

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D. C. 20523  
BIBLIOGRAPHIC INPUT SHEET

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Batch 72

|                           |                               |                |
|---------------------------|-------------------------------|----------------|
| 1. SUBJECT CLASSIFICATION | A. PRIMARY<br>Social sciences | SE00-0000-0000 |
|                           | B. SECONDARY<br>Sociology     |                |

2. TITLE AND SUBTITLE  
Social indicators: the bibliographic review as a first step toward scientific inquiry

3. AUTHOR(S)  
Wasson, K.W.; O'Connell, H.J.

|                          |                            |                      |
|--------------------------|----------------------------|----------------------|
| 4. DOCUMENT DATE<br>1971 | 5. NUMBER OF PAGES<br>18p. | 6. ARC NUMBER<br>ARC |
|--------------------------|----------------------------|----------------------|

7. REFERENCE ORGANIZATION NAME AND ADDRESS  
Iowa State

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)

9. ABSTRACT

|                                  |                       |
|----------------------------------|-----------------------|
| 10. CONTROL NUMBER<br>PN-AAE-747 | 11. PRICE OF DOCUMENT |
|----------------------------------|-----------------------|

|  |                                     |
|--|-------------------------------------|
| 12. DESCRIPTORS<br>Indicators<br>Reviews | 13. PROJECT NUMBER                  |
|  | 14. CONTRACT NUMBER<br>CSD-3642 GTS |

15. TYPE OF DOCUMENT

PN-AAE-747

SOCIAL INDICATORS: THE BIBLIOGRAPHIC REVIEW AS A  
FIRST STEP TOWARD SCIENTIFIC INQUIRY

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April 12, 1971

SOCIAL INDICATORS: THE BIBLIOGRAPHIC REVIEW AS A  
FIRST STEP TOWARD SCIENTIFIC INQUIRY

ABSTRACT

Two broad, interrelated approaches within the social indicator movement are explored in terms of their consequences for the discipline of sociology and social planners. The perspective of societal problem solving, vis-a-vis policy decision-making and how it can impact the planning process leading to social policy decision, is examined in terms of its potential utility to policy makers. Monitoring and evaluation of policy decision-making is also discussed as another possible contribution to social system analysis.

An inductive-deductive paradigm is introduced for the scientific inquiry of social indicators. A taxonomy of current bibliographic materials is advanced to assist those interested in becoming familiar with the literature in the field. Seven categories are developed which focus attention on those areas the authors feel lack uniform treatment and intellectual interest. Finally the authors call for a concerted effort by the discipline toward an integrated development of all aspects of social indicators for the rapid realization of its sociological dividends.

# SOCIAL INDICATORS: THE BIBLIOGRAPHIC REVIEW AS A FIRST STEP TOWARD SCIENTIFIC INQUIRY

## Introduction

Under the auspices of a social indicator research project in the Department of Sociology at Iowa State University,<sup>1</sup> this bibliographic taxonomy was one of our initial steps in attempting to achieve the following broad objectives over a four year period:

1. to attempt to conceptualize at a lower level of abstraction the subconcepts that appear to be logical derivations from the general level concepts of human resource development, community development, and social and economic development;
2. an attempt will be made to develop measures and data collection procedures for the concepts so derived; and
3. to apply these measures on a limited stratified sample of communities varying from farm to metropolitan areas.

The interest in the field of social indicators is a rather recent development confined mainly to the decade since 1961. Interest and concern has been expressed not only in the academic and private arena but also in federal, state, and local governmental units.

The interest engendered in many units of our society toward specific problems, such as pollution, participatory democracy, equality of access for de facto and de jure minorities, housing, education, health, etc. have come to be expressed, increasingly in the last decade, in terms of the

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<sup>1</sup> Project No. 1837 of the Iowa State University Agricultural and Home Economics Experiment Station in cooperation with the Cooperative State Research Service, U.S. Department of Agriculture.

