



# **Research on Human Behavior**

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*A Systematic Guide to Method*

*PHILIP J. RUNKEL AND JOSEPH E. McGRATH*

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## *Preface*

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Experience brings knowledge. More exactly, people interpret their experience; they come to conclusions about it. Research systematizes the process and enables the researcher to be explicit about the parts of his observations (experience) he pieces together in coming to his conclusions. This systematic explicitness enables others to make very similar observations (undergo very similar experiences) and judge for themselves whether they, too, would adopt the same conclusions. This book examines the ways researchers can organize their experiences about the world of human behavior so as to be explicit and systematic in reporting their experiences, their conclusions, and their logic to others.

It is a recurring theme of this book that research proceeds through a series of choice points, at each of which the investigator chooses one among several available strategies. Each course of action opens up new sets of alternatives and puts other sets out of reach. Each alternative offers advantages and disadvantages; there is no magical path to “good” research. There is never an unquestionably best method. Choices must be made to suit the investigator’s purpose—the questions he is trying to answer.

We describe in this book what seem to us the major choice points. At each point, we offer a rationale (sometimes even a theory) for conceiving alternatives among which to choose, and we describe at least some of the advantages and disadvantages of choosing each alternative. A recurring theme of the book is that the researcher buys advantages by accepting disadvantages. You will find no “right answers” in this book. At least, we hope we have not let any slip in. What you will find are advantages and disadvantages of various strategies for various purposes.

This is not a book for the technician. You cannot learn here how to delineate, in practice, the subsystems of a living system. No exercises are offered in hypothesis writing. The technicalities of using balanced incomplete block designs for experimental treatments are omitted. We give no instructions for computing a chi square or a factor analysis. What you will find here, instead, is a systematic display of the sorts of choices every researcher makes, whether

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or not he wishes to do so. You will find statements of what you pay and what you get when you make one choice or another. Of course, many technical procedures are described briefly, and examples are given, because we must give some picture of the procedures that are available. But we leave the task of imparting skill in these procedures to the books that have been written for that purpose.

We have written this book primarily for the almost-beginner. We hope the reader will have had a couple of undergraduate courses in which he spent some time talking with others (not just sitting quietly before a lecturer) about empirical research. We hope he has spent some time visualizing the process of research, or even trying it, and comparing his ideas with those of others. We hope he can say a few things in the language of elementary algebra. We do not think a course in statistics, however, is necessary for the reader to grasp the important concepts in this book. The concepts and an interim version of the manuscript have been presented to college juniors, seniors, and graduate students; the quickness of the student to grasp the argument did not seem strongly related to the number of his credit hours in psychology or statistics.

Although this book is introductory in the way we have described, it is advanced in the sense that its systematic treatment makes use of recent and advanced thinking about the logic and facets of research. It should serve as a textbook for introductory and advanced courses in research methods in a variety of scientific behavioral disciplines, such as social psychology, education, sociology, and political science, and in a number of interdisciplinary areas, such as industrial relations, organizational studies, and communications research. It can also serve as background reading for students engaged in dissertation research or other empirical research projects in these fields.

If we have one hope more poignant than others, it is that we have embedded our descriptions of research methods in a way of thinking about research that the reader can use to absorb new methods easily into his planning. It is too much to hope that our systematization contains cubbyholes for all the new ideas that will be coming on the scene, and it is too much to hope that our way of thinking about things will be compatible with all the temperaments found among researchers in social science. We do hope, however, that our organization of research choices will find wide enough use so that others will find the scheme worth improving.

In the body of each chapter, we have tried to keep references to supplementary writings to a minimum. At the end of each chapter (except the last), we have included a section headed "Further Reading," in which we describe briefly some literature that will expand and illuminate what we have written. Much of this literature is technical and will not be easily deciphered by the beginner. We include these sections primarily for the advanced student and the instructor.

