomes more complex, it was decided [to study this critical area]. The Social Science Research Council created late in 1960 for this purpose, a Committee on the Preservation and Use of Economic Data [The Ruggles Committee]. The efforts of this study group were to be but the first in a series of studies, critiques, Congressional hearings,

and special analyses which still are in progress." The issue has broadened since issuance of the report. Concerns are: invasion of privacy versus national development of a centralized information handling system featuring ADP. This report discusses the history of these activities, subsequent investigations, and Congressional concerns.

Gross, Bertram M. and Michael Springer. "New Goals for Social Information." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Sciences, Vol. 373, September 1967, pp. 208-218.

"In this period of confusing social change, a domestic 'intelligence gap' impedes rational consideration of both public and private policy choices. An intelligent strategy for narrowing this gap requires action on many fronts. One of these is to remedy the 'concept lag' produced by the comparability-relevance conflict and other factors. As indicated by the table "Indicator Suggestions" (and the similar table in the Gross-Springer article in the May 1967 volume of The Annals), this is the main task assumed by most of the authors in both volumes. Instead of discussing statistical techniques, they have concentrated on conceptual innovations that make it possible to upgrade obsolescent data and obtain new forms of social information, both quantitative and qualitative."

Gross, Bertram M. and Michael Springer. "New Goals for Social Information." In "New Goals for Social Information and S. 843." Remarks of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, November 17, 1967. pages S16667-70.

Sen. Mondale's statement includes a reprint of the Gross-Springer article originally appearing in the Annals of the American Academy of Political and Social Science.

Harwood, Richard and Laurence Stern. "Federal Agencies Lack Proper Data On Which to Base Social Policies." The Washington Post, January 7, 1970.

Reviews statements on inadequacy of Federally collected social data as made by Joseph A. Califano, former special assistant to the President, while testifying on the proposal to establish a Council of Social Advisors. The discussion then turns to the hazards of the proposal--primarily invasion of privacy. " * * * There is something a bit scary about the notion * * * a trifle Orwellian * * * The preservation of the village idiot is as much a mark of our freedom as the eradication of the empty belly."

Holleb, Doris B. "Social Statistics for Social Policy." Planning 1968: Selected Papers from the ASPO National Planning Conference, San Francisco, May 4-9, 1968." Chicago, American Society of Planning Officials, 1968, pages 80-85.

One of the topics treated at the conference was social indicators. In her paper, which served as background material for the conference, Doris B. Holleb, Center for Urban Studies, University of Chicago, says: "Dilemmas are inescapable when attempting to use social statistics in urban planning. And the social information that we presently collect is often distinctly irrelevant to the issues at hand." She outlines some of the inadequacies of currently collected statistics describing urban conditions, and describes the pros and cons of developing social indicators to meet the present gap between needs for and availability of information. "The development of a set of social indicators and the consequent improvement of our empiric information can contribute greatly to the evolution of a satisfactory body of theory, and, perhaps, to more rational social policy decisions."

"The Numbers That Cost Money." Business Week, March 14, 1970, page 108. Discussion of new economic statistical series being considered by the Office of Statistical Policy, Bureau of the Budget.

Report of the Commission on Federal Statistics, 2 vols., Washington, D.C., U.S. G.P.O., 1972.

"Report of the Committee on the Preservation and Use of Economic Data to the Social Science Research Council, April 1965." [The Ruggles Report.] In U.S. Congress. House. Committee on Government Operations. The Computer and Invasion of Privacy. Hearings before a Subcommittee of the . . . July 26, 27, and 28, 1966. 89th Congress, second session. Washington, U.S. Government Printing Office, 1966, pages 195-253. (318 pages.)

"* * * The Committee on the Preservation and Use of Economic Data . . . met with a considerable number of Federal agencies concerned with the collection and use of data in machine readable form. The prime concern of the committee has been the development and preservation of data for use in economic research. Although considerable progress has been achieved in specific areas, the committee has concluded that three more general lines of action

are required. Specifically, these are (1) the Federal Government should undertake the establishment of a Federal Data Center; (2) procedures should be established to insure the development and preservation of important data; and (3) research institutions and universities should develop an organization for coordinating their requests for economic data." These recommendations and justification for them are developed. Also includes a listing of preliminary evaluation of punchcard and computer tables of economic data held by federal agencies and recommendations to improve data development at universities and research institutions.

"Resolutions of the Conference on Social Statistics" In "Excellent Suggestions for Improving Our Social Data." Remarks of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, October 9, 1967, pages S14444-5.

Describing this article, Sen. Walter F. Mondale, sponsor of a bill to create a Council of Social Advisors says: "Some excellent suggestions for improving our ability to gather increasingly accurate and meaningful social statistics have been advanced in recent months. Among the better recommendations are those advanced by the Conference on Social Statistics and the City, convened by the Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University." Resolutions emanating from the Conference treated improvement of the enumeration of Negroes, Puerto Ricans, and Mexicans."

Rokkan, Stein, ed. Data Archives for the Social Sciences. Proceedings of the Paris Conference on Data Archives for the Social Sciences., 28-30 September 1964. A Publication of the International Social Science Council. Paris, Mouton and Company, 1966, 213 pages.

"This volume of conference papers represents the third in a series of exploratory studies and discussions of the possibilities of strengthening the organizational and informational infrastructure for comparative social science research. The first of these volumes, the "World Handbook of Social and Political Indicators" (New Haven and London, Yale University Press, 1964) illustrated the potentialities and documented the limitations of centralized data banks for aggregate national statistics. The second volume "Comparing Nations" (New Haven and London, Yale University Press, 1966) brought together a set of 25 papers from a large-scale international conference on problems in the use and further development of such data banks. This third volume adds a further series of papers on the organization of data banks and data archives in the social sciences: this time with a focus on the concrete and practical problems of access, quality control, standardization and retrieval. The papers in this volume must be read and studied in a wider context of parallel efforts under the auspices of UNESCO, the International Social Science Research Council, the National Science Foundation . . . and a variety of other bodies." Material included deals generally with: "the production of raw data for storage and retrieval; the development and operation of data archives; and the technology of the archiving and retrieval."

Ruggles, Richard. "Report of the Commission on Federal Statistics---a review essay."

Monthly Labor Review, Vol. 95, September 1972, pp. 29-32.

Review article which treats the following issues detailed in the report: statistical service, availability of data, social science research policies and invasion of privacy.

Shiskin, Julius. "Strengthening Federal Statistics." The American Statistician, Vol. 24, February 1970, pages 15-20.

"Social Science Data Archives in the United States, 1967." New York: Council of Social Science Data Archives, 1967, 45 pages.

Lists various archive centers and gives the following information on these centers: Director, Data, Number of studies. Procedures for use, Equipment, Future plans and Publications.

Taeuber, Conrad. "The Federal Government As a Source of Data." In "Social Science and the Federal Government." The Annals of the American Academy of Political and Social Science, March 1971, pages 114-124.

"The federal government is the source of a large volume of statistics which becomes available for analysis by social scientists. Developments have been made in recent years in the timeliness of the release of the data. The growing use of electronic computers has led to the development of new ways of making data available for further analysis. Available statistics tend to become used even though there is not the continuing critical review which would be desirable to assure that statistics at all times reflect the situation in the real world which they are intended to describe. There are needs for coordination and for the development of ways by which data from different sources can be used without violating the confidentiality of the individual data. Methodological problems in relation to sample surveys have received considerable attention. The development of improved methodology is a promising field for collaboration between federal statistical agencies and the social science community."

Terleckyj, Nestor. "Data Systems for Measuring Social Change." Paper given at the Annual Meeting of the American Statistical Association, Detroit, December 27, 1970, Mimeo, 18 pages.

"The purpose of this paper is to survey the possibilities for developing data systems which could be used for policy or research in the social field. . . . The mutual failure of supply and demand of data illuminating social conditions can be remedied probably in a substantial degree by educating the decision-makers to the possibilities of statistical information which could be obtained with more suitable lead time and demand specifications,

and by provision for an innovative and experimental branch of the statistics industry both in and out of government."

Tunstall, Daniel B. "Development of a social statistics publication." U.S. Office of Statistical Policy, Office of Management and Budget. A paper presented at the Annual Meeting of the American Statistical Association, Detroit, Michigan, December 27-30, 1970. Available from OMB, Washington, D.C. 20503.

U.S. Congress. Joint Economic Committee. Review of Federal Statistical Programs. Hearings before the Subcommittee on Economic Statistics of the * * * April 20, May 1, and 15, 1969, 91st Congress, first session, Washington, U.S. Government Printing Office, 1968, 208 pages.

Testimony received on the following two questions: (1) what data do we need to collect for an adequate census reflecting the socio-economic conditions of the population; (2) does the collection of such data constitute an invasion of privacy?

U.S. Congress. House. Committee on Post Office and Civil Service. 1967 Report of Statistical Activities of the Federal Government. 90th Congress, second session, House Report No. 1071. Washington, U.S. Government Printing Office, February 1, 1968, 216 pages.

"This report * * * is prepared every two years by [the] Subcommittee on Census and Statistics to furnish summary and detailed data concerning personnel, costs, and facilities devoted to Federal statistics. The current report has been expanded to include a listing of public-use forms approved by the Bureau of Budget as of June 1967." Also included are the titles of statistical series collected by various Federal agencies. The series was started in the 86th Congress. The 1969 report will be published sometime in Spring, 1970.

U.S. Executive Office of the President. Bureau of the Budget. Office of Statistical Standards. "Statistical Services of the United States Government." Prepared by the Office of Statistical Standards. Revised Edition 1968. Washington, U.S. Government Printing Office, [1968], 157 pages plus pocket.

"This booklet is designed to serve as a basic reference document on the statistical programs of the U.S. Government. Part I describes the statistical system of the Federal Government, the procedures followed to achieve coordination within a decentralized statistical system, and distinguishes between the various types of statistical agencies. Other sections describe the reductions of Federal statistical programs to those of other governmental and nongovernmental organizations, the methods of collection and tabulation, and the presentation of data. Part II presents brief descriptions of the principal economic and social statistical series collected by Government agencies. For each of about 50 subjects it tells what agencies are concerned and what kinds of data are collected and made available. Part III contains a brief statement of the statistical responsibilities of each agency and a list of its principal statistical publications."

"The booklet deals with economic and social statistics, with emphasis on what statistical information is made available to the public. Among statistical activities not dealt with here are statistical programs in the physical and natural sciences and the application of statistical methods and techniques in administrative processes. The collection and use of statistical data for operating purposes are not described in detail unless the data thus obtained are also available and used for informational purposes."

White, Douglas R. "Societal Research Archives System: Retrieval, Quality Control and Analysis of Comparative Data." Social Science Information, Volume VII, No. 3, June 1968, pages 79-94.

"The Societal Research Archives System (SRAS) was created * * * in 1966 as a computer-based retrieval and research facility for comparative data in social science. The basic idea was to integrate all of the available cross-societal coded data from published and unpublished sources into a single data base, and secondly to develop computer programs which would facilitate all of the steps in comparative research, from sample selection and data retrieval to correlation, data quality control, and testing for genetic, diffusional, or functional sources of correlation. This paper will serve to explain the present operation of the system."

"Who Needs the Figures?" Editorial. The Journal of Commerce and Commercial. March 6, 1970.

Treats collection of census data.

4. Governmental Organization for Social Indicators

Bell, Daniel. "The Idea of a Social Report." The Public Interest, Number 15, Spring, 1969, pages 72-84. (Part of the series "Toward a Social Report," included in this volume of The Public Interest.)

This article was published shortly after publication of "Toward a Social Report," released by the Department of Health, Education, and Welfare in January 1969. Dr. Bell, who is one of the foremost scholars of social change and forecasting, describes and details pertinent activities and literature relating to the concepts of social cost and social trends. He then details current activities designed to close the gap between the need and lag in development of social indicators. In describing "what a social indicator is," he draws upon the HEW report and describes the pitfalls which beset the group. Legislative proposals to create a Council of Social Advisors are described and evaluated as to their merit: While a government-wide social report is needed, "* * * the proposal for a Council of Social Advisers * * * has its drawbacks. * * * The intellectual and organizational resources for staffing such a council are few; there is little work in macrosociology comparable to the three decades of work in macroeconomics. * * * My own preference is to enlarge the present Council of Economic Advisers into a Council of Economic and Social Advisers and give it the responsibility of a combined report."

Henroit, Peter J. "Political Questions About Social Indicators." The Western Political Quarterly, Vol. XXII, No. 2, June 1970, pages 235-55.

