SOCIAL RESEA

A Study in Methods of Gathering.

BY

GEORGE A. LUNDBERG

UNIVERSITY OF WASHINGTON

LONGMANS, GREEN AND CO.

NEW YORK · LONDON · TORONTO

LONGMANS, GREEN AND CO., Inc. 55 FIFTH AVENUE, NEW YORK 3

LONGMANS, GREEN AND CO., Ltd.
of Paternoster Row
43 Albert drive, London, S.W. 19
17 CHITTARANJAN AVENUE, CALCUTTA 13
NICOL ROAD, BOMBAY 1
36A MOUNT ROAD, MADRAS 2

LONGMANS, GREEN AND CO. 215 VICTORIA STREET, TORONTO 1

LUNDBERG

SOCIAL RESEARCH

COPYRIGHT • 1942

BY LONGMANS, GREEN AND CO., INC.

ALL RIGHTS RESERVED, INCLUDING THE
RIGHT TO REPRODUCE THIS BOOK, OR

ANY PORTION THEREOF, IN ANY FORM

SECOND EDITION JANUARY 1942
REPRINTED MAY 1946
REPRINTED JULY 1947

Printed in the United States of America

VAN REES PRESS • NEW YORK

SOCIAL RESEARCH

To JOHN M. GILLETTE AND TO STUDENTS OF THE FIRST EDITION

"The truth is, the Science of Nature has been already too long made only a work of the *Brain* and the *Fancy*: It is now high time that it should return to the plainness and soundness of *Observations* on *material* and obvious things." Robert Hooke, *Micrographia*, 1665, Preface.

"The present tendency is to loaf and to generalize... We need men not afraid to work: who will get busy the adding machine and the logarithms and give us exact studies, such as we get from the psychological laboratories. Sociology can be made an exact, quantitative science if we can get industrious men interested in it." F. H. Giddings, Amer. Jour. Sociol., 15:196, 1909–10.

"The critical habit of thought, if usual in a society, will pervade all its mores, because it is a way of taking up the problems of life. Men educated in it cannot be stampeded by stump orators and are never deceived by dithyrambic oratory. They are slow to believe. . ." W. G. Sumner, Folkways, 1907, pp. 632-33.

"The fundamentals of the science which our century inherited from its predecessors have been modified, now slightly, now quite perceptibly, till our outlook on the physical universe today bears but little resemblance to that of only thirty years ago. Great and striking as these advances are, there has been another, most rapidly developed since 1930, which has been slowly gathering momentum for all of 2300 years, which is of far deeper significance for "truth" – or Pilate's query – than any of the radical advances of science of the past thirty years. Being more fundamental, more radical, and simpler than any of the spectacular advances in science, naturally this new advance has escaped the notice which its far-reaching importance merits. Yet it is of profound significance for all theorizing and truth-seeking, scientific or other." – E. T. Bell, The Search for Truth (Reynal and Hitchcock, 1934), pp. 7-8.

"Some of the gratuitous dualisms done away with [by modern biology, cultural anthropology, and the experimental method] . . . are those of the objective and subjective, the real and apparent, the mental and physical, scientific physical objects and objects of perception, things of experience and things-in-themselves concealed behind experience, the latter being an impenetrable veil which prevents cognitive access to the things of nature." — John Dewey, "Experience, Knowledge, and Value: A Rejoinder." (The Philosophy of John Dewey, P. A. Schilpp, Editor, Northwestern University Press, 1939), p. 524.

PREFACE

TO THE FIRST EDITION

The advance of physical science has been chiefly dependent upon the refinement of the technique and tools of observation and description. In the social sciences this technique and these tools are as yet largely undeveloped. There is a large number of treatises on "Principles" of Sociology, Economics, and Political Science. As hypotheses, these Principles are of unquestionable value. But the hope for the advancement of the social sciences lies in the testing of these principles by a patient accumulation of observed data, scientifically classified and generalized. The technique of such observation and classification is today the aspect of the social studies which is most in need of development.

To be sure, the details of an adequate technology and methodology in a given case can be developed only as we work on specified problems. "The thought of an end," says John Dewey, "is strictly correlative to perception of means and methods. Only when and as the latter become clear during the serial process of execution, does the project and guiding aim and plan become evident and articulated." It would certainly be absurd to attempt to prescribe a rigid method of procedure to be followed in all inquiries. However, there are certain principles of logic, certain common dangers of bias, and certain common general approaches, which may be treated as generally present in all research. It is with these general principles and methods in the social sciences that this book is concerned.

The present work has been produced primarily in order to bring together and to make available in compact form materials which the author has found useful in his course on Methods of Social Research. The objectives of this course, and hence of the present book, are:

1. To emphasize the importance of accurate and objective observation as the first step in scientific method, on which the value of subsequent analysis and the validity of the conclusions depend.

2. To inculcate a healthy skepticism of, and a critical spirit toward, statistical data by acquainting the student with the difficulties, danger, and inaccuracies to which the collection and interpretation of social data are especially subject.

3. To give a general knowledge of the technique of gather-

ing original data.

The value of the first two of these objectives to the general student will probably be admitted by everyone. With the increasing use of quantitative data in the literature and social administration of the day, a critical discrimination in their production and consumption becomes increasingly desirable. The last objective, in addition to being a goal in itself to the research student and the field worker, is a means to the achievement of the first two purposes.

The need for a discussion of the topics treated in this book was impressed on the author by the fact that while there are several dozens of treatises on statistics and methods of classifying, generalizing, and scientifically manipulating quantitative social data, there are only three or four which place the main emphasis on the scientific observation and recording of these data. The main reason for this fact is, of course, that the methods of handling and manipulating data are largely the same in all sciences, and hence it is natural that this phase of scientific method should be much more highly developed in the social sciences than the first step, namely, the observation and recording of data. This is the step in scientific method which is likely to be most different in the various fields of science, because it is the step concerned largely with the matter of units, nomenclature, and instruments of observation which may be very different in different fields. As a result, statistical technique of manipulating data already collected in the social sciences has become more highly developed than the technique of observing and recording the data.

Obviously there is little to be gained by the application of refined statistical technique to data which are grossly inaccurate, indefinite, or otherwise defective from the standpoint of observation and recording. Says Wilcox: "I cannot but feel that there may be some danger of turning the attention of the class too exclusively either to graphic methods of rep-

resenting results or to mathematical methods of determining the exact degree of correlation. Doubtless each of these has an important place in a course in statistics, but neither strikes at the spot in which most errors are found. . . For a large majority of statistical errors are those which creep into the raw material and cannot be eliminated by any refinements of mathematical analysis or any skill in graphic representation. To center attention on these field errors has the incidental advantage of bringing home to the student as nothing else can the real difficulties before the official statistician. . ." Certainly it is this phase of social science which is in greatest need of development today. To call attention to this need, as well as to make a few general suggestions toward meeting it, is the purpose of the present work.

I have tried to give full credit in the text and in footnotes to the various authors on whose works I have drawn, but realize that it is perhaps impossible to make adequate acknowledgments in this way. Especially is this true of the ideas I have drawn from my former teachers. First among these should be mentioned Professor L. L. Bernard, to whom more than to any other person I am indebted for my general viewpoint as well as for numerous quotations in the text. To Professor F. Stuart Chapin I owe a threefold debt-for training in quantitative methods, for permission to draw liberally on his published works, and for reading a large portion of the manuscript and making valuable suggestions. To Professor M. C. Elmer I am likewise indebted for his reading of a large portion of the manuscript and for constant encouragement and suggestions. I am also under obligation to Professor R. E. Chaddock for valuable suggestions, encouragement, and criticism of part of the manuscript.

In addition to the above I wish to express my appreciation to Professors L. L. Thurstone and Jerome Davis, and to Dr. Emil Frankel for permission to quote liberally from their published writings, and to Dorothy Swaine Thomas for the privilege of examining a portion of the manuscript of "The Child in America" by D. S. and W. I. Thomas. Acknowl-

¹ W. F. Wilcox, "Cooperation between Academic and Official Statisticians," *Publications of the American Statistical Association*, Vol. 14 (N. S.), 1914–15, pp. 292-93.

edgments are also due to the American Journal of Sociology, The Century Company, and Social Forces, for permission to reprint extracts from their publications.

Finally, I am under great obligation to Professor John F. Markey for reading the major part of the manuscript and making suggestions of great importance; to my colleague Calvin F. Schmid for a discriminating reading of the proofs; and above all to Professor Read Bain, who has not only read the entire manuscript critically but has given unsparingly of his time in extensive criticism, much discussion, and constant encouragement. For the errors and shortcomings which remain, the author is, of course, solely responsible.