"quality of life." Recognition of this concern and discussion by both governmental and non-governmental groups has revealed that this is an area which can now be and should be approached by social scientists. A multi-disciplinary approach is suggested by the wide range of disciplines represented by those writing in this general area. Other disciplines, such as economics, have been calling for the complementary development of appropriate indicators of the social equation for resource development.

The sui generis of social indicators lies in its potential for integrating the discipline's empirically verified theoretical models for the applied practitioner in his application to societal problem solving and decision making. Interest in the melding of our sociological theory to practical problems as a legitimate area of social research has now fallen on fertile ground, vis-a-vis expressed interest by legislative decision-makers. The scale of this new arena, social indicators, can broaden the scope of social research from specific institutional and/or organizational problems to more inclusive planning, programming and implementation.

There are many uses with which a fully developed set of social indicators could be applied, however we delineate here two of the possible categories within which many other areas, both within and outside the discipline of Sociology, would benefit from the development of social indicators.

First we consider the category of societal problem-solving, vis-a-vis the various policy decisions that must be made by all levels of government and to a lesser extent all other social units whose practitioners now define social goals, social objectives, and their means as salient to the social equation. The initiation of any inquiry into a particular societal problem, as John Dewey (1938) has suggested, is a stepwise procedure begin-

ning with the determination of a "problematic situation." This situation becomes problematic in the very process of an indeterminate situation being subjected to inquiry. This is a reciprocal inductive process involving two stages. First our sense selves are subjected to an indeterminate situation existing in nature or culture. Second, the perceptual cognitions arising therefrom form the necessary, but not sufficient, conditions requisite for the solution of this indeterminacy.

The determination of a solution involves getting the problem stated so that the constituents of a given situation can be analyzed in terms of the possible relevant solutions suggested by the factual conditions. Hypotheses are suggested.

The next stage involves a process of reasoning or deductions through propositions as to the relationship between hypotheses and their concepts. This, in turn, leads to the final stage of inquiry or operationalization; i.e., the manner in which the concepts of the hypotheses function to resolve the problematic situation initiating the inquiry.

The similarity between scientific societal problem solving and social indicators is summarized as follows:

- 1) We societally define the scientific method as legitimate to attain better informed decisions;
- 2) We have, recently, defined our social life as an appropriate area for informed decision makers and social scientists;
- 3) Therefore, social indicators research is both the vehicle and the result for scientific social analyses for our decision makers.

The second category to which the full development of the field of social indicators can be useful is the monitoring and evaluation of social programs, whether they be governmental or private. Bertram Gross (1966),

as an example, has suggested that the state of any social system can be analyzed, monitored, and evaluated in terms of a model which utilizes the two main concepts of system structure and system performance. The full analysis of a social system in terms of this model could tell us at any given time the major trends in our society, the potential consequences of such trends, and how to evaluate the trends in terms of the social goals and objectives of the nation, state, community, organization, or any other social collectivity.

The increasing concern, within our discipline on applying the principles learned through research on human behavior and social interaction to solving salient and high priority social problems in contemporary society, is consistent with the growing interest in social indicator research. Amitai Etzioni (1966), for example, indicates that we must have a systematic exploration of societal issues. Alvin Gouldner (1965) has emphasized the need for an applied social science concerned with the prediction and production of social change. Finally Benne (1969) advances that social scientists/practitioners must diagnose and intervene in events so as to maximize human values.

Therefore, consistent with this new emphasis, our theoreticians must develop more meaningful concepts, propositions, and models for the explanation of human conduct; our methodologists must align their research toward more salient issues confronting our age; and our practitioners must develop a greater capacity for planning, programming, and implementing those concepts, propositions, models, and research findings. Concomitantly our practitioners must develop the expertise to cause, influence, and change public policy consistent with his professional and relevant training and sensitized experience.

We believe that in the determination of a solution to a problematic inquiry, the study of social indicators can bring to fruition in a practical or utilitarian way many of the problems stated above. This refocusing of the discipline will encompass the time, energies, and talents of a large group of sociologists with diverse specialty interests, but would be applied directly to this broad problem as opposed to the piece-meal, ad hoc approach, familiar in our discipline to date.

We note that the first step of initiation of inquiry has already been delineated. The indeterminate or problematic situation does exist. It exists by the mere fact that sociologists have not, as yet, fully developed a model to allow for the measurement of the state of society's health or well-being encompassing controllable and predictable variables of the social equation. We do not have the refined tools to fully monitor, evaluate, predict or cause change in the state variables of a social system in terms of adding a more scientific base to the present decision-making criteria in both governmental and private sectors.

Consequently, to begin our inquiry, an extensive review of literature in the field of social indicators was initiated to define the problematic arena. The results of our first attempt was a general bibliographic source book of all the publications we had found or were referred to at that time. This annotated bibliography has approximately one third of the writings in the area covered by the first bibliography with our classification scheme for the purposes of directing attention to rather broad areas of concern and as an assist to those who wish to become familiar with the current literature in the area.

### Rationale for Selection or Why Start Here?

Since the area of social indicators is both new and therefore "broad" in interpretation and discussion, our plan of selection necessarily spans many disciplines and forms of literature, both technical and popular. In such a relatively new area as social indicators, it is often difficult for researchers to acquire a listing of the most recent materials. Our first bibliography was an attempt to minimize these difficulties culminating in a listing of over 400 references.

The impetus for the library research to our bibliography was initiated by the selected readings list of Carol Agos (1967). From this start we examined extensively Raymond Bauer's Social Indicators, a chronological first in the introduction of the concept, "social indicators." This edited book contains several position papers by Bertram Gross, Raymond Bauer, Albert Biderman, Robert Rosenthal and Robert Weiss. In 1966 the President of the United States directed the Secretary of Health, Education and Welfare to initiate preliminary steps to complement the Economic Report of the President. These efforts resulted in a HEW publication, Toward a Social Report, under the general direction of Daniel Bell and Alice Rivlin. This report had been the subject of much debate as demonstrated in the hearings before the special subcommittee on evaluation and planning of social programs while the Full Opportunity Act was being considered. Another publication which was a strong input for the social indicator movement was Bertram Gross' book The State of the Nation.

In 1967 both Daedalus and The Annals of the American Academy of Political and Social Science devoted issues to social indicators. The Behavioral and Social Science Survey Committee of the National Academy of Sciences and the Social Science Research Council made further inputs calling

for the development of social indicators in the Neil Smelser and James Davis edited edition of Sociology and the committee's output, The Behavioral and Social Sciences: Outlook and Needs. Eleanor B. Sheldon and Wilbert Moore's, Indicators of Social Change and O.D. Duncan's, Toward Social Reporting: Next Steps, made major contributions in advancing the social indicator perspective, under the aegis of the Russell Sage Foundation.

We recognize that some persons desire an overall familiarization with the field. The following references are, in our judgment, a good place to begin to obtain a "feel" for the area. (The full citation is included in the annotated bibliography.)

1. Bauer, Raymond, Social Indicators.
2. Beal, George M., et al., Social Indicators: Bibliography I.
3. Bell, Daniel, Toward the Year 2000.
4. Bell, Daniel and Alice Rivlin, Toward a Social Report.
5. Daedalus, 1967 issue "Toward the Year 2000."
6. Duncan, Otis Dudley, Toward Social Reporting: Next Steps.
7. Gross, Bertram, State of the Nation.
8. Sheldon, Eleanor B. and Wilbert Moore, Indicators of Social Change.
9. Smelser, Neil and James Davis, Sociology, and The Behavioral and Social Sciences: Outlook and Needs.
10. The Annals of the American Academy of Political and Social Science, Volumes 371 and 373, 1967, edited by Bertram Gross.

In this section of the paper we will discuss our rationale for selection of specific articles to be included in this annotated bibliography as well as the rationale for the general taxonomic classification into which they have been placed. Judgments were made as to the utility of each entry to social scientists interested in the area of social indicators. The reader should

keep in mind that the decision as to whether the article should be included in the bibliography and the statements made about each article have been made within the following frame of reference (guidelines).

1. References have been included which dealt with any aspect of the concept, social indicators, or the social nature of the term, quality of life.

2. Recognizing that a wealth of material and bibliographic references are available in specific social problem areas, such as crime, delinquency, poverty, etc., we have opted not to reproduce this work believing that the concerned areas of our discipline already have access to this work. We, therefore, limited our inclusion of the specific area discussions to those which have also used the concept "social indicators."

3. The annotated statements of each article included concerns only that portion of the article, book, etc. that deal with social indicators or the social indicator perspective.

4. Because this is a new area the primary chronological span for a majority of the entries is the last decade, 1961 to present. A few other antecedent sources have been included because they refer directly to the concepts involved in the "social indicator" perspective. No attempt was made to include works from which a historical-philosophical derivation could be deduced, e.g., the sociological classics.

The articles in the bibliography have been categorized into seven broad areas. We recognize that there could be as many different sets of categories as there are authors contributing or persons categorizing. We are only suggesting this categorization as a means to order our thinking as we move forward in the study of the field of social indicators. The references included in each category are chosen because we feel that the major

contribution of the social indicator portion of the entry lies in the category so selected. The following description is a brief statement of our definitions of the categories into which we placed entries. It should also be noted that some entries may appear in more than one category, such as a book reference. We have endeavored to indicate the appropriate chapter or chapters applicable to the category into which it has been classified but we have prepared annotations only for the entire book, rather than chapter by chapter. We have included several references in each category for persons interested in becoming familiar with that section.

I. Theory:

When discussing theory, especially sociological theory, we believe that writers should define their concepts explicitly. By sociological theory, we mean, a system of logically interrelated propositions which are empirically verifiable. Obviously in a new field of interest we would not expect to find many such references. Our review of literature has corroborated this assumption. We also believe, however, that sociological theory serves several functions among which is the stimulation of interest and the directing of foci for both theoretical and empirical explorations. We have included articles in this section which serve this function. The resultant rationale for the selection of articles for this section is that they contain one or more of the following attributes:

- a. logical statements at the abstract level about social indicators;
- b. statements concerning the relationships of and between social indicators; and,
- c. the use of social indicators as a perspective for recasting existing theory or redirecting our theoretical attention.

## Suggested Introductory Readings for this Section:

Bauer, Raymond A. (ed.)

1966 Social Indicators. Cambridge, Massachusetts: The Massachusetts Institute of Technology Press.

Gross, Bertram

1966 The State of the Nation: Social Systems Accounting. New York: Tavistock Publications.

Sheldon, Eleanor B. and Wilbert E. Moore

1968 "Monitoring social change in American society." Pp. 3-26 in Eleanor B. Sheldon and Wilbert E. Moore (eds.), Indicators of Social Change: Concepts and Measurements. Russell Sage Foundation.

Urban Affairs Quarterly

1970 "Urban indicators: The state of the art." Urban Affairs Quarterly 6 (December): (Special Issue).

Warren, Roland

1970 "Toward a non-Utopian normative model of the community." American Sociological Review 35 (April):219-228.

II. Concept:

Our use of the word "concept" refers to a term that can exist or be imagined, or to an operation that can be performed as distinct from constructs which are merely grammatical. Authors included in this section are those which use the term "social indicators" in the sense of ordering our thinking regarding the social "facts" with which we deal. By this we mean authors who have dealt with the notion of "social indicators" in a conceptual frame while attempting to restructure our view of certain specific phenomena, groups of phenomena, particular relationships of phenomena, and the contextual properties of those phenomena (Zetterberg, 1965).

## Suggested Introductory Readings for this Section:

Kamrany, Nake M.

1968 "A note on the development of social indicators." Santa Monica, California. Systems Development Corporation. 25 pages. (International Bank for Reconstruction and Development, Western Africa Department, 1818 H. N.W., Washington, D.C. 20433).