The author raises "some of the political questions which should be asked about social indicators and about the social indicators movement." Among the questions covered are the following: (1) Is the root of contemporary social problems a lack of information or a conflict of interests?; (2) What are the consequences of the political orientation of the proponents of social indicators?; (3) What political consequences follow from the fact that social indicator systems are modeled upon economic systems?; (4) Can there be value-neutrality in the choice of questions to be asked in developing social indicators systems?; (5) What political consequences follow from the fact that some phenomena can more readily be measured than others?; (6) What influences will lobbying pressures have on the gathering of data?; (7) What influence will the character of a particular agency have upon the gathering of data?; (8) What is the political importance of the presentation of a social report which utilizes systems of social indicators?; (9) What safeguards are necessary to prevent the 'management of data'? (10) Is it possible or desirable to prevent indicators from being used as vindicators and indicators?; (11) To how wide an audience will the data for social indicators be available?; (12) What are the dangers to privacy that a system of social indicators might involve?; and (13) What impact upon administration will the use of social indicators have?"

Horowitz, Irving Louis, and Lee Rainwater. "Comment: Social Accounting For the Nation."

(Reprint of article originally appearing in Trans-action, May 1967.) In "Social

Accounting." Remarks of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, April 27, 1967, pages S5974-5.

Discussion by two social scientists of the pros and cons of passage of the bill to create a Council of Social Advisors, a Joint Committee on the Social Report, and to provide for an annual Social Report. "The bill * * * can institutionalize a much more systematic assessment of the social implications of various government actions and of the introduction into the policy-making process of the kind of social considerations that now tend to be either ignored or dealt with in a cavalier manner." And, "the long-range effects of the Mondale legislation on the social sciences themselves would be great. The social sciences are called upon to 'put up or shut up' by a program directly calling upon social advisors to work out a social report. Social scientists might experience great internal pressure to move in the direction of more precise and clearly formulated statements about society and about the effects of various kinds of intervention on society." The authors also urge that "* * * the Council of Social Advisors be enlarged from the present proposed three-member committee to a large committee * * *" with advisors from the social sciences.

"The Human Touch." Editorial. New York Times, July 17, 1969, page 26. Editorial on objectives, pros and cons of establishment of the National Goals Research Staff.

Javits, Jacob K. "Council of Social Advisors--Amendment No. 428." Remarks of the Hon. Jacob K. Javits on the floor of the Senate. Congressional Record, December 16, 1969, pages S16804-7.

The amendment to S. 5, a bill to create a Council of Social Advisors, "* * * would establish an Office of Goals and Priorities Analysis within the Congress to conduct a continuing nonpartisan analysis of national goals and priorities and to provide the Congress with the information, data, and analysis necessary for enlightened priority decisions." Included in Sen. Javits' statement is an elaboration of his reasons for introducing the amendment, and a statement on "National Goals and Priorities," from the 1969 Joint Economic Report.

Mondale, Sen. Walter F. "Editorials Support Need for Improved Social Policy-making." Statement by the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, February 16, 1970, pages S1669-70.

A short statement followed by three newspaper articles treating the Senator's proposal to create a Council of Social Advisors. Included are: Tom Wicker, "In the Nation: The Missing Ingredients," New York Times, December 25, 1969 (discusses lack of adequate information upon which to

base social policy making, based on testimony on the bill to create a Council of Social Advisors, by Joseph Califano); Richard Harwood and Laurence Stern, "Federal Agencies Lack Proper Data on which to Base Social Policies," Washington Post, January 7, 1970, (similar to the above but also discusses the hazard of invasion of privacy deriving from development of a system of social accounting); and "Council of Social Advisors," St. Paul Pioneer Press, January 8, 1970, ("A National Council of Social Advisors would be a worthwhile experiment.")

Mondale, Sen. Walter F. "The Full Opportunity and Social Accounting Act of 1967."

Remarks in the Senate. Congressional Record (vol. 113, no. 17, February 6, 1967).

Mondale, Sen. Walter F. "Mondale Announces Subcommittee on Social Program Planning and Evaluation." Remarks of the Hon. Walter F. Mondale on the floor of the Senate.

Congressional Record, May 20, 1969, pages S5372-3.

Announcement of formation of a new subcommittee to consider the bill to create a Council of Social Advisors, and the bill to create a National Foundation for the Social Sciences.

Mondale, Sen. Walter F. "Proposed Council of Social Advisors." Statement on the floor of the Senate by the Hon. Walter F. Mondale. Congressional Record (daily edition), March 21, 1967, pages S4146-7. (Contains Statements by leading social scientists regarding the proposed Council.)

Mondale, Sen. Walter F. "Reporting on the Social State of the Union." (Article originally appeared in Trans-Action, June 1968.) In "'Reporting on the Social State of the Union," Article by Senator Mondale." Remarks of the Hon. Fred R. Harris on the floor of the Senate. Congressional Record, July 18, 1968, pages S8857-9.

In this article, Senator Mondale reviews his major reasons for introducing a bill to create a Council of Social Advisors. Discussed are: the inadequacies of using economic statistics to give an indication of social conditions, the need to plan for and operationalize social goal setting, and general policy-making requirements. He reviews also the difficulties he foresees in passing the legislation, the need for social scientists to help form the constituency needed to give additional support to passage of the bill. He describes also how the social sciences would benefit from passage: additional basic and applied research support and access to policy-makers.

Mondale, Sen. Walter F. "S.5--Introduction of Bill--Full Opportunity Act of 1969."

Statement of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, January 15, 1969, pages S232-7.

Floor statement by Sen. Mondale upon introduction of the 1969 version of the bill to create a Council of Social Advisors, provide for an annual social report, and create a Joint Committee on the Social Report. Mr. Mondale reviews conclusions about the need for passage, as derived from hearings held on the proposal since 1967, and relates the functions of the proposed Council to solving some of the nation's most current pressing social problems.

Mondale, Sen. Walter F. "Senator Mondale Commends 'Toward a Social Report.'" the Hon.

Walter F. Mondale on the floor of the Senate. Congressional Record, February 4, 1969, pages S1306-9.

Statement by Sen. Mondale describing release of the Department of Health, Education, and Welfare's "Toward a Social Report." Includes the introduction made by H.E.W. Secretary Wilbur Cohen on release of the report: Richard P. Kleeman. "Cohen Expects Broad Social-Health Report." Minneapolis Tribune, January 20, 1969.

Mondale, Sen. Walter F. "Social Advisers, Social Accounting, and The Presidency."

In "The Institutionalized Presidency." Law and Contemporary Problems, Summer 1970, pages 496-504.

In this article, Senator Mondale, principal sponsor of S. 5, the bill to create a Council of Social Advisors in the Office of the President, and to establish an annual social report, describes and evaluates the history of the past fragmented and unsuccessful executive branch activities designed to provide better social data to improve policy making. "...We have seen two administrations rely...on the Budget Bureau, the Council of Economic Advisers, the Department of Health, Education, and Welfare, a new National Goals Research Staff, and a new Domestic Council to do a job which (two administrations) agreed needs doing. ... We have already invested tremendous amounts of energy, talent, and money in cost-benefit analysis, experimentation with planning programming, budgeting systems and a wide variety of program evaluation techniques."

The author suggests that neither Congress nor the President can make effective social policy in the absence of a continuous and more sophisticated mechanism of social measurement and evaluation. "I believe," states the author, "a Council of Social Advisors, charged with the responsibility for advancing and asserting existing knowledge or of real social facts about this society, should serve to integrate, coordinate, and systematize the now dissident and discordant efforts of social planners and evaluators..." within the Government.

Mondale, Sen. Walter F. "Some Thoughts on 'Stumbling Into the Future.'" By the Hon. Walter F. Mondale, From the American Psychologist, November 1967. In "New Paths in Social Research." Statement by the Hon. Fred Harris on the floor of the Senate. Congressional Record (daily edition), January 30, 1968, pages S627-8.

Mondale, Sen. Walter F. Statement of Senator Walter F. Mondale at the Seminar on S. 843, "The Full Opportunity and Social Accounting Act," Held June 26, 1967, by the Senate Subcommittee on Government Research. Washington, D.C., mimeo, 3 pages.

Mondale, Sen. Walter F. "Toward A Social Report: Health and Illness." Statement of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, February 17, 1969, pages S1599-603.

Sen. Mondale has inserted into the Congressional Record, the first chapter of "Toward a Social Report," treating health and illness.

Mondale, Sen. Walter F. "Toward a Social Report: Income and Poverty." Statement of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, March 4, 1969, pages S2764-8.

Sen. Mondale has inserted into the Congressional Record, the fourth chapter of "Toward a Social Report," treating the physical environment.

Mondale, Sen. Walter F. "Toward a Social Report: Social Mobility." Statement of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, February 25, 1969, pages S2067-74.

Sen. Mondale has inserted into the Congressional Record, the second chapter of "Toward a Social Report," treating social mobility.

National Science Foundation. Division of Social Sciences. "Grants in Support of Research on Social Indicators Awarded in FY 1971." Mimeo, 1971, 3 pages.

A three page list on grants awarded by NSF in FY 1971 specifically in support of research on social indicators. Information is given on grant number, investigator, institutional affiliation of investigator,

title of proposal, amount of funding and duration. Twenty-two grants, totalling \$2,063,000, were awarded in FY 1971.

"New SSRC Center for Coordination of Research on Social Indicators Opens in Washington."

Social Science Research Council Items. September 1972, pp. 25-6.

Announces establishment in Washington, D.C. of the NSF-funded center. "The Center will seek to stimulate, facilitate and guide research on social indicators by providing a locus and source of information on research underway, and by encouraging communication among and between researchers and the broad constituency that has need for their output. The task is to encourage the application of the best social science methods to the problems of social indicators and to bring developments of potential significance to the attention of policy planners who make use of them and statistical agencies that could assume responsibility for their regular production and analysis."

Olson, Mancur, Jr., "The Plan and Purpose of a Social Report." The Public Interest, Number 15, Spring 1969, pages 85-97. (Part of the series "Toward a Social Report," included in this volume of The Public Interest.)

This article is adapted from a "working paper" Mancur Olson wrote while staff director of the H.E.W. Panel on Social Indicators, which published "Toward a Social Report." In it the author attempts to relate the scope of the social report to other information and policy activities of the government.

Pepper, Claude. "The Full Opportunity Act." Statement of the Hon. Claude Pepper on the floor of the House. Congressional Record, August 12, 1969, pages E6882-6.

This material consists of Rep. Pepper's statement in support of S. 5, the bill to create a Council of Social Advisors, originally made before the Special Subcommittee on Evaluation and Planning of Social Programs of the Senate Committee on Labor and Public Welfare; a copy of the House version of the bill to create a Council of Social Advisors, H.R. 9483, as introduced by Rep. Pepper; and a reprint of the Congressman's testimony before the Senate Subcommittee on the bill.

Popper, Frank J. "The Social Meaning of Social Accounting." Polity, Vol. 4, Autumn 1971, pp. 76-90.

"Social accounting" is a movement which aims at producing a set of data, indices, and other information from which one could analyze society in the same way a business accountant can tell the condition of an enterprise. Mr. Popper .. presents critique of the aims and methods of social accounting. He finds that it presents several dangers, not least of which is that old bugaboo,

the expert who is on top rather than on tap. Since social accounting is already with us in some degree, this warning is a timely one."

Report on the Social Indicators Conference, Held at George Washington University,

November 5-6, 1971, sponsored by the National Science Foundation Conference Chairman, Dr. Elliott R. Morss. Non-published, 85 pages plus appendices.

"There were three primary purposes for holding the conference. The first was to improve communications between persons working under NSF grants in the Social Indicators field. The second was to improve communications between social indicator researchers and government policy-makers. The third was to make some assessment of the adequacy of current research efforts and to indicate areas in which more work is needed."

Conference participants included scholars, researchers, and governmental officials.

This report includes: summary of the conference, transcript, and appendices: A. "Description of Vietnam Hamlet Evaluation System;" and B. "A very partial survey of social indicator work and its implications for future research and organizational strategies," by Elliott R. Morss; C. List of Conference participants;" and D. "Social indicators research funded by the social science division of the NSF."

"S. 5---Introduction of the Full Opportunity and National Goals and Priorities Act."

Statement of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, January 25, 1971, pages S119-127.

The bill to institutionalize a social accounting system in the Federal government was introduced once again by Sen. Walter F. Mondale.

Springer, Michael. "Social Indicators, Reports, and Accounts: toward the management of society." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 1-13.