Philip J. Runkel  
Joseph E. McGrath

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Every day, every one of us distills information about human behavior from our experiences with other humans. This is both ordinary and vital. Insofar as it is ordinary, we are usually unaware of the exact processes by which we come to conclusions about other humans and ourselves. We have observed others (and ourselves in interaction with them) all our lives, and we usually act in an intuitive and unexamined manner when we turn our eyes to some particular event and ponder on what we see. But insofar as information about ourselves and others is vital, we want our conclusions to be accurate and describable to others, and insofar as our conclusions are intuitive and unexamined, we cannot ascertain their accuracy. It is true that we can get much information about human behavior from books and much, too, from the memories of individual humans. But if the words in books or the words uttered by other persons are accurate in what they say about human behavior, then they must have sprung from someone's actual observations of humans acting, however long ago. It is the process of moving from observations of actual behavior to descriptions or conclusions with which this book is concerned.

When we want to check the degree to which our information is accurate and transmissible, we then begin to examine the process or method by which we extract information from observations of humans in action. In making explicit the *method* of moving from observation to conclusion, we shift from intuitive information-getting to scientific information-getting. In simplest terms, a social scientist is a man who tells you not only what he believes about human behavior but also what he observed and how his observations give rise to his beliefs. This book sets forth the major steps by which the systematic (or scientific) inquirer can make explicit his methods of observation and the connection between his observations and his conclusions.

Competent scientific research—that is, systematic inquiry—can be a complicated and difficult process. But there is no magic in it. The competent researcher need have no particular heritage aside from moderately good physical and mental health, nor does he need to acquire mysterious abilities from some dark source inaccessible to the rest of us. However, competent research does require diligence, logical reasoning, and painstaking observation. Effective

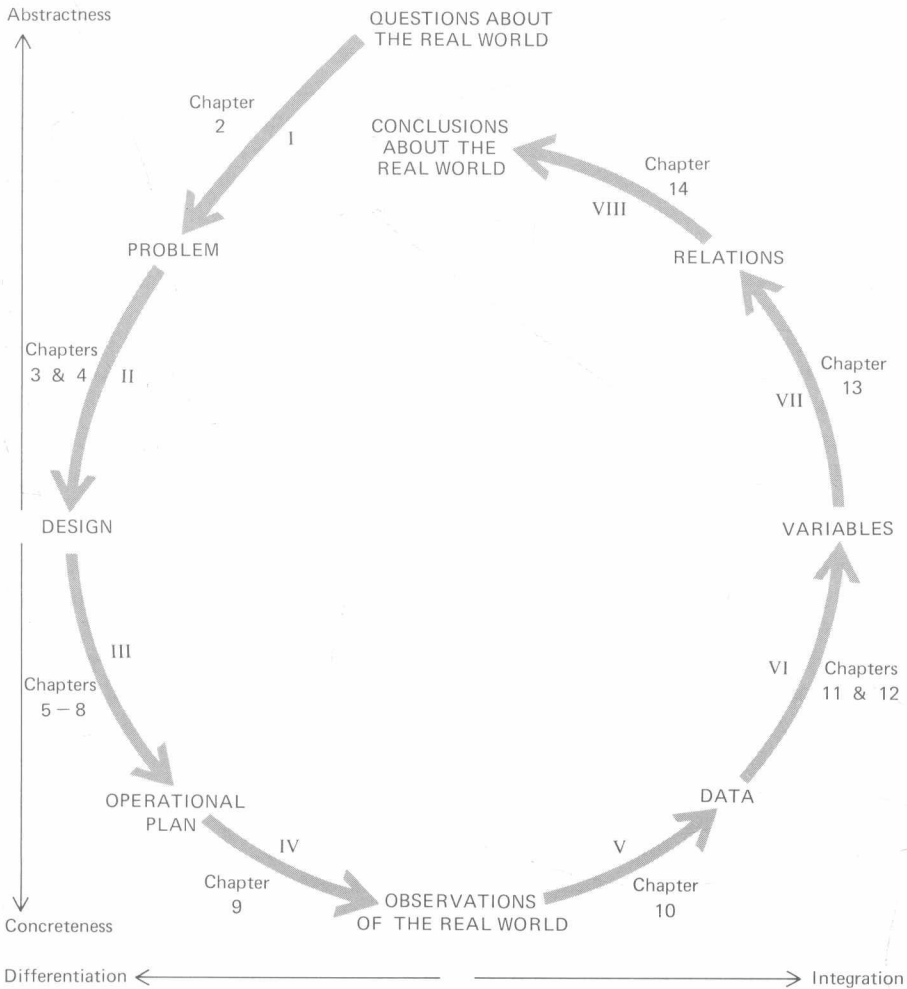
research requires scholarship—mastery of what is already known about the subject of study. In most cases, competent research in the behavioral or social sciences requires skill in stating hypotheses, designing samples, choosing observations, constructing scales, and in other techniques. But all of these can be learned.

At heart, research consists of systematically asking questions. The answers derived depend very heavily on what questions are asked and how they are asked. It is our premise that the research process involves a series of choice points, each of which poses alternative ways in which a general question can be given more specific shape. The meaning of research results is always contingent on the particular series of choices made in the process of the research. The main aims of this book, therefore, are to lay out the major choice points involved in research in behavioral science, to indicate the several alternative paths available at each choice point, and to discuss the consequences, favorable and unfavorable, that follow from each potential choice. In a sense, we will try to present the major outlines of a “theory of method” (or, more precisely, a metatheory about method) to serve as a guide or map of the research process.

The analogy with a map is useful in making several further points. First, as on any map, some paths are better charted than others. Some will be more difficult to traverse, and some will provide more interesting and rewarding experiences along the way. Second, there is no right path, or best path, for all journeys. The best road to take depends on where you want to go and the resources (time, money, manpower) you can invest in the trip. Finally, the map analogy is useful for describing the general organization of the book. We shall begin by presenting in this chapter a large-scale map laying out the entire domain of concern. In Chapter 2 we shall describe several important sets of concepts that will provide language for later parts of the book. Succeeding parts of the book offer small-scale maps of particular portions or phases of the research process (problem formulation, study design, and other topics) arranged in an oversimplified chronological sequence. The final chapter contains a recapitulation of the general problems that characterize the process of behavioral research and some extended discussion of the ways those problems affect the conclusions one can draw.

### ***1-1. The Research Process as an Open System***

Research is a continuous process made up of highly interdependent activities. Slicing the process into neat, ordered steps must be arbitrary and an oversimplification. Nevertheless, in this book we shall arbitrarily slice the research process into eight ordered phases (see Figure 1-1); we have found these phases useful in organizing our thinking in this book and we hope they will also be useful to readers. Professional researchers do not work in the neat, strictly ordered succession of logical steps suggested by our diagram. Often they work on some “later” steps before they complete “earlier” ones. Furthermore, their plans many times go awry, or their educated guesses turn



**Figure 1-1.** The cycle of empirical research and the plan of the book.

out to be wrong, requiring them to recycle through the earlier steps. The research process is not chaotic, however. Above all, it has a *directionality* to it: from question to plan to evidence to understanding. It is literally impossible—as well as absurd—to analyze your data before you have gathered it or to use an instrument or procedure before you have selected or developed it. It is largely the recycling, both to correct mistakes and to take advantage of new insights, that makes the research process seem disorderly in its flow. But this aspect of research is simply the operation of feedback loops by which problems and insights encountered at any stage of the process are “fed back” to be used in reworking some earlier stages.

Research is never done wholly in isolation, and the research process should not be viewed as an autonomous, closed system of activities. Research

is always embedded in social and technological contexts. In the first place, the instigation to investigate a given research problem comes from *outside* the research process itself, from its embedding context. Ultimately, it comes from the real world; the instigation often comes from the groups, communities, and traditions in which the investigator moves. One source of research is the theory, knowledge, and lore of a field of science which serves as a repository of prior research on related phenomena. Another source of a research problem is the individual researcher himself; