METHODS OF RESEARCH

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Educational, Psychological, Sociological

by

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Preface

THIS BOOK has been written for field workers, graduate students, and members of the senior division of the undergraduate college who would evaluate the quality of conclusions, either as producers or consumers of research. Both the producer and consumer of research literature should know how and by what methods evidence is gathered, analyzed, and interpreted. Knowledge of research techniques and active participation in problem-solving are more likely to stimulate in the student the excitement of learning and of searching for truth than will textbook and lecture materials in the form of ready-made generalizations. Therefore, in this book research is presented as a way of finding answers to questions that make human beings curious or perplexed. Many of our illustrations of research portray scientists and scholars as people, with the joys of discovery and the disappointments or frustrations of wrong hypotheses, inadequate techniques, and physical, psychological, or material handicaps.

The organization of this text follows substantially the steps or sequence of problem-solving: formulation and development of the problem for investigation, and survey of the related literature; selection and use of one or more appropriate methods for gathering evidence, together with analysis and interpretation of the data; and reporting and implementation of the findings. Aspects of analysis and interpretation are treated in the setting of their functional relationships to the methodology of research (historical, descriptive-survey, experimental, case-clinical, and genetic) rather than in the more artificial setting of a separate chapter or section of this book. It is appropriate, however, to point out that Chapter 5, on the descriptive method, is devoted primarily to the concepts and procedures involved in general description, analysis, and classification, together with numerous illustrations of these types of research. The several chapters vary in length and complexity of structure, but so do the steps in problem-solving and the methods of research.

Chapters 5 and 6, on the descriptive-survey methods and data-gathering procedures, are complementary, although in a sense each is internally complete as a unit. Chapter 5 presents a theoretical, rather technical, advanced treatment (together with numerous illustrations) which some college seniors

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and some beginning graduate students may find in part difficult reading. Chapter 6 is a relatively concrete discussion of the organized forms of descriptive-survey research, together with an elementary treatment of the various data-gathering procedures and instruments used frequently in normative-survey studies. With respect to these chapters and others, the user of the text may find portions in which his immediate interest is not sufficient to warrant careful study; he should select in keeping with his purposes and needs. The content of this text steers a middle course between the concrete details of illustrative investigations and the more abstract concepts and theories of research methodology.

Since there are many specialized graduate courses and texts that deal with the details of educational, psychological, and sociological testing and statistics, these techniques as such will not be treated in the present volume. The psychometric, sociometric, and educational techniques not specifically treated in this book (or mentioned only briefly for illustrative purposes) include the following: intelligence tests and measures of general mental ability, measurement and prediction of special abilities or aptitudes, personality and character tests, measures of attitudes and interests, projective methods and other devices for the study of personality, psychometric and sociometric techniques with standardized testing and statistical emphasis, and educational (accomplishment) tests in or outside of schools and colleges.

This volume is not a "recipe book" of research methods, a "cookbook," a "rule book," or a series of "lesson plans" for problem-solving, reflective thinking, and research; but rather it is a discussion of concepts, principles, and procedures in educational, psychological, and sociological investigations. These intellectual processes do not ordinarily proceed in a succession of orderly steps straight to the goal. This is not the way of research. As has been emphasized and illustrated generally in this book, the sequence of activities in research frequently moves shuttle-like between formulating concepts and gathering of evidence, checking the ideas against the observations, and perhaps collecting new facts.

In many instances in this book the discussion of a particular problem or technique is in the form of a series of questions for the student to think through, with attention directed to the available literature, because the answer may not yet be fully known. The thesis, project, or seminar report of the student is regarded as a functional and appropriate exercise to carry along, paralleling the study of the several chapters of this book, as he engages in developing the problem, reviewing the related literature, selecting

and using a data-gathering procedure, analyzing and interpreting the evidence, and preparing the report. This procedure seems preferable to a listing of exercises in the more or less artificial settings at the ends of the various chapters. The student who would achieve intellectual independence through a working knowledge of the research literature will find a reasonably full account of the essential library tools and many illustrative studies. The library aids may be used to bring the bibliographical references of this book up to date at any time in the future.

In the interest of variety, illustrations of two bibliographical (and footnote) forms are given, as explained more fully in Chapter 10: one style in the chapter bibliographies and footnotes at the bottom of the pages, and the other (as examples) in the body of the chapter dealing with technical reporting.

Only moderate use has been made of the term *scientific,* since there is no essential conflict between the procedures of science, philosophy, logic, history, statistics, and case-clinical study. The methods of science (and technology) and of philosophy (and logic) are complementary techniques, perhaps different aspects of the general purpose of a single discipline of inquiry, in the development of problem or concept and in the gathering of evidence with which to test or modify the concept. It is held that science without philosophy is blind, while philosophy without science is empty. Recognition of the importance of theory and philosophy is found especially in Chapter 1 and Chapter 5 (on the descriptive method), which may be regarded in part as a philosophy of research and science.

Because of the increasing interdependence of problems and procedures in certain educational, psychological, and sociological areas, it has been possible to present a common pattern of research methodology, together with numerous illustrations from each special field. Sociology has moved toward integration with social psychology and cultural anthropology. The special aspects of social psychology that have value alike for sociology and for education include problems of personality, the influence of culture and culture patterns and of racial and other groups, the assessment of intelligence and character, the analysis of folk psychology, and the study of political leadership. This trend toward integration of sociology, social psychology, and cultural anthropology, including pertinent applications to educational problems, may be regarded as part of a larger movement toward coöperation in all the human sciences. Evidence of this interdisciplinary approach and of close coöperation between the different areas of

behavioral or social science is now found in the literature [1] and in certain graduate programs and research centers which utilize the combined resources of psychology, sociology, anthropology, and education.

While the general outline of the text was prepared after joint planning and discussion between the two authors, each was given primary responsibility for the writing of certain chapters. Good wrote Chapters 2, 3, 4, and 6 through 10, with Chapters 6 and 7 based in large part on examples and memoranda collected by Scates over a period of years. Scates wrote Chapters 1 and 5.

The authors are indebted for advice and assistance to Alice Yeomans Scates, especially in preparing Chapter 7 on experimentation; to Dr. Nathan S. Washton of Queens College for critical reading of the section on classification; to Dr. William H. Burton of Harvard University for editorial assistance; and to a large number of workers in education, psychology, sociology, and other social fields, whose research and writings have provided essential background for this book.

C. V. G.
D. E. S.

[1] Leon Festinger and Daniel Katz, Editors, *Research Methods in the Behavioral Sciences.* New York: Dryden Press, 1953. p. 1-12.

John Gillin and Others, *For a Science of Social Man:* Convergences in Anthropology, Sociology, and Psychology. New York: Macmillan Co., 1954. 296 p.

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