"To many scholars and public officials, proposals for systems of social indicators and accounts, and for annual presidential social reports, point toward what can be viewed as an ultimate instrument of societal management. This instrument would eventually provide a macroscopic assessment of the current and future state and performance of the social order, along with an indication of control mechanisms and guidelines for the production of social knowledge. Rooted in a social science of managerial rationality, it would draw upon the techniques of social-trend analysis, the analysis of national goals, futurism, systems theory, and the new political economy. In this

regard, the two most fully developed discussions of social accounting differ primarily in their notion of what would be a rationally managed social order. It is argued that this instrument should be developed with models of democracy, as well as rational management, and based on a social science developed to serve the needs of the poor and unorganized as well as the rich and powerful."

U.S. Congress. Senate. Committee on Labor and Public Welfare. Full Opportunity Act. Hearings before the Special Subcommittee on Evaluation and Planning of Social Programs of the ... on S. 5, To Promote the Public Welfare. July 7, 8, 10, 18; December 18, 1969; and March 13, 1970. 91st Congress, first and second sessions. Washington, U.S. Government Printing Office, 1970, 439 pages.

This hearings record contains: Federal department reports on S. 5, the bill to create a Council of Social Advisors; testimony of witnesses who appeared in 1969 and 1970; and extensive appendix materials on social science and public policy, and background materials on the need for improving Congressional sources of information on social goals and programs.

U.S. Office of Management and Budget. "Outline for a social statistics publication." Office of Statistical Policy and Management, Information Systems Division. Washington, D.C., May 18, 1970, Draft No. 5, 15 pages. Available from Robert B. Pearl, Statistical Policy and Management, Information Systems Division, Office of Management and Budget, Washington, D.C. 20503.

U.S. Congress. Senate. Committee on Labor and Public Welfare. Full Opportunity and National Goals and Priorities Act. Hearing before the Special Subcommittee on Evaluation and Planning of Social Programs on S. 5, July 13, 1971. 92nd Congress, first session. Washington, U.S.G.P.O., 1971, 190 pages.

This is the most recent set of hearings on the bill to create a Council of Social Advisors. In addition to testimony and statements of witnesses, the hearings include copies of departmental reports and a bibliographic appendix.

U.S. Congress. Senate. Committee on Government Operations. Full Opportunity and Social Accounting Act. Hearings before the Subcommittee on Government Research

of the * * * on S. 843, A Bill to Promote the Public Welfare and to Create a Council of Social Advisors, a Social Report of the President, and a Joint Committee on The Social Report. Part 1, June 26, 1967 (Seminar) 124 pages; Part 2, July 19, 20, and 26, 1967, 125-315 pages; Part 3, July 28, 1967, 316-531 pages, Washington, U.S. G.P.O., 1968.

These three volumes are the printed versions of the first set of Senate hearings held on the bill to establish a Council of Social Advisors; a social accounting system; and a Joint Congressional Committee on the Social Report. Participants included representatives from the various academic social science disciplines, persons familiar with economic accounting, Federal statistical users, and spokesmen for various social interest groups, such as labor, welfare, health, etc.

Testimony presented includes a wide range of views as to feasibility of institutionalizing social accounting at the present time; suggestions as to inadequacies in currently collected Federal statistics; discussion of potential contributions of social scientists to design and implementation of a social accounting system; and suggestions for research needed in the social sciences to support such a system. These hearings are a valuable primary source for anyone doing original policy or conceptual work in social accounting.

U.S. Bureau of the Budget. Office of Statistical Policy Analysis. "Pilot Study to Determine Data For Inclusion in a Social Statistics Report." Memo prepared by * * * Mimeo, Washington, D.C., [1969], 3 pages plus questionnaire.

The Office of Statistical Policy Analysis, Bureau of the Budget[now OMB] is responsible for recommending to Federal agencies what Federal social statistics should be collected and published. The office, under the direction of Julius Shiskin, recently began an exploratory pilot study designed to develop new "statistical series * * * for inclusion in periodic Social Statistical Report." The Bureau of the Budget has sent a questionnaire to selected Federal agencies asking them to suggest how statistics they collect might be improved so as to better indicate the social state of the nation.

Specifically Federal agencies have been asked to select a statistical series which: " * * * highlights important aspects of the social condition of the nation, or because it is an indicator of social trends and developments, or because it aids in analysis of the social problems and progress that occur." In addition, the series selected should: "measure performance. Does the series show that the U.S. is failing, succeeding or standing still in meeting some social goal? Predict social change: Do changes in this series forecast changes in a series that more directly measures performance or in some overall social condition? When a series is chosen on the basis of being a predictor, indicate the related series that it leads and give some idea of the lead time. Give information about the effects of Federal programs on people?" Series selected should be output-oriented (in the sense of providing information about what is actually happening to the people involved) rather than input-oriented (providing information on what resources are going into a particular program or project.)

Although this activity is "low-priority", the Bureau has sent the questionnaire to several Federal agencies and is analyzing the results of its survey. The Bureau hopes to publish a "Dictionary of Social Indicators," which "* * *" would highlight important social trends and issues, and hopefully would serve as a focal point for reasoned discussion of these issues." In addition the new publication will be used to: (1) develop new statistical information to improve input data used by Federal agencies for program evaluation in conjunction with the Planning, Programing, Budgeting System; (2) provide data for revised guidelines and improved EOB [OMB] directives and circulars relating to the Planning, Programing, Budgeting System, and the collection and publication of Federal statistics; and (3) develop new social data series to be used in conjunction with the social accounting and forecasting activities of the National Goals Research Staff in the White House.

U.S. Office of Management and Budget. "Statement of Dwight A. Ink, Assistant Director For Office of Management and Budget," Before the Special Subcommittee on Evaluation and Planning of Social Programs of the Senate Committee on Labor and Public Welfare on S.5, "The Full Opportunity and National Goals and Priorities Act," July 13, 1971, Mimeo, 12 pages.

This statement describes the President's opposition to S. 5 and activities now underway in the Executive branch to improve Federal development and use of social indicators. These activities are: (1) "...a Presidential Commission on Federal Statistics has spent the past year reviewing the full scope of the Federal statistical system; the report is due in two months. ...One section of this report will lay out a five-year plan for research in social indicators and social reporting. This plan will encompass the work to be done in private research organizations as well as in the Federal Government." (2) The Statistical Policy Staff of the Office of Management and Budget, under the direction of Julius Shiskin and Daniel Tunstall are continuing work on social indicators that began in 1969. "Work is currently proceeding on selection and adaptation of available (statistical) series, experimentation with various ways of presenting the data, and research into means of resolving data deficiencies and gaps....Data for use in the new publication will be drawn from existing statistical series, mainly those produced by Government agencies, and important single-time surveys. It will be post-World War II national data, with totals broken down by race, sex, age, and, in some cases, region of the country to SMSA-non-SMSA. The degree of disaggregation will be determined by estimations of the usefulness of components as well as availability. Projections will be included only for relatively known quantities, such as number of pupils enrolling in primary school five years from now." (3) OMB has established two advisory committees to assist in this work: the Interagency Committee on a Social Statistics Publication and the Ad Hoc (non-governmental) Advisory Committee on a Social Statistics Publication.

5. National Social Indicators

Terleckyj, Nestor E. "Measuring Progress Towards Social Goals: Some Possibilities at National and Local Levels." Management Science, Vol. 16, No. 12, August 1970.

Development of goals and social indicators to use in future development of a social accounting system at national and local levels.

U.S. Department of Labor. Workplace Standards Administration. State Economic and Social Indicators. 1970, 96 pages.

Gives indicators on wages, family income, educational attainment, projected growth in labor force, 1970-80; and relative advantage of pay to living costs in metropolitan areas. States are ranked quantitatively from highest to lowest.

Wilson, Albert, and Donna Wilson. "Toward the Institutionalization of Change." Middletown, Connecticut, the Institute for the Future, August 1970, 35 pages, Working Paper WP-11.

"The Institute for the Future, under a grant from the Russell Sage Foundation, is preparing plans for the publication of an annual series of reports on the Future State of the Union. This paper, which is part of that preparatory effort, is concerned with some of the underlying conceptual problems of such an undertaking and presents a discussion of some of the features that might be included in the yearbooks." The following are proposed as candidate features of the initial yearbook: technological and environmental forecasts; highly predictable societal options and scenarios of possible futures; and miscellaneous features. Despite their efforts, the authors conclude that wide-spread aversion to planned change mitigates against systematically designing a favorable future.

Wilson, John O. "The Quality of Life in America." (Based on an article that appeared in the Los Angeles Times, October 22, 1967, and reprinted from the MRI Quarterly, Winter 1967.) Mimeo, [1967], 12 pages.

Short summary for laymen of his study originally done for the Midwest Research Institute.

Wilson, John Oliver. "Quality of Life in the United States--An Excursion into the New Frontier of Socio-Economic Indicators." (MRI Preprint.) Kansas City, Midwest Research Institute, [1969], 42 pages.

This research paper reviews the concept of social indicators and alternative types of information needed to develop indicators. It then develops, in detail, and presents an analysis of the rank ordering of the fifty states on several socio-economic indicators developed by the author using currently collected data from national, state, and local and special sources. The nine areas on which states are ranked are: individual status, racial equality, state and local government, education, economic growth quality, technological change, agriculture, living conditions, and health and welfare.

6. Local, Urban and State Social Indicators

Ahmed, Mr. Paul I. "Data Needs for Local and Regional Decisionmaking." Address by Mr. Paul I. Ahmed, National Center for Health Statistics, as chairman of the conference sponsored by the Washington chapters of the American Statistical Association, and the American Marketing Association, held November 15, 1967. In "Data Needs for Regional and Local Decisionmaking." Remarks of Rep. Curtis on the floor of the House. Congressional Record, January 30, 1968, pages H553-4.

"In November 1967, the Washington chapters of the American Statistical Association held a conference on data needs for local and regional decision-making. The opening address by Mr. Paul I. Ahmed, chairman of the conference, emphasized the need for new and improved statistical data to provide the means to identify and help solve problems of our cities. We need to discover not only whether the goals of our cities conform to the desires of their inhabitants, but also the specific problems that need to be solved to make our cities more enjoyable places in which to live. Mr. Ahmed pointed up the need for additional data in the areas of mobility patterns; employment and income; industrial demography; and the impacts of governmental programs."

Center for Urban Studies. Wayne State University. Social Reporting in Michigan: Problems and Issues. HUD Project No. Michigan P-272. Clearinghouse for Federal Scientific and Technical Information January 1970. 286 pages.

"This report examines how the State can exercise leadership in providing regular and reliable public information on the quality of life in the State of Michigan and the area covered by the Southeast Michigan Council of Governments. The development of a comprehensive system of social reporting would provide the basis upon which to judge the extent to which towns, cities, states, or other administrative units are or are not meeting social needs. The first three sections of the report deal with the need for regular public reporting; present activities associated with quality of life reporting in Michigan, an overview of Federal, state, and local activities, and the organization of societal information.... Six substantive areas of high priority policy significance are treated...; demographic indicators, health indicators, economic indicators, lawful behavior indicators, education indicators, and environmental quality indicators. ... The last two sections of the report provide recommendations relative to the State of Michigan.... Specifically, it is recommended that (1) the Governor's office initiate an annual Social Goals and Indicators Report with supplemental annual in-depth reports...and (2) that the Southeast Michigan Council of Governments arrange for the coordination of an effort to initiate a system of regular reporting on the quality of life in Southeast Michigan."

"Developing Urban Indicators: Some First Steps." Search/ A Report from the Urban Institute, Vol. 1, No. 3, May/June 1971, pages 3-6.

Status report on social indicators research conducted by The Urban Institute primarily by Michael J. Flax under the direction of Harvey A. Garn. This article summarizes the Institute's research on urban indicators for Washington, D.C. and discusses cultural and political barriers to the adoption of social indicators. Current social indicators research at the Urban Institute deal with "comparative indicators describing the courts, correction systems, characteristics of the policy, and the extent of criminal activity in large U.S. cities. Additional future plans...include working with individual cities to develop indicators comparing different sections of the same city, and publication of racial indicators showing comparative conditions across cities."

Ferriss, Abbott L. Indicators of Change in the American Family. New York, Russell Sage Foundation, 1970, 145 pages.

This is the third study in the continuing series published by the Russell Sage Foundation. Indicators of Change in the American Family includes time-series data useful for understanding social change. "Most of the social indicators on the family presented..have been extracted from published sources and are reproduced as they originally appeared. A few other indicators have been contrived from available data, however, in an attempt to create more sensitive indicators.... The statistical time series are presented and organized topically: marriage, marital status, households, fertility, dependency, divorce, work and income, and poverty. ... The series are illustrated by graphs and accompanied by a brief commentary on a facing page. [The discussion] illustrate(s) some of the utilities of analyzing changes in an institution through time series, exploring approaches to developing social indicators, and stimulating others to improve the data, the method, and the theory underlying the study of social change."

Flax, Michael J. "Future Prospects for the Development of Additional Social and Urban Indicators." Washington, The Urban Institute, July 1, 1971, 26 pages.

Definitions of social and urban indicators are suggested and examples of current indicator work described. The focus is on urban indicators, which are "social indicators disaggregated on a city, inter-city or intra basis." The author concludes that "at the present state of-the-art...most social indicators will tend to be primarily descriptive, since adequate cause and effect models do not yet exist and a consensus on many of our social goals is not at all likely. There are many political, institutional, and psychological barriers to the more widespread publication of indicators. Despite these, the demands of the general public and the needs of public and private policy makers will result in the publishing of many more comparative and descriptive indicators." Bibliography included.

Gottehrer, Barry. "Urban Conditions: New York City." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 141-158.

"Many people believe that the future direction of modern cities will be considerably determined by the success or failure of New York City's present experimentations. When Mayor Lindsay's administration took office (1966), the city's fiscal affairs were in serious disorder, and the governmental structure was chaotic and wasteful. For years, foundations and special committees had been issuing reports calling for reform of the proliferation and duplication of agencies. Mayor Lindsay's administration has initiated fiscal reform and a sweeping governmental reorganization. Integrated with these programs is the Mayor's new program-planning-budget system which defines governmental programs actively in terms of evaluating alternative ways to reach program objectives. Fiscal experts agree that New York must receive substantially increased federal and state aid, and Mayor Lindsay is joining with other city mayors to press for additional federal funds. The Mayor is also advocating greater regional ties for solving regional problems; increased home-rule powers; and Neighborhood Mayors' Offices throughout the city. Improving the quality and co-operation between the cities' agencies and setting up task forces independent of the bureaucracy will also be major goals. In the long run, however, the success of these reforms will depend on the judgment of the man at the top."

Gran, Harvey and Michael J. Flax. Urban Institute Indicator Program. Washington, D.C., The Urban Institute, July 14, 1971.

Past and future research plans on urban indicators in light of methodological problems that have surfaced in previous work.

Heer, David M., ed. Social Statistics and the City. Report of a Conference held in Washington, D.C., June 22-23, 1967. Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, 1968, 186 pages.

Includes: "Foreword," Daniel P. Moynihan; "Introduction," David M. Heer; "Completeness of Coverage of the Nonwhite Population in the 1960 Census and Current Estimates, and Some Implications," Jacob S. Siegel; "Procedural Difficulties in Taking Past Censuses in Predominantly Negro, Puerto Rican, and Mexican Areas," Leon Pritzker and N. D. Rothwell; "Needed Innovations in 1970 Census Data Collection Procedures: A Census View," Conrad Taeuber; "Needed Improvements in Census Data Collection Procedures with Special Reference to the Disadvantaged," Everette S. Lee; "Vital Statistics for the Negro, Puerto Rican, and Mexican Populations: Present Quality and Plans for Improvement," Robert D. Grove; "Needed Statistics for Minority Groups in Metropolitan Areas," Daniel O. Price; and "An Evaluation of Coverage in the 1960 Census of Population by Techniques of Demographic Analysis and by Composite Methods," Jacob S. Siegel and Melvin Zelnik.

Jones, Martin V. and Michael J. Flax. "The Quality of Life in Metropolitan Washington, D.C.: Some Statistical Benchmarks." The Urban Institute, Washington, D.C., March 1970, 82 pages. (Working Paper 136-1.)

"This is the first of a series of Urban Institute research reports on the subject of 'urban indicators'. This report, using data currently available, presents indicators for fourteen 'quality of life' areas. Based on these indicators, charts and summary tables are developed showing Washington's current status in each quality area, its latest ranking, and its rate of change compared to the seventeen other largest metropolitan areas. Limitations of the indicators used and plans for future research are included."

Katzman, Martin T. "Social Indicators and Urban Public Policy," Planning 1968:

Selected Papers from the ASPO National Planning Conference, San Francisco, May 4-9, 1968. Chicago, American Society of Planning Officials, 1968, pages 85-94.

A hard-hitting critique of potential development and utility of social indicators, especially in the area of education, by assistant director for economic analysis, office of the vice-president for planning and analysis and lecturer in city and regional planning, University of California, Berkeley. Many of the complexities of developing indicators are discussed. In summary the author says: "For any particular problem area, there are trade-offs in developing a workable indicator. In education, for example, dollar expenditures are highly scalable, reliable, and proximate; nevertheless, they have little validity with respect to learning output. Value added, on the other hand, has validity but requires longitudinal analysis and elaborate statistical manipulation. Finally, social indicators are only weakly scalable but many have the great validity. * * * As a general rule, the more valid the indicator and the more it reflects the real phenomenon of interest, the less consensus there will be on its relative merit."

Krendel, Ezra S. "Social Indicators and Urban Systems Dynamics." Paper presented at the Symposium on Human Factors in Urban Development, Metropolitan Chapter Human Factors Society, Columbia University, New York, April 11, 1970. Available from Wharton School of Finance and Commerce, University of Pennsylvania, 19104.

Krieger, Martin H. Social Reporting for a City: A Perspective and Some Problems. New York, New York City-Rand Institute, May 1971, 33 pages.

Political and technical problems encountered in developing a series of social indicators for a city. Although certain indicators are suggested the author cautions: "the development of social reporting that is related to actual social action is likely to take many years."

Levinson, Irving. Neighborhood Social Indicators: Uses, Framework and Development, New York City Planning Commission, 1970.

Levy, Claudia. "Visual Statistics Map Social Needs." Washington Post, January 3, 1971, pages H1-H2.

The article describes computer mapping, by Urbanetics, Inc. of patterns of crime, educational needs, population, employment, etc. with patterns showing how Federal monies are spent in that map's geographical area in the solution of identified social problems.

Moynihan, Daniel P. "Urban Conditions: General." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 159-177.

"Solving United States urban problems is an increasingly important concern of the public and of government officials. Social science can make an important contribution to solutions by providing urban social indicators. Three general propositions concerning this process are: (1) Social scientists must be prepared for accusations of betrayal from proponents of causes which they have previously supported, if data conflict with objectives of such causes. (2) How indicators are developed will influence at what level problems are resolved. (3) Social indicators will be developed by professors and government executives whose judgments will be based on a value-background different from that of the urban masses being measured. In the light of these propositions, four guidelines for social indicators are suggested: (1) They should be in the realm of disaggregation and correlation. (2) As they cannot be apolitical, they must be pan-political. (3) They should be concerned with the future as well as the present. (4) They should provide comparisons of local, national, and 'best practice' data. The indicators should report urban conditions in three categories: (1) people as individuals--numbers, distribution, density, mobility, employment, income, behavior, health, and participation rates; (2) families--unemployment and welfare statistics, correlations and 'poverty neighborhood' studies; and (3) institutions--public services and voluntary organizations, business, mass media, education, and urban ecology."

National Academy of Sciences. A Strategic Approach to Urban Research and Development: Social and Behavioral Science Considerations. Report of the Committee on Social and Behavioral Urban Research, Division of Behavioral Sciences, National Research Council to the Department of Housing and Urban Development. Washington, D.C., National Academy of Sciences, 1969, 100 pages.

The Committee on Social and Behavioral Urban Research in the National Research Council was established by the National Academy of Sciences and the National Academy of Engineering to provide advice to the Department of Housing and Urban Development to outline the major social and behavioral science

research efforts needed by urban specialists and the Department in promoting development of the nation's cities. Analysis and recommendations relate to strategies, recommendations on research and development capabilities, policy analysis and program evaluation, the Department's research and development programs, urban institutes, and urban information systems.

The Committee discussed the potential use of social accounting with respect to urban information systems and cautiously recommended: "If a system of social accounting were in being, the basis for measuring the effects of programs affecting important parameters would be present. The Department should approach this promising area experimentally and with some caution, * * * In order to secure social-psychological measures for what has been called * * * the 'quality of life,' experimentation with new measures for what has to be conducted. Such experimentation should seek to identify sets of inter-acting variables that may be treated, at least provisionally, as sub-systems of the urban process. If this were done, it might be possible to move toward establishing measures of the indirect, second-order effects of a given program."

Perle, Eugene D., ed. "Urban Indicators." Urban Affairs Quarterly, Vol. 6, December 1970, pages 135-248.

Partial contents: "Toward a framework for defining and applying urban indicators in plan-making," David E. Boyce; "Urban information systems and urban indicators," Kenneth J. Dueker; "Metropolitan income estimation," John M. Mattila; "Water quality: the state of the art," Henry A. Dirasian; "Interaction patterns," James Simmons; and "The Inner-city impact," Zvi Maimon.

Social Reporting for Albuquerque: Development of a Social Indices System. Albuquerque Urban Observatory, New Mexico, October 1, 1971, 93 pages. Available from NTIS.

A survey of current literature was utilized to determine quantitative indicators of the quality of life areas of physical and mental health, education, community participation, equality of opportunity and level of living. Problems of data availability, and use are discussed in terms of periodicity, comparability, reliability and accessibility. A summary of data available in the Albuquerque SMSA demonstrates some of these problems. While census data corresponds to many preferred indicators, its infrequency limits its usefulness. An appendix summarizes efforts of seven other cities to conceptualize social indicators, particularly for use by city management (Author) PB-206 371

Social Profile, Dayton Metropolitan Area, Community Welfare Council of the Dayton Area, 184 Salem Avenue, Dayton, Ohio.

Stagner, Ross. "Perceptions, Aspirations, Frustrations, and Satisfaction: an approach to urban indicators." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 59-68.

"Urban indicators must tell us how the urban system is doing. Objective indices are limited; inherent factors in the situation demand that subjective data from those affected by social planning be considered. Because the city exists only to serve human needs, the question of satisfactions becomes crucial. But satisfactions depend on aspirations, and aspirations depend on how a person perceives himself, his progress, and his status as compared with others. It seems likely that frustrations of desires for status, security, recognition, and self-expression contribute substantially to the hostility and violence found in contemporary cities. Research is required to validate this assertion. A set of psychological urban indicators would focus on the frequency and intensity of satisfaction (or dissatisfaction) with aspects of urban life perceived as important by the citizens of the city. Effective use of these indicators will require that they be analyzed in relation to the objective data already available. If data are sorted by census tracts or similar units, it should be feasible to test some hypotheses about urban planning by introducing a change in a restricted area and measuring changes in perceptions and satisfactions which follow."

The State of the City -- Los Angeles, 1970, prepared by Community Analysis Bureau, 316 West Second Street, Los Angeles, California, 1970, 4 volumes.

The Quality of Life in Iowa: An Economic and Social Report of the Governor for 1970. Office for Planning and Programming, Des Moines, Iowa, 1970, 112 pages. Available from NTIS.

The purpose of the report is to assess the economic and social health of the State of Iowa during 1970. Included is a sector-by-sector analysis of the quantitative changes in agriculture, manufacturing, banking, government, wholesale and retail trade, construction, transportation, communications, and public utilities. Also, consideration is given to population changes over the past decade, labor force, and employment changes, and personal income trends. (Author) PB-201 100.

Trimble, Joseph E. An Index of the Social Indicators of the American Indian in Oklahoma.

Prepared for the Office of Community Affairs and Planning, State of Oklahoma. Oklahoma City University, Department of Psychology, 1972, 564 pages.

Yin, Robert K. Policy Uses of Urban Indicators. New York, New York City-Rand Institute, 1972, 12 pages.

7. Social Indicators in Industry

Campbell, Angus. "Social Accounting in the 1970's." Michigan Business Review, January 1971, pp. 2-7.

Review of the findings of Toward a Social Report, for a business/industrial audience.

Corson, John J. "The Great What-Is-It: The 'Social Audit.'" Nation's Business, July 1972, pp. 54-56.

Description of social accounting activities undertaken by the Chase Manhattan Bank. Illustrates complexities of establishing social goals for business.

First National Bank of Minneapolis, 1971 Annual Report.

"The proposed social - environmental audit is in our 1971 Annual Report. While the specific standards we decide to use are still tentative, the approach outlined reflects the way we intend to write social reports for the Twin Cities of Minneapolis and St. Paul."

Goldston, Eli. The Quantification of Concern: Some Aspects of Social Accounting, Carnegie-Mellon University, 1971, 75 pages.

Philosophical and technical treatment of social indicator needs for business. Among the topics treated are social responsibility of business and problems encountered in convincing financial auditors of the realities of social indicators.

Linowes, David. "Accounting for Social Progress: Yardsticks Must Be Found For Public Programs." Reprinted from New York Times, March 14, 1971. In "Accounting for Social Progress." Extension of remarks of the Hon. Frank E. Moss. Congressional Record, March 29, 1971, pages E2369-70.

The author urges that social scientists, professional accountants and business managers join forces to create a new discipline for evaluating the impact and quality of social programs--- "socio-economic management." The objective of this proposed activity is to combine social scientists' expertise in developing qualitative standards for evaluating social programs with accountants' and business managers' expertise in developing quantitative standards for evaluating program efficiency. The author identifies five principles of socio-economic management, and urges establishment of socio-economic management councils at the local level to examine the quality of existing programs in education, environment, crime, poverty and drug control. Mr. Linowes is a partner in an accounting firm and has served as adviser to the State Department and the United Nations.

Wilensky, Harold L. "Intelligence in Industry: the Uses and Abuses of Experts."

In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals. Volume 388, March 1970, pages 46-58.

"In their vision of the managerial revolution, Max Weber and Thorstein Veblen pictured experts coming to power by virtue of their indispensability. The reality, not so dramatic, is nevertheless critical for an understanding of the main drift of modern society. Coalitions of top managers and experts, each acquiring some of the skills of the other, now make increasing use of systematic technical and ideological intelligence. The structural roots of intelligence failures--hierarchy, specialization and rivalry, and centralization--become more prominent. The new technology produces a surfeit of information, poorly digested or lost in the system. Big policy decisions are often made in an atmosphere of urgency and uncertainty, the effects of which can be both good and bad. Alert executives, therefore, reshape administrative structures to smooth the flow of intelligence; more important, they bypass the machinery and seek firsthand exposure to unofficial intelligence sources both inside and outside the organization. These responses are evident in the structure and strategy of modern corporations. Although preconceptions remain discouragingly powerful, top executives are increasingly exposed to social science perspectives in college and on the job. It is possible that social science at its best sometimes breaks through executives' stereotypes, enhances their understanding of themselves and their organizations, alerts them to the range of relevant variables, and increases their skill in using experts."

8. Advancement of the Social Sciences

"Behavioral Sciences Survey Urges Social Reporting." Statement by the Hon.

Walter F. Mondale on the floor of the Senate. Congressional Record,
October 27, 1969, pages S13273-77.

Brady, Henry. Social Indicators: Report and Bibliography. Prepared for the
Division of Social Sciences, National Science Foundation, 1970, non-paginated.

Priorities for social indicators research, particularly within the social
science communities.

Gross, Bertram. The State of the Nation: Social Systems Accounting. London.

Social Science Paperbacks in association with Tavistock Publications. 1966.
166 pages.

This volume contains lengthier versions of essays originally published
in "Social Indicators," edited by Bauer. Included in Gross's essay on A
Social Systems Model. He analyzes various approaches taken to developing
an explanatory model of the social system: national economic accounting,
general and partial systems models, and structural-functional model. Detailed
treatment is given to description of system structure and system performance.
The last chapter is an attempt to specifically deal with information needed
to develop a social indicator system, in the context of his model. Problems
discussed are: conflicts of interest in setting goals, need to portray a
dynamically changing social system, level of abstraction and generality, and
specific data inadequacies in national and comparative statistics.

This volume derived from a project developed by the Committee on Space
Efforts and Society of the American Academy of Arts and Sciences, under a
grant from the National Aeronautics and Space Administration.

Mondale, Walter F. "Behavioral Scientists Urge Establishment of Council of Social
Advisers." Statement and materials inserted into the Record, by the Hon.

Walter F. Mondale on the floor of the Senate. Congressional Record, August 4,
1971, pages S13107-S13113.

This statement includes an analysis by Senator Mondale, principal spon-
sor of S. 5, the bill to create a Council of Social Advisors, of social
scientists' support for establishing a social accounting mechanism in govern-
ment. "Although the social science community has been reluctant to support
this proposal vigorously in the past, I am happy to see," observes Mr. Mon-
dale, "that opinions are shifting." Several materials are included to sup-
port this evaluation.

One: excerpts from the "Symposium on Applying Knowledge from the Behavioral Sciences to Social Legislation Programs," conducted by the Brookings Institution at the request of the U.S. Office of Education. The symposium was attended by noted social scientists, executive branch personnel and legislators. The report of the symposium states that "many participants came to the symposium strongly opposed to the creation of a Council of Social Advisers. ...After reexamining the issues, however, the group felt that the legislation and structures should be created." Additional report conclusions are excerpted in the Senator's statement.

Two: recent testimony, before the Special Subcommittee on the Evaluation and Planning of Social Programs, by noted social scientists indicating support for S. 5, and describing some social scientists' opinions on the need to create a social accounting system. Raymond A. Bauer, author of Social Indicators, and former senior consultant to the National Goals Research Staff, testified on the urgency of moving ahead with social accounting and the institutional arrangements necessary to systematize government activities in this area. Prof. Bauer, describing recent social science research and policy activities evaluates the pros and cons of his own and other social scientists former reluctance to support these proposals. Dr. Nicholas J. Demerath III, executive officer of the American Sociological Association, described early resistance by some members of the social science community to the proposal: "...Many social scientists were convinced several years ago that our disciplines were not sufficiently developed to discharge the responsibilities entailed in a Council of Social Advisors and an Annual Social Report." He continued: "In my judgment, such modesty was appropriate at that time, but fortunately, the social sciences have developed rapidly since. ...I think it fair to say that we are well along with a methodological revolution that is producing greater rigor in handling more complex phenomena," which has caused social scientists to feel more confident that they can perform functions required to support a social accounting system. Mr. Sol M. Linowitz, chairman of the National Urban Coalition, citing his experiences in preparing Counterbudget, urged establishment of a social accounting system to provide Congress with "the social data required to choose rationally between alternative resource uses, to evaluate program effectiveness, and to formulate comprehensive public policy."

National Science Foundation. "Memorandum to Social Science and Behavioral Science

Journals: Subject: Social Indicators Research," October 6, 1970.

To help social scientists develop indicators designed to measure trends and changes in our society, the NSF awarded a planning grant to the Social Science Research Council for program development of social measurement. The Council will prepare for NSF and other interested research organizations a comprehensive plan for scientific studies to be conducted outside the Government on social measurement. The study is under the supervision of Dr. Henry W. Riecken, the award totals \$21,800.

"Search for Social Indicators." The Washington Report. American Psychological

Association, Volume III, No. 2, February-March 1967, pages 1-3.

9. Goal Formation and Values

Colm, Gerhard and Luther H. Gulick. "Program Planning for National Goals. With an NPA Joint Statement." Washington, D.C. National Planning Association November 1968, Planning Pamphlet No. 125, 26 pages.

Brief statement by two economists of a proposed program, at the Presidential level, for formalizing the "central planning functions of our national government and its management." In brief the authors outline the precise scope and functions of: a special White House assistant to the President for Plans and Priorities; an Office for appraisal of national goals and programs in the executive office of the President; a standing Citizens' Committee on National Goals and Priorities; and review of these operations by the Joint Economic Committee of Congress. The authors emphasize that this proposal differs from the proposal to establish a Council of Social Advisors because that proposal is too limited in scope.

Goldsen, Joseph M. "Thinking About Future Social Development." (Paper on social planning, delivered at the 80th annual meeting of the American Institute of Certified Public Accountants, September 27, 1967.) In "Future Social Development." Remarks of the Hon. Walter F. Mondale on the floor of the Senate. Congressional Record, October 12, 1967, pages S14740-2.

An intuitive, but sophisticated, forecast of current social problems and some requirements for their solution made by a member of the RAND Corporation. Among the requirements for effective handling of these problems, according to Mr. Goldsen, are the following: "* * * a more rapid development of the social sciences and social scientists, including such practitioners as lawyers, public officials, and administrators"; improvements in the adequacy "* * * of basic social data and the need for more sophisticated analyses of it. * * *" Mr. Goldsen specifically discusses the proposal to create a Council of Social Advisors and the relationships between social and economic accounting.

Javits, Senator Jacob K. "Press Release excerpting a statement by Senator Javits, ranking Republican on the Subcommittee on Evaluation and Planning of Social Programs, prepared for delivery today on the Senate floor regarding his introduction of an amendment to establish a Congressional Office of Goals and Priorities Analysis." December 16, 1969, Mimeo, 2 pages.

Statement made by Senator Javits upon introduction of an amendment to S. 5, a bill to create a Council of Social Advisors, originally introduced by Sen. Walter F. Mondale, chairman of the Subcommittee on Evaluation and Planning of Social Programs, Committee on Labor and Public Welfare. "The amendment," according to Senator Javits, "would establish an Office of Goals

and Priorities Analysis within the Congress to conduct a continuing non-partisan analysis of national goals and priorities and to provide the Congress with the information, data, and analysis necessary for enlightened priority decisions."

Rokeach, Milton and Seymour Parker. "Values as Social Indicators of Poverty and Race Relations in America." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 97-111.

"The purpose of this paper is to explore the usefulness of values as social indicators of underlying social problems. Using value choices of a national sample, an attempt was made to determine the extent and nature of cultural differences between groups differing in socioeconomic status and race. Since the publication of The Negro Family (the Moynihan Report), there has been lively debate and invective about the issue of whether or not cultural differences exist between the poor and the rich and between Negro and white. The issue of whether those living in poverty, particularly the Negro poor, are characterized by a distinctive culture of poverty-amelioration and community development. The findings reported here lend support to the idea that considerable value differences do distinguish the rich from the poor, but not Negroes from whites. For the most part, differences found between the latter disappear when socioeconomic position is controlled."

"Social Indicator Study to Survey Values, Goals." APA Monitor, November 1970, page 5.

Describes plans for: "a two-year interdisciplinary research project dealing with 'social indicators' that has begun at the University of Michigan. Funded by a NSF grant of \$201,900, the project is being undertaken jointly by psychologists and economists of the university's Institute for Social Research."

Terleckyj, Nestor E. "Goals Accounting Projects: Description of Status." National Planning Association, in-house document, November 3, 1971, unpublished paper, various pagings.

Status and objectives of National Planning Association's social accounting project. The goals accounting project is designed to provide for evaluation of social goals and social indicators at state, local and Federal levels and within the private sector.

U.S. President (Richard M. Nixon). "Statement by the President on the Establishment of a National Goals Research Staff." Office of the White House Press Secretary, July 13, 1969, Mimeo, 3 pages.

President Nixon's announcement of the formation of a National Goals Research Staff, whose functions will include: "forecasting future developments, and assessing the longer-range consequences of present social trends: measuring the probable future impact of alternative courses of action, including measuring the degree to which change in one area would be likely to affect another; estimating the actual range of social choice--that is, what alternative sets of goals might be attainable, in light of the availability of resources and possible rates of progress; developing and monitoring social indicators that can reflect the present and future quality of American life, and the direction and rate of its change; and summarizing, integrating and correlating the results of related research activities being carried on within the various Federal agencies, and by State and local Governments and private organizations."

U.S. The White House. "Press Conference of Dr. Daniel P. Moynihan, Assistant to The President For Urban Affairs." Washington, D.C. Office of the White House Press Secretary, July 11, 1969, Mimeo, 8 pages.

Clarifies some of the points raised about functions of the National Goals Research Staff, whose establishment at the White House level was announced by the President that same week.

Winthrop, Henry. Ventures in Social Interpretation. New York, Appleton, Century Crofts, 1968, 532 pages.

"In exploring some of the impacts which science and technology have, or may have, on our lives, this book reexamines the meaning of culture, the purposes and uses of leisure, and the nature of a genuine education. There are five parts: * * * Each describes and forecasts social problems meriting concerted action by policy makers, social scientists and technology forecasters. Treated are: "technology and some of its social consequences; culture, leisure, and education; the burden of social complexity; the pathologies of over-urbanisation; and technology, decentralization and the restoration of community."

WR Interviews Director of Goals Research Staff. The Washington Report, The American Psychological Association's Newsletter of the Behavioral Sciences, Volume V. No. 8, November 1969, pages 11-13.

"* * * Charles Williams, a public administration specialist formerly with the Office of Planning and Policy at the National Science Foundation, was appointed acting director of the National Goals Research Staff (NGRS) created last summer by President Nixon. * * * Williams gave an * * * interview to the Washington Report in which he emphasized that the professions, along with business, the academic community and government agencies, will play a strategic role in the future of the NGRS. He also expressed his belief that, from the beginning, these sectors should be aware of the philosophy behind what he called 'the first institutional receptacle for holistic thinking at the national planning level.'" This article contains excerpts from that interview describing the tentative composition and course of the NGRS. (Since the interview, Raymon A. Bauer, pioneer student of social accounting, was named full-time consultant to the National Goals Research Staff.)

10. Political Participation

Krendel, Ezra S. "A Case Study of Citizen Complaints As Social Indicators." A paper to be published in IEEE Transactions on Systems Science and Cybernetics, October SSC-6, 1970, 26 pages.