GEORGE A. LUNDBERG

Pittsburgh, Pa. July 1, 1929

PREFACE

TO THE SECOND EDITION

The extensive developments in methods of social research during the past decade have necessitated a complete rewriting of all but four chapters of the First Edition. Extensive additions have been made even to those chapters of the First Edition which have been in part retained (Chapters II-V). Occasional paragraphs and pages of other chapters of the original edition have also been incorporated into the present text, but nearly all of these passages have been modified to some degree. The orginal chapter headings have been retained for the most part, with some changes in their order. The chapter on Case Work and the Statistical Method of the First Edition has been eliminated as a separate chapter. The aspects of this subject which are of contemporary interest are discussed in Chapters I and XI of the present text. Two new chapters have been added, namely, Chapter VII on Questionnaires and Chapter X on Sociometric Methods in Ecology and Inter-personal Relations. At least three-fourths of the present edition is entirely new, both as regards the text and the research referred to. Most of the references are to studies that have appeared during the last five years.

The present text places greater emphasis than did the First Edition on practical problems of research, and devotes relatively less space to controversial theoretical topics. Two conditions have influenced me in this modification. First, I have devoted considerable space in another recent volume to the more theoretical questions of methodology. Instead of going over this ground again in the present volume, the position in question has been briefly summarized, and references made to the more complete discussion to be found in my Foundations of Sociology (Macmillan, 1939).

Second, my experience in practical non-academic research since the first edition appeared, has doubtless influenced both the selection of subject matter and its treatment in the present edition. For example, my research opportunities as Director of the Bureau of Social Research of the Pittsburgh Federation of Social Agencies, as director of a research project on leisure and recreation for the Council for Research in the Social Sciences of Columbia University, and as Research Supervisor in the Federal Emergency Relief Administration, impressed me with certain aspects of research which were relatively neglected in the First Edition. My recent community studies on interpersonal relations, likewise, have caused me to deal in the present edition with some of the problems and techniques of this type of research. In any case, the present text is primarily a textbook on practical techniques of securing basic data on sociological questions. It aims to make available to students and teachers the most valuable recent experience and criticism on this subject. Both for these reasons, and because of the general trend of research during the past decade, the reader will probably find much less material of a controversial nature in the present edition, and very little with which anyone will disagree with reference to practical advice to researchers, regardless of his individual views on a number of questions of sociological theory.

At the same time, the breadth of the field and the variety of the methods prevent giving equally full treatment to all of them. This is not necessarily a reflection on the value of the neglected methods. In view of the fact that this point is frequently overlooked, it may not be amiss to repeat what I said in the First Edition on this subject:

The social sciences cannot afford, in their present stage of development, at least, to neglect any method which promises to throw light on the problems which we seek to solve. The argument in this book is for the refinement and objectification of all the methods which at present admittedly contribute something to our understanding of social behavior. There is, for example, no desire to discredit or abandon the fullest possible use of life history documents, intensive historical studies of individual cases or institutions, and other discursive and non-quantitative approaches. What has been advocated is that the technique of classifying and analyzing such information be improved in such a way as to permit scientific generalizations from the data. This involves the development of a technique for the statistical summarization of these case studies. These methods tend to merge with the procedures we have considered, to the extent that they become objective in their technique. Instead of regarding life

history and case study methods as fundamentally different from the tests and statistical techniques, therefore, they should be regarded as different stages in the development of a common scientific method. The final test of the validity of a method is its efficacy in securing the type of results sought. It follows that we are justified in the use of any method, regardless of its degree of objectivity, if it helps to throw even a little light on the problem we are seeking to solve. From this point of view most social problems call for a composite method-the full utilization of historical and genetic sources, the non-quantitative description of individual cases in complete social situations, as well as the more rigid, objective, and quantitative tests - all of which may give us a more accurate account than any single approach can give. The purpose in pointing out the weaknesses of certain methods, therefore, is not to advocate their abandonment as long as they contribute something to our knowledge. The purpose of evaluating them has been to help us avoid extravagant assumptions as to the validity of the conclusions which they are capable of yielding. (First Édition, pp. 241-42.)

For the general bibliography and appendices of the First Edition I have substituted at the end of each chapter specific suggestions for further study of the subject under consideration. The enormous increase during the past decade of literature on the subjects discussed in the present book makes it necessary for the student in the future to rely on annotated bibliographies indicating which studies are likely to contain material relevant to a particular inquiry. On the subject of attitude research alone, for example, there appeared in periodicals in English, during the years 1937-39 inclusive, some two hundred titles, not counting relatively inaccessible theses and papers and excluding all studies having no bearing on methodology. Annotated bibliographies for the field have, fortunately, become increasingly available, enabling students to go more directly to the relevant sources. A bibliography of such bibliographies, aggregating many thousands of titles, is appended to the present volume.