Stanford Research Institute

1969 "Toward master social indicators." Educational Policy Research Center. SRI Project 6747, Research Memorandum EPRC-6747-2. (February) Menlo Park, California. 52 pages.

Vestermark, S.D. Jr.

1968 Indicators of Social Vulnerability. McLean, Virginia: Human Science Research, Inc. 285 pages and summary. (Human Science Research, Inc. Westgate Research Park, 7710 Old Springhouse Road, McLean, Virginia 22101)

### III. Definition:

The basic rationale for references included in this section was influenced by Ruby (1950). He emphasized the basic criteria for an adequate analytical definition. The definition should include:

- a. the definiendum or the word being defined;
- b. the definien is that part of the verbal order or statement which is equivalent to the definiendum;
- c. the definien should clarify the nature of the definiendum by specifying the genus, the general class of objects to which the definiendum belongs, and the differentia, the special characteristics or the modifying elements of the definiendum.

Thus we are concerned with anyone who has attempted to apply these definitional criteria to the term, social indicators. Ideally we would not be concerned with those definitions which would use extensive or denotational techniques. However, the state of the art is insufficient at this time to find a large body of knowledge in this area. Therefore, we have included all authors who have, as their stated objective, definitions of the term, social indicators.

Following this criteria for a definition, the works included will necessarily utilize verbal constructs of an abstract nature. Definitions, which may be referred to as empirical or those with real world or empirical

referents, including the extensive type of definition, we will include in the application section.

We assume that the term "social indicators" is a minimum and primitive term, as understood by Zetterberg (1965), unique to the discipline of sociology. Therefore, the inclusion of a section for the definition of the term seems appropriate, logically, for this bibliography.

Suggested Introductory Readings for this Section:

Kamrany, Nake M. and Alexander N. Christakis

1970 "Social indicators in perspective." *Socio-Economic Planning Science* 4 (June):207-216.

Land, Kenneth C.

1970 "Social indicators." In Robert B. Smith (ed.) *Social Science Methods*. New York: Free Press.

Olson, Mancur Jr.

1969 "Social indicators and social accounts." *Socio-Economic Planning Science* 2:335-346.

#### IV. Methodology:

We subscribe to the view of methodology presented by Kaplan (1964). We treat as substantively different methodology and methods. Methods refer to those techniques including; the formation of concepts and hypotheses, observation and measurement, the conduct of experiments, and the construction of models and theories. Methodology, on the other hand, refers to the description, analysis, explanation, and justification of those techniques or methods and not to the methods themselves. Hence, writers included in this section are concerned with methodology, not methods.

Suggested Introductory Readings for this Section:

Coleman, James S.

1969 "The methods of sociology." Pp. 86-115 in Robert Bierstedt (ed.), *A Design for Sociology: Scope, Objectives, and Methods*. Monograph Number 9 in a series by The American Academy of Political and Social Science. Philadelphia: The American Academy of Political and Social Science.

- Duncan, Otis D.  
 1968 "Social stratification and mobility: Problems in the measurement of trend." Pp. 675-719 in Eleanor B. Sheldon and Wilbert E. Moore, (eds.), Indicators of Social Change: Concepts and Measurements. New York: Russell Sage Foundation.  
 1969 Toward Social Reporting: Next Steps. New York: Russell Sage Foundation. (Paper number 2 in Social Science Frontiers Series.)

- Jones, Martin V. and Michael J. Flax  
 1970 The Quality of Life in Metropolitan Washington (D.C.). Washington, D.C.: The Urban Institute. 82 pages.

- Krendel, Ezra S.  
 1970 "A case study of citizen complaints as social indicators." IEE Transactions on Systems Science and Cybernetics (October) SSC-6, number 4.

- Wilson, John O.  
 1969 Quality of Life in the United States: An Excursion into the New Frontier of Socio-Economic Indicators. Kansas City: Midwest Research Institute. 46 pages.

#### V. Application:

This section would be dealing with empirical case studies of the application and use of social indicators. However, it is quite obvious this is not possible at the present time. Therefore, we are concerned with those articles in which the author has used extensive and/or operational definitions of the term "social indicators" and has in some cases applied it to the analysis of some "real world" data.

Suggested Introductory Readings for this Section:

- Department of Health, Education and Welfare  
 1967 Health, Education and Welfare Indicators. Washington, D.C.: U.S. Government Printing Office (published monthly from September, 1960 through February, 1967).  
 1969 Toward a Social Report. Washington, D.C.: U.S. Government Printing Office. 101 pages.
- Sheldon, Eleanor B. and Wilbert E. Moore  
 1968 Indicators of Social Change: Concepts and Measurements. New York: Russell Sage Foundation. 822 pages.
- U.S. Senate; Bill No. S.843  
 1967 "The full opportunity and social accounting act of 1967." American Psychologist 22 (November):974-983.

## VI. Criticism and the State of the Art:

This is a broad area of literature in which the notion of social indicators itself is explored. We have included authors who have dealt with the notion, using a retrospective interpretation of their work, as well as the contemporary articulation of the notion. Also included are those articles which call for the development of the area of social indicators in sociology and those which are critical of the need and/or role of this development.

Suggested Introductory Readings for this Section:

Bell, Daniel

1969 "The idea of a social report." *The Public Interest* 15 (Spring): 72-84.

Gross, Bertram (ed.)

1967 "Social goals and indicators for American society volume 1." *The Annals of the American Academy of Political and Social Science* (May)371: entire issue.

Gross, Bertram and Michael Springer

1967 "New goals for social information." *The Annals of the American Academy of Political and Social Science* (September)373:208-218.

Henriot, Peter J.

1970 "Political questions about social indicators." *The Western Political Science Quarterly* 23 (June):235-255.

Sheldon, Eleanor B. and Howard E. Freeman

1970 "Notes on social indicators: Promises and potential." *Policy Sciences* 1 (April):97-111.

Springer, Michael

1970 "Social indicators, reports, and accounts: Toward the management of society." *The Annals of the American Academy of Political and Social Science* (March)388:1-13.

## VII. Policy and Planning:

We realize that the inclusion of statements advancing the possible use of social indicators in public policy and social planning could also be viewed as general arguments for the development of the area. We feel, however, that this particular potential field of utilization is sufficiently

unique and important to warrant a separate category. In this category we have included references to the discussion of the decision-making processes, the adequacy of data for policy decision, feed-back procedures influencing that policy, monitoring and evaluation processes, discussions of the appropriate methods and state variables. Also included are discussions of the procedures used to isolate the state variables applicable to social planning, and the necessity, input, and impact of these variables in planning both to and for policy decisions at various hierarchical levels of government and private life.

Suggested Introductory Readings for this Section:

Cohen, Wilbur J.

1968 "Social indicators: Statistics for public policy." *The American Statistician* 22 (October):14-16.

Department of Health, Education and Welfare

1969 *Toward a Social Report*. Washington, D.C.: U.S. Government Printing Office. 101 pages.

Horowitz, Irving Louis

1968 "Social indicators and social policy." Pp. 328-339 in Irving L. Horowitz (ed.), *Professing Sociology: Studies in the Life Cycle of Social Science*. Chicago: Aldine Publishing Company.

Olson, Mancur Jr.

1969 "The plan and purpose of the social report." *The Public Interest* 15 (Spring):85-99.

### Conclusion

We have attempted to demonstrate in this paper the vast potential of the new conceptual area, social indicators, as it impacts both our discipline and all levels of policy decision-making and planning. Hopefully, our bibliographic taxonomy will be useful to those who wish to familiarize themselves with this field. Our reasoning in demonstrating the dearth of writings in our categories is to stimulate active scientific inquiry by individuals from a variety of perspectives and specialty areas in our discipline.

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Gross, Bertram M.

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- 1964 *The Conduct of Inquiry*. San Francisco: Chandler Publishing Co.

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Ruby, Lionel

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Zetterberg, Hans L.

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