"Political science has been largely absorbed in aimless institutional description, rather than in the attempt to explain humanly significant change. Unlike economics-- war and revolution apart--it has no phenomena of the order of the business cycle, inflation, growth rates, and the like, of demonstrable human consequence, of which it seeks to give theoretical comprehension, and to develop intervention strategies from this comprehension. Without explanatory theory, it has no occasion to develop indicators except as the implicit theory of common sense suggests the value of such indicators. For the most part, such indicators as we have were developed as predictors and are without explanatory value. This state of affairs is now in the process of alteration. The reports of the Kerner and Eisenhower Commissions, however unsatisfactory, provide scenarios of significant social change, with partially explicated theory to account for it, and with some specification of the relevant variables. The movement of these variables suggest theoretically significant indicators whose values could predict significant change. Fruitful development can be expected as our capacity for evaluation highlights humanly important phenomena whose explanation will suggest the indicators necessary for the use of that capacity."

Long, Norton, E. "Indicators of Change in Political Institutions." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 35-45

Scammon, Richard M. "Electoral Participation." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 59-71.

"The report of the Kennedy Commission on Registration and Voter Participation, the 1964 Current Population Survey of the Census Bureau, and other data indicate a number of facts about United States voter participation. People tend to 'overstate' their participation in elections. Men vote more than women, the middle-aged more than the young and the elderly, whites more than the Negroes. The curve of voter turnout parallels those of education and income. Turnout is lower in the South than in other areas and also, varies by urban, suburban, and rural areas. Turnout is generally greater in elections for higher government levels and greater in general than in primary elections. One group of nonvoters is deterred by such major legal-administrative obstacles as citizenship, registration, and absentee voting requirements, racial and religious disabilities, and administrative regulations for voting times and locations. A second group of nonvoters are those

who meet legal-administrative requirements but exhibit 'lack of involvement.' Age, sex, and social-economic status affect lack of involvement. So do importance and closeness of elections and competitiveness of the political atmosphere. Total voter participation in elections is a dubious goal. Perhaps the goal should rather be to increase access to the polls by eliminating or altering legal and administrative barriers to voluntary voting."

Schneier, Edward. "The Intelligence of Congress: information and public policy patterns." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 14-24.

"Proposals for improved information systems for legislatures have become a standard feature of the literature on legislative systems. Most of these proposals, however, either fail to take account of political realities or have a centralizing bias which is likely to prove incongenial to most legislators. Given the functionally fragmented structure of American politics, the methods that congressmen use to gather information are essentially rational, and likely, therefore, to prove highly resilient to change. But the form of rationality which the legislative intelligence system now favors is ill-suited to the policy needs of the society, and particularly in those instances where the need for establishing orders of priority is most urgent. It may, thus, be particularly important to develop new intelligence systems in the executive branch, and in the private sector, to supplement, challenge, and engage the entrenched system of legislative intelligence.

Verba, Sidney. "Democratic Participation." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 53-78.

Democratic participation refers to acts that are intended to influence the behavior of those empowered to make decisions. In a society where participation is a value, inability to participate represents a severe deprivation. This essay focuses on participation vis-a-vis governmental decision-makers, though the term refers to nongovernmental decisions as well. The variety of participatory acts is discussed, as are the conditions for effective participation. There is need to consider a wide range of participatory acts, including participation in relation to administrative decisions. In addition, one must study not only why citizens participate, but why decision-makers are responsive. Several problems of participation are discussed, including the problems of scale, of technical complexity, and of inequalities in participation."

11. Health

Hoffer, J.R. "Relationship of Natural and Social Sciences to Social Problems and Contribution of * * * Scientists to Solution." American Documentation. Vol. 18, October 1967, pages 228-334.

"Explores the premise that information science and information specialists can make a major contribution to solution of basic social problems by collecting and integrating pertinent knowledge from the physical, biological, and social sciences and by relating it directly to selected critical areas. Suggests that periodic indexes be developed for the field of social welfare."

Lee, Philip R. "Health and Well-Being." In "Social Goals and Indicators for American Society, Vol II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 193-207.

"Health is discussed as both a generalized and a very relative concept, defined to include not only freedom from physical disease and pain, but also social well-being. The importance of environmental factors is stressed. Measuring health status in the past has been largely dependent on the negative aspects of health - death rate and morbidity. Although still important, they no longer yield enough information on which to establish goals and determine policy. Increasing emphasis has been placed on disability, costs, and the social and emotional consequences of disease. During the past thirty years, the federal government has been increasingly involved in a number of health-care programs designed to: (1) advance research; (2) meet manpower, facility, and other resource requirements; (3) stimulate local, regional, and state initiative and improved co-operation with the federal government; (4) remove financial barriers; (5) improve quality and availability of services; and (6) protect the consumer and improve the quality of our environment."

Woolsey, Theodore D. and Philip S. Lawrence. "Moving Ahead in Health Statistics." American Journal of Public Health, Volume 59, No. 10, October 1969, pages 1820-26.

"Future needs and priorities for health statistics are discussed in the light of major health problems and priorities in the United States. Among the items included in such an agenda are not only health status data, but also facilities and manpower at various levels, quality of health care, state of the environment, and many others."

12. Culture

Fontaine, Andre. "The Mass Media - A Need for Greatness." In "Social Goals and Indicators for American Society, Vol. I" Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 72-84.

"United States mass media are probably the world's greatest, and in excellent health, more mature and more responsible today than fifty years ago. But they are not good enough because: (1) People do not believe what they read; (2) the media do not have enough or the right kind of information; (3) editors need more power; and (4) there are large gaps in knowledge of the impact that the media have on the audiences. Once these shortcomings have been remedied, the media can face the really difficult questions of the times: (1) To what extent has newsmen's reportage only of the dramatic distorted readers' concepts of reality? (2) To what extent has media's exploitation of violence made violence prevalent? (3) To what extent have media contributed to the popularity of extremism and the devil theory of international relations?"

Toffler, Alvin, "The Art of Measuring the Arts." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 141-155.

"The transition to postindustrialism is marked by increasing political concern for the quality of life. The arts, an important determinant of the quality of life, are affected by this transition in the following ways: growth of mass participation in cultural activities; elaboration of the institutional framework of the arts; formation of a "culture lobby"; and politicalization. Decision-makers in government, business, research, and education must begin to take into account, as one entry in their cost-benefit ledgers, the cultural consequences of their actions. A cultural data system is needed to provide information for rational policy-making in the cultural field and to assist those outside the field in understanding their impact on it. A tentative model is constructed to facilitate the monitoring of qualitative, as well as quantitative, changes in the arts in contemporary society. Fifteen variables are suggested, which, taken together, comprise an index of the state of health of a nation's culture. Ways are proposed by which changes in these variables can be statistically measured."

13. Environmental Quality

Bisselle, C.A., et al. Monitoring the Environment of the Nation. Mitre Corporation, April 1971, 179 pages.

Design for a system to monitor the nation's environment, identifying major gaps in environmental indices.

Fisher, Joseph L. "The Natural Environment." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 127-140.

"In the United States, the problem of sheer quantity of raw materials has given way in importance to the qualitative problem of environmental pollution. On the quantitative side, physical and economic indicators and goals are available, but on the qualitative side, such goals and indicators are more difficult to conceive and work with because the more subjective problems of individual and social welfare must be taken into account. As exemplified by the water-quality studies of the Delaware Estuary, probably the basic indicator for social welfare would be the net social benefits (minus costs or losses in some sense) that would result from various selected measures to deal with a specific problem. Where estimates of benefits seem impossible, a second-best objective would be minimizing the social costs of selected measures. In view of the interrelatedness of environmental pollution problems, the concept of the 'environmental problem shed' has been suggested - taking into account the various interrelated physical and social problems and indicators within a given area. Research is also needed on the processes by which environmental quality standards and programs are reached, the direction and rates of change for which statistical indicators are necessary, and to create and improve the indicators of trends in environmental pollution and its effects on people."

Pikul, Robert. "Development of Environmental Indices." Presented to International Association for Statistics and Physical Sciences Symposium on Statistical Aspects of Pollution Problem. The Mitre Corporation, August-September, 1971, 56 pages.

Formulation of 14 environmental indices for use in guiding environmental policy and legislation and evaluating effects of environmental policies and programs.

Train, Russell E. "The Quest for Environmental Indices." Science, October 12, 1972, editorial page.

Need to develop environmental indices to assist in determining policies for the environment, especially discussed in relationship to activities of the Council on Environmental Quality.

U.S. Environmental Protection Agency. An Anthology of Selected Readings for the Symposium on 'The Quality of Life' Concept: A potential new tool for decision-makers. August 29, 30, 31, 1972. Warrenton, Virginia.

Background papers in support of the EPA's three day conference exploring possibilities for developing a social balance sheet for the agency and its programs.

14. Minority Groups

Duncan, Otis Dudley. "Discrimination Against Negroes." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 85-103.

"The functions of indicators to measure fullness of participation of minorities in American society can best be understood by relating them to strategic junctures in the socioeconomic life cycle. Data for Negroes, in particular, reveal the operation of two types of handicaps - those common to all members of the society subject to disadvantages of background or misfortune, and those specific to minority status. To distinguish between them, and thus to measure progress in reducing discrimination, requires not only comprehensive time series but also methods and models suited to the analysis of causal sequences. Despite the growing fund of valuable indicators of the status of "nonwhite" Americans, a number of statistical hazards must be circumvented before reliable inferences and realistic recommendations become possible. In reaching interpretations in this field, social science should operate as a "third force," complementing the work of policymakers and program administrators, on the one hand, and civic action groups on the other. Present knowledge is inadequate to the task of formulating specific proposals for redirecting trends. It could rapidly become more nearly adequate with the availability of sufficient resources for research, full cooperation of official statistical agencies, freedom to investigate so-called sensitive problems, and concerted attempts to improve analytical and interpretive models. For the moment, we can only be sure that formidable obstacles remain in the way of achieving freedom from discrimination."

Ferriss, Abbott L. Indicators of Trends in the Status of American Women. New York, Russell Sage Foundation, 1971, 451 pages.

The author addresses the question of changing status of women in the United States. "Time series data presented, which compare the relative status of men and women, do not provide sufficient evidence for the new feminist activities." Data cover education, marital status and fertility, labor force status, employment, and income and health and recreation.

Flax, Michael J. Blacks and Whites: an experiment in racial indicators. Washington, D.C. The Urban Institute, 1971, 79 pages

Development of social and economic measurements to give a "balanced picture of the status of blacks and whites in the 1960-68 period."

Konvitz, Milton R. "Civil Liberties." In "Social Goals and Indicators for American Society, Vol. I." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 38-58.

"Our political institutions are based on certain moral principles. Some are stated in the Constitution; others, unmentioned, are necessary to give 'breathing space' to those enumerated. The freedoms expressly stated may be interpreted as expressions of even more fundamental values. And the Constitution also protects the traditions and collective conscience of our people. However, it is not enough for a nation to profess to be a democracy. Totalitarian states have made the same profession. A nation must look at the facts to estimate the degree to which it lives by its ideals. We have, on the one hand, our values, and, on the other, a considerable amount of data which show how inadequately the values are fulfilled. There is an unconscionable lag of time between proof of malfunction and its cure. The problem is, then, to get the guardians of our goals to read the indicators. There are enough instances of honest governmental reporting to warrant the calculated risks of relying on it. We also have private watchdog organizations interested in civil liberties, and their efficacy is shown in their record. Watchdogs - like the presidential veto - are built into our political system and independent observers of our national scene also contribute to raising our sights. However, there still remains a need for a privately financed organization for research into civil liberties."

Palley, Howard A. and Marian Lief Palley. "Social Policy Analysis: The Use of Social Indicators." Welfare in Review, Volume 9, March/April 1971, pages 8-13.

"Concern is growing among social policymakers about the need for precise and insightful methods of conducting social policy analysis and measuring the success of social welfare programs. Consequently, a number of social scientists are developing social indicators to provide systematic data on the nature and intensity of such social problems as hunger, ill health, and inadequate housing and to measure the costs and benefits of specific social welfare delivery systems. This article discusses the use and potential use of social indicators. In addition, it discusses a case study using social indicators to examine a social policy issue. Though the issue is racial disorders in U.S. cities, the methods used could be applied just as easily to any number of social policy questions."

15. Education

Cohen, Wilbur J. "Education and Learning." In Social Goals and Indicators for American Society, Vol. II. Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 79-101.

"The American people have set important social goals to improve the quality of American life. Although there is some evidence of progress toward these goals, there are few accurate indicators of the changes actually taking place and the problems encountered along the road to attainment. The development of statistics and other pertinent information is essential because of the rapid and reverberating changes that are taking place. Significant changes are being generated in the American educational system in terms of people, expenditures, activities, and innovations. The educational indicators that are developed must take into account the variety of goals, as well as the changes in definitions and emphases of the goals. There is a need for both quantitative and qualitative data. Although some quantitative indicators exist, the data disclose little about the quality of the education system or its products. New indicators relating to education opportunities, the quality of education, fundamental human behavior, and political and economic behavior are needed. The responsibility for developing these indicators must be shared by public and private interests - government, business, educators, labor unions, and civic and community groups."

Ferriss, Abbott L. Indicators of Trends in American Education. New York, Russell Sage Foundation, 1969, 454 pages, including extensive bibliography.

"Indicators of Trends in American Education is the second in a series of publications initiated by Russell Sage Foundation as part of its program on 'social indicators.'" The first volume of the series, Indicators of Social Change presented "a general framework for the analysis and measurement of change * * * encompassing relevant concepts and measures. The primary purpose of this earlier overview was to provide a basis for subsequent studies. * * * Integral to [the Foundation's] program [examining and monitoring the changing structure of American society] is an assessment of existing relevant data, emanating from a variety of federal and other statistical agencies, and often left to accumulate in those agencies in a relatively uncoordinated fashion. In this volume, Dr. Ferriss has assembled, collated, analyzed and assessed those data bearing on trends in American education. The volume is designed to present the principal time-series basic to the description and analysis of changes in American education. * * * Dr. Ferriss presents the basic data on school enrollments, retention and attainment indicating changes in the educational characteristics of the population, and the organization of school systems. His analysis of data examines the interrelations among some of the basic indicators as well as among measures which could be considered extraneous to the educational system, such as business cycle variables.

"In relating these data to an explicit statement of educational goals for American society, Dr. Ferriss, in his final chapter, provides evidence bearing on the relevance of the time-series to national policy formation. He utilizes the data to provide an assessment of progress toward what appeared to be reasonable and necessary educational goals for the nation some ten years ago. Further, his examination provides an assessment of the adequacy of educational statistics for indicating such significant trends in the system." The educational goals examined concern teachers, segregation, the education of women, the high school curriculum, higher education and financing higher education. Numerous statistical tables and series are included.

Gitter, A. George and Robert R. Peterson. Toward a Social Indicator of Education - A Pilot Study. Communication Research Center, Boston University, Report No. 44, September 1970, 119 pages.

"Methods of constructing two types of factor analytical indicators - factor score and basic variables - were developed, and shown to apply in aggregating multivariate education data. Procedures for computing both state and national indicators for both a base year, and any subsequent one, were described. State and national indicators of education for 1960 were computed."

Stanford Research Institute. Educational Policy Research Center. Toward Master Social Indicators. SRI Project 6747, Research Memorandum EPRC-6747-2. Supported by: Bureau of Research, U.S. Office of Education, February 1969. Menlo Park, California, Stanford Research Institute, 1969, 52 pages.

"The present state of the art in social accounting seems to be somewhere between a 'none-too-ordered' description' and a 'cataloguing.' It is the purpose of this paper to suggest the next step, a 'system of classification,' and to indicate how in the distant future analytical models of society might be devised."

Although the study was done for the Office of Education, it is a general treatment, at a high level of abstraction. "The paper has four principal sections. * * * Section II sketches a heuristic model for categorizing indicator concepts. This model suggests how low level indicators perhaps can be aggregated into master elements one relating to the individual and the other to the social system. Section III of the paper discusses the interrelationships of goals, indicators, and attainment levels. One purpose is to show that values are an integral part of any indicator system and that values, too, can be hierarchically ordered. In Section IV, an attempt is made to structure the findings of a preliminary draft of the Social Report in terms of the heuristic model of society. The section points out why it is not possible to derive master indicators from the draft of the Social Report alone. The final section of this paper briefly outlines some key considerations in constructing a comprehensive national social data system. Discussion of the advantages of such a system concludes the manuscript."

16. Crime and Disorder

Gerbner, George. "Cultural Indicators: The Case of Violence in Television Drama." In "Political Intelligence for America's Future." Edited by Bertram M. Gross and Michael Springer. The Annals. Volume 388, March 1970, pages 69-81.

"The cultural transformation of our time stems from the extension of the industrial-technological revolution into the sphere of message-production. The mass production and rapid distribution of messages create new symbolic environments that reflect the structure and functions of the institutions that transmit them. These institutional processes of the mass-production messages short-circuit other networks of social communication and superimpose their own forms of collective consciousness--their own publics--upon other social relationships. The consequences for the quality of life, for the cultivation societies, are far-reaching. Informed policy-making and the valid interpretation of social behavior require systematic indicators of the prevailing climate of the changing symbolic environment. A central aspect of cultural indicators would be the periodic analysis of trends in the composition and structure of message systems cultivating conceptions of life relevant to socialization and public policy. Findings of studies of the portrayal of violence in network television drama illustrate the terms of such analysis, and demonstrate the need for more comprehensive, cumulative, and comparative information on mass-cultural trends and configurations."

Glaser, Daniel. "National Goals and Indicators for the Reduction of Crime and Delinquency." In "Social Goals and Indicators for American Society, Vol. 1." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 371, May 1967, pages 104-126.

"Optimum procedures for measuring the prevalence of crime vary tremendously by type of offense, because these procedures depend on whether the crime creates a death, a complaining victim, a satisfied customer, an annoyed audience, or a dangerous condition. Assessing the effectiveness of criminal correction requires long-term data on criminal careers, to compare the subsequent criminality of similar offenders who receive different kinds of correctional action. The formulation of crime reduction goals must take into account the instability of crime definitions, and the social costs of crime control actions, in addition to the dimensions of crime. Because of the multiplicity of data sources and the breadth of perspective required for this diversity of measurement, it should be the primary responsibility of a single national agency, to be assisted by the many other agencies now oriented to segments of this task."

Goldman, Nathan. "Social Breakdown." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 156-179.

"Although problems of family breakdown, drug and alcohol addiction, mental disorders, suicide, and sexual deviation appear to be increasing, the available data are either so deficient or so incomplete that accurate appraisal of the situation is impossible. However, some of these problems seem to be more or less socially sanctioned adjustments to strains in the social system rather than maladjustments in themselves. To achieve our goal of maximizing the social health of American society, we must consider these problems as indicators of strain, and focus our national resources on the reduction of these strains. We need to improve the collection of data on these indicators, and to devise new ones, in order to identify and locate those situations which interfere with the ideal functioning of our social system. A significant aspect of social breakdown is seen in the inability of the society to mobilize for an attack on situations which it has defined as undesirable. Our concern should be with the identification of these processes as well as the underlying social strains of which social problems are overt indicators. We must establish standard definitions or criteria of social problems and increase the scope and accuracy of our data-collection. Information-gathering on the local or state level would need to be co-ordinated on a nationwide basis to provide a useful set of indicators of the social state of the nation."

National Commission on the Causes and Prevention of Violences. To Establish Justice. To Insure Domestic Tranquility. Final Report of the National Commission on the Causes and Prevention of Violence. Washington, U.S. Government Printing Office, 1969.

Among the recommendations made in the report is "* * * that to aid in the reordering of national priorities, consideration should be given to establishing a counterpart of the Council of Economic Advisers to develop tools for measuring the comparative effectiveness of social programs, and to produce an 'Annual Social Report', comparable to the present Annual Economic Report."

17. Technology

Bauer, Raymond A. (With Richard S. Rosenbloom and Laure Sharp, et al.) Second-Order Consequences: A Methodological Essay on the Impact of Technology. Cambridge, The M.I.T. Press, 1969, 231 pages plus index.

This volume is the third in a series of studies undertaken by the American Academy of Arts and Sciences for the National Aeronautics and Space Administration. NASA made a grant to the Academy "* * *" for the support of basic scientific research entitled: conduct a study of long-range national problems related to the development of the NASA programs." In this volume Bauer intended to survey the specific social consequences of the space program. He found that a methodological framework was necessary to do this-and this book presents that conceptualization along with an assessment of some of the second-order or unanticipated consequences of modern large scale technology in general. The general need to develop social indicators and specifically with respect to assessing the impacts of technology is intensively reviewed in this book.

McHale, John. "Science, Technology, and Change." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 120-140.

"Science and technology are major change agencies now operating on a global scale. The narrowing interval between scientific discovery, technological implementation, and social use has increased the general rate of change. Our monitoring and accounting procedures for the differential rates of such changes in various sectors of society, and for their short- and long-term consequences, are presently inadequate. The available indicators in these areas tend to be quantitative rather than qualitative. To provide measures of social progress, and earlier warning of the social and environmental effects of new scientific-technical developments, we need to redesign our present indicator procedures. Such extended and qualitative indicators will further require integration, and interpretation, within a comprehensive system of social accounting."

Technology and Decisions in Airport Access. Prepared by Robert F. Baker and Raymond M. Wilmotte for the Urban Transportation Research Council. New York, American Society of Civil Engineers, 1970, 152 pages.

The two most important questions relating to severity of the airport access problems are "when and how airport access should be improved in light of the many demands upon public funds. The report is developed under the presumption that the when and how questions are not technological problems in the initial phases. They are primarily policy questions related to the social and economic goals of the public and private sector." In an attempt to design research to provide information for answering the public policy questions related to airport access the authors argue for

utilization of social indicators and develop a scheme for designing social indicators useful in answering public policy questions about airport access.

U.S. Congress. House. Committee on Science and Astronautics. A Study of Technology Assessment. Report of the Committee on Public Engineering Policy, National Academy of Engineering. Washington, U.S. Government Printing Office, July 1969, 208 pages. [Committee Print.]

This study was prepared by the Academy's Committee on Public Engineering Policy at the request of Representative George P. Miller, Chairman of the House Committee on Science and Astronautics. The report examines ways to assess the social impact of technological developments. It "* * *" argues that assessment studies should include analyses of the cause-and-effect relationships between government activities and social impacts. It emphasizes the importance of intuitive judgments by knowledgeable people, and recommends that behavioral and political scientists be well represented in the membership of the task forces." The technologies treated are: technological teaching aids, multiphasic health screening, and subsonic aircraft noise.

U.S. Congress. House. Committee on Science and Astronautics. Technology: Processes of Assessment and Choice. Report of the Ad Hoc Panel on Technology Assessment, created by the Committee on Science and Public Policy, National Academy of Sciences, Washington, U.S. Government Printing Office, July, 1969, 163 pages [Committee Print.]

This is the final report of the Ad Hoc Panel on Technology Assessment, created by the Committee on Science and Public Policy, National Academy of Sciences, in response to a request from the House Committee on Science and Astronautics. It examines the need for and alternative forms of technology assessment in the Federal government. Various social, cultural, data base and institutional constraints are detailed. The Panel agreed that the technology assessment function should be performed but "* * *" differed in certain matters of detail, especially pertaining to the organization of a possible technology-assessment structure within the Federal establishment." Organizational differences related to whether "* * *" the central responsibility should be tied to the executive or the legislative branch * * *" and whether the Office of Science and Technology and the National Science Foundation had adequate capability to fulfill a technology assessment function.

Contains some analysis of the relationship of technology assessment to social accounting.

"One attempt," said the group, "in the development of improved models [of technology assessment mechanisms] it would seem will be precisely the attempt to organize at least some technology-assessment activities around the themes provided by social patterns and problems, rather than focusing exclusively upon technology itself as the central theme for assessment."

18. Employment and Welfare

The Advisory Council on Public Welfare. Having the Power, We Have the Duty, Report to the Secretary of Health, Education, and Welfare, U.S. Department of Health, Education, and Welfare, Welfare Administration, Washington, D.C. June 29, 1966.

Recommended enlargement of the Division of Research, Welfare Administration to provide "a vehicle for continuing assessment of the social state of the Nation."

Bureau of Labor Statistics, U.S. Department of Labor. State Economic and Social Indicators: Wages and Family Income, Educational Attainment, Projected Growth in Labor Force, 1970-80, and Relative Advantage of Pay to Living Costs, 1970. U.S. G.P.O., 1970, 96 pages.

A first attempt, using currently collected statistics, to provide States and civic and labor-management organizations with a statistical "selection of facts about the 50 States in a format designed to help the busy administrator see his own State in the context of other States and the country as a whole." Suggested "social indicators" for a "do-it-yourself socio-economic profile" include statistics on educational attainment; state expenditures for education; data on AFDC recipients; infant mortality rates; and crime rates.

Hanushek, Eric A. "Developing Local Educational Indicators--The Priorities."

RAND Corporation, Santa Monica, August 1970, P-4434, 14 pages.

"There has been considerable discussion about development of a set of social indicators. This discussion has mostly been at the national level.... However, since a number of the areas grouped under social indicators, such as education, public safety, housing and political participation, have traditionally fallen into the bailiwick of local governments, it is inevitable that emphasis will soon shift to social indicators at a local level. (This) paper delineates a set of priorities in local data collection for educational indicators. This discussion is an outgrowth of one of the first inquiries into local social indicators, sponsored by the City of Chicago."

Herrick, Neal Q. and Robert P. Quinn. "The Working Conditions Survey as a Source of Social Indicators." Excerpts reprinted from Monthly Labor Review, April 1971. In Congressional Record, July 15, 1971, pages S11131-3.

Summary of study conducted by University of Michigan Survey Research Center on development of "working conditions" social indicators. The Department of Labor, which supported this survey research study, needed data to address the following two issues: (1) "That the proportion of its resources allocated to existing programs might not reflect the actual importance of these programs to workers, and (2) that its traditional labor standards programs might be ignoring other important problems confronting workers." The researchers collected data from workers on the extrinsic and intrinsic elements of work and attempted to relate these elements to workers' satisfaction with their jobs. All of the data has not been analyzed yet so no final conclusions have been drawn. However the researchers report: that continuous assessment of changes to workers' attitudes, through a series of social indicators measuring working conditions problems as experienced and evaluated by the workers themselves is necessary to develop appropriate legislation relating to the work and welfare of employed persons.

Herrick, Neal W. and Robert P. Quinn. "The Working Conditions Survey as a Source of Social Indicators." Monthly Labor Review, April 1971.

Development of objective and subjective indicators in different occupational categories.

Keyserling, Leon H. "Employment and the 'New Economics.'" In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 102-119.

"The main focus of national economic and related social policies should be upon federally guaranteed full employment and a federally initiated nationwide system of guaranteed income for those who cannot be brought within the employment stream. Progress toward these objectives will add more to personal development and national achievement than a further proliferation of marginal programs called new. Full-time unemployment should be reduced to about two percent of the civilian labor force, and the true level of unemployment to about three to 3.5 percent. Full employment, optimum economic growth, and optimum allocation of resources, in line with the great social priorities of national needs, are inseparable objectives and do not involve much programmatic differentiation. The prevalent view that these objectives involve excessive or even enlarged inflationary pressures is not justified by empirical observation. The drive against inflation thus far has inflated the fat and starved the lean. The aggregate and structural approaches to full employment need a new synthesis. We need, particularly under the aegis of the Employment Act of 1946, a ten-year budget of our needs and resources. All national public policies importantly affecting resource-allocation, including the federal budget, should be made an integral part of this long-range budget. The core problem for the years ahead is to maintain that one increasing purpose in our national life which is essential if we are to realize the promise of America."

Miller, S.M., Martin Rein, Pamela Roby, and Bertram M. Gross. "Poverty, Inequality, and Conflict." In "Social Goals and Indicators for American Society, Vol. II." Special Issue of the Annals of the American Academy of Political and Social Science, Vol. 373, September 1967, pages 16-52.

"Groping concern with poverty has ushered in the much more controversial issue of inequalities within the affluent society. In America, relative deprivation is a more important aspect of 'poverty' than poor physical conditions. Income alone is an inadequate indicator of level of living. This paper proposes six dimensions for the measurement of well-being: income, assets, basic services, social mobility and education, political position, and status and satisfaction. Questions of 'who does and should get what' within each of these dimensions are issues arousing acrimonious debate. Social indicators are suggested which would create greater awareness of the extent of inequalities and make discussions of inequalities more useful. These indicators will not tell us what choices to make in inequality-reduction, but they can prevent us from complacently ignoring the fact that choices are being made."

Samuelson, R.J. "Council of social advisers; new approach to welfare priorities?" Science. Vol. 157, July 7, 1967, pages 49-50.

19. Foreign and International

Delors, Jacques. Les Indicateurs Sociaux. (S.L.D.E.O.S., Futuribles, Paris, 1971), 392 pp.

Detailed report on French developments in social indicators for planning and forecasting of governmental programs. Among the topics treated are: health, the family, the role of women, old age, employment, education, culture, social mobility, utilization of national wealth, income, the home, rural space, and urban development. In French only.

"Demographic Accounts: A Step Towards Social Accounting." The OECD Observer, December 1970, pages 35-38.

"French Experience in Respect of Social Indicators." Case Study Presented by France.

Presented at the Seventh Meeting of Senior Economic Advisers to Economic Commission For Europe Governments. November 17-22, 1969. Econ. Advisers 1969/Conf. 13, August 27, 1969 Mimeo, 1969 23 pages.

This draft reviews the experiences of the French General Planning Commissariat which attempted to utilize a social accounting system in French planning. Part 1 of the paper sets forth the Planning Commissariat's interest in social indicators, which are based primarily on United States' activities; Part 2 reviews experiences of the studies conducted by the group; which met from September 1967 to April 1968, and analyzes the scope and limitations of these studies. (The topics for which indicators were developed are: life expectancy, health protection, evolution of the family, participation of women in economic and social life, old people's place in society, behavior towards marginal population, employment trends, role of education, cultural development, adaptation to change, social mobility, receptivity of society to the outside world, distribution of national wealth, utilization of income, pattern of assets, role of welfare, housing, organization of the countryside, urban development, and pattern of time-utilization). Part 3 of the paper treats prospects of using social indicators in the French Sixth Plan.

The document contains a valuable list of problems encountered when attempting to implement a system of social accounting at the national level. Many recommendations for general as well as specific research and development are made. In way of summary "The French experience of social indicators may be summed up as follows: 1. In the studies carried out under the Planning Commissariat's auspices, various series of indices were collected around economic and social development topics. This empirical and preliminary step was deemed necessary although they are not true social indicators. Moreover, gradual progress is being made towards the elaboration of consolidated indicators, particularly in the housing and health sectors. 2. It is possible that a first cautious and partial use of social indicators in respect of situations and objectives will be made on the occasion of the preparation of the Sixth Economic and Social Development Plan. 3. Theoretical studies on the concept of social indicator are imperative as the question stands at present, and should be carried out simultaneously with the first attempts at utilization. These theoretical studies are still rather restricted but are beginning to be undertaken by a small number of sociologists and economists."

One of the more valuable contributions made by this paper is in the area of development of "positive indicators of normalcy." For example, "On the question of health * * * an effort was made to centre the analysis on the 'normal state of health of a population,'

and no longer on pathology - an approach which leads to greater emphasis on prevention and on choosing indicators at the level of normal conditions rather than at that of crises."

Nissel, Muriel, ed. Social Trends, No. 1., 1970. London, H.M. Stationery Office, 1970, 162 pages.

First issue of a new annual drawing together "some of the more significant statistical series relating to [British] social policies and conditions."

Nissel, Muriel, ed. Social Trends, No. 2, 1971. London, H.M. Stationery Office, 1971, 206 pages.

Second issue of the annual social indicators publication. Includes articles on social indicators in particular areas such as manpower, health, model building and trends in several social areas.

Organisation for Economic Cooperation and Development. Manpower and Social Affairs Directorate. Social Indicators Development Programme. Paris, April 23, 1971.

Details objectives of social indicators program planned by OECD for 1971. Background papers include summary of discussion of an OECD Conference on Social Indicators, December 1970.

Organisation For Economic Cooperation and Development. Manpower and Social Affairs Committee. Work Related to Social Indicators in International Organisations. Paris, February 25, 1971, 14 pages.

Summarizes the work on social indicators that is underway in U.N. Organizations located in Western Europe. Includes: demographic and social statistics, methodology of social planning, measurement of socio-economic development.

Rummel, R.J. "Indicators of Cross-National and International Patterns." American Political Science Review, Volume LXIII, No. 1 March 1969, pages 127-147.

"The purpose of this paper is twofold. One goal is to contribute towards a refocusing of the analytic conceptual scheme employed in the study of international relations. Rather than being based on quantification alone, however, this refocusing will entail fastening major concepts to major patterns of variation in the empirical attributes and interactions of nations. The second and primary goal is to help and encourage a definition of the best indicators of these major concepts." The paper proposes " * * * several criteria for selecting a preferred set of indicators and a number of measures that more

or less satisfy these criteria." Data used is based on " * * * large scale analyses involving * * * several hundred variables defining attributes and behavior of nations. The data cover the years ranging from 1836 to the 1960's." Factor analysis is used to generate the indicators. Indicators for a variety of attributes of nations are detailed conceptually and empirically; previous work in developing national and cross-national indicators of the behavior of nations is reviewed.

Russett, Bruce M. "Indicators for America's Linkages with the Changing World." In "Political Intelligence for America's Future." Edited by Bertram H. Gross and Michael Springer. The Annals, Volume 388, March 1970, pages 82-96.

"Many variables are thought to be relevant to international politics. Better theory is needed to increase parsimony, but meanwhile a tour d'horizon of possible data-gathering efforts is offered. Collection costs could be eased by sampling nations according to level of development, region, or policy importance, and many highly correlated measures could be eliminated. A list of indicators for American linkages to the world is given, with indicators distinguished between stock and flow; over-all linkages and links to particular states; and ratios of foreign links to domestic equivalents. The world environment should be documented according to national-attribute data on politics and social value-aspirations; and the level and pattern of linkages of availability or potential cost of collection. More effort should go to collecting and distributing existing information than to new data-gathering, except for variables of exceptional theoretical interest."

Russett, Bruce M. World Handbook of Political and Social Indicators. New Haven, Yale University Press, 1964, 373 pages.

This book is an illustration of recent interest among students of comparative government and international politics in developing comparable data series describing the political, economic and social levels of development of developed and less-developed countries. "Part A includes quantitative data on 75 variables for 133 states and colonies. Among the [statistical data included] are vital statistics, political data on voting, governmental budgets, military personnel, economic information, health conditions, literacy and education, mass media, income and land distribution and religion. Part B analyzes some of the relationships among the variables, showing how the data can be used to investigate a wide variety of political and social questions."

"Social Information for Developing Countries." In Annals of the American Academy of Political and Social Sciences, Vol. 393, January 1971, pages 1-131.

Partial contents: "Social information for what?," Itzhak Galnorr; "Crisis prediction," Peter Wiles; "Analysis of socio-economic development through a system of indicators," Donald V. McGranahan; "Progress in health: what index of what progress," Wilfred Malenbaum.

SSRC Conference on social indicators. SSRC (British) Newsletter. June 1971, p. 2.

Summarizes conference held by the British Social Science Research Organization.

Taylor, Charles. Aggregate Data Analysis: Political and Social Indicators. Paris, Mouton and Co., for UNESCO, 1968.

"Where the Grass is Greener." The Economist, December 25, 1971. p. 15.

Social indicators used to evaluate the living conditions of OECD countries. Although the indicators are, admittedly, not reliable, the U.S. achieves the highest score.

20. Bibliographies

Agocs, Carol. "Social Indicators: selected readings." In "Political Intelligence for America's Future." Edited by Bertram H. Gross and Michael Springer. The Annals, Volume 380, March 1970, pages 127-132.

"This bibliography is intended to be a working list of sources representative of the new field of social indicators and social accounting. It includes both a sampling of works that outline theoretical developments in the field and some illustrative attempts to develop social indicators and reports. For the sake of brevity, only collections of papers have been provided with annotations which indicate the titles and authors of articles contained therein. A review of this bibliography will illustrate the interdisciplinary nature of the social accounting movement. Because social accounting originated so recently and is developing so rapidly, the majority of the references bear dates of 1965 or later. Inasmuch as this bibliography is a selection of readings, it obviously makes no claim to inclusiveness."

McVeigh, Thomas. Social Indicators: A Bibliography. Monticello, Illinois, Council of Planning Librarians, Exchange Bibliography 215, September 1971, 45 pages.

Includes some annotated references on: legislation; indicators in the particular areas of health, education, and welfare; mental health, natural resources, housing and urban development; problems of developing social indicators; literature on model and social systems development.

"Social Indicators: Bibliography I." By George M. Beal, et. al. Preliminary Report of the Iowa State University Agricultural and Home Economics Experiment Station in cooperation with the Cooperative State Research Service, U.S. Department of Agriculture. Department of Sociology Report No. 92, Department of Sociology and Anthropology, Iowa State University, Ames Iowa, January 1971, 56 pages.

Contains a short preface plus alphabetical bibliography of published and unpublished materials on social indicators, including working papers, papers presented at professional meetings, articles, books, theses and dissertations. Also describes current activities of Iowa State social indicators research. This series is continuing.

"Social Accounting: A Select Annotated Bibliography." By David Johnson, Education and Public Welfare Division. Washington, D.C., Library of Congress, Legislative Reference Service, June 5, 1967, Multilith, 18 pages, Ed-220.