My first obligation to be acknowledged in connection with the preparation of the present text is to the users of the First Edition. Their criticisms and suggestions are chiefly responsible for the improvements which will be found in the present volume. Among the many who have made helpful suggestions in this way are Raymond F. Sletto of the University of Minnesota, Paul F. Lazarsfeld of Columbia University, Stuart C. Dodd of American University of Beirut, Ruth Inglis of the Research Division of the Curtis Publishing Company, J. E. Bachelder of the University of New Hampshire, and Calvin F. Schmid of the University of Washington. I am indebted to the first three of these persons and to F. F. Stephan of Cornell University for permission to quote liberally from their published works. Mr. Sletto and Miss Inglis have also read parts of the manuscript and made valuable suggestions. Norman E. Himes, in his capacity as editor of Longmans Sociology Series, has greatly improved the form of the final manuscript by numerous valuable criticisms. I am indebted also to Robert Bierstedt of Bard College, Columbia University, for his painstaking reading of the proofs. greatest obligation is to Harry Alpert of the College of the City of New York, who has not only read the entire original manuscript, but has given generously of his time in written and oral discussion in the course of which he has made valuable criticisms and suggestions. My indebtedness to all of the above and to others who have shown interest in the revision implies, however, no responsibility on their part for the faults and limitations which remain.

GEORGE A. LUNDBERG

North Bennington, Vermont June 1, 1941

SOCIAL RESEARCH

CONTENTS

	PAGE
and the second s	
Research	Ι
A. Fields and Methods of Science, 1; B. Levels of Scientific Procedure, 5; C. Steps in the Scientific Method, 9; D. Common Misconceptions Regarding the Nature of Science and of Scientific Law, 11; E. The Possibility of a Science of Sociology, 14; F. The Complexity of Social Data, 16; G. The "Subjectivity" and "Intangibility" of Social Phenomena, 19; H. Predictability of Social Behavior, 21; I. Quantitative Methods in the Social Sciences, 22; J. Quantitative Methods and Case Work, 25; K. Laboriousness of Quantitative Research, 27; L. The Selection of Research Problems, 31; M. Planning a Research Project, 34; N. Summary and Conclusion, 39; O. Suggestions for Further Study, 42	
EXPERIMENTAL TECHNIQUES	45
	The Theory and Planning of Social Research

HAPTER		PAGE
III.	TERMINOLOGY, UNITS, AND CLASSIFICATION A. The Importance of Definite Terminology in Science, 80; B. Confusion of Terminology in the Social Sciences, 83; C. The Criteria of Scientific Terminology, 86; D. The Nature of Operational Definitions in Science, 88; E. Operational Definitions in the Social Sciences, 91; F. The Units of Science as Constructs of Convenience, 93; G. Requirements of Desirable Units, 96; H. Classification, 104; I. Summary and Conclusion, 109; J. Suggestions for Further Study, 111	80
IV.	THE PRINCIPAL METHODS OF SOCIAL RESEARCH	113
V.	THE SAMPLE IN SOCIAL RESEARCH A. The General Use of Sampling, 134; B. Conditions Governing the Validity of a Sample, 135; C. Methods of Sampling, 137; D. The Size and Reliability of the Sample, 145; E. Practical Tests of the Adequacy of a Sample, 149; F. General Cautions in Sampling, 149; G. Summary, 153; H. Conclusion, 155; I. Suggestions for Further Study, 157	134
VI.	THE SCHEDULE AS AN INSTRUMENT OF OBSERVATION	159

CHAPTER	F. The Testing of Schedules, 175; G. The Filling Out	PAGE
	of Schedules, 175; H. Advantages of Personal Investigation, 178; I. Conclusion, 180; J. Suggestions for Further Study, 180	
VII.	The Questionnaire as a Special Type of Schedule, 182; B. The Solicitation of Cooperation, 183; C. The Content and Structure of the Questionnaire, 186; D. Wording of Questions, 190; E. Physical and Esthetic Aspects, 196; F. Pretesting of Questionnaires, 197; G. Reliability, 198; H. Validity, 201; I. Sending out the Questionnaire, 202; J. Follow-up Letters, 203; K. Who Answers Questionnaires, 205; L. Conclusion, 208; M. Suggestions for Further Study, 209	182
	The Measurement of Attitudes and Opinions	211
171.	BEHAVIOR A. The Demand for Measurements of Institutional Behavior, 253; B. General Requisites of a Sociometric Scale, 254; C. Problems in the Construction of a Sociometric Scale, 258; D. The Factors and Weights in a Sociometric Scale, 260; E. Summary of the Principles of Construction of Sociometric Scales, 265; F. The Measurement of Hygienic Behavior, 270; G. A Scale for the Appraisal of City Health Work, 279; H. The Measurement of Socioeconomic Status, 284; I. The Principal Steps in the Construction of Sociometric Scales, 294; J. Conclusion, 306; K. Suggestions for Further Study, 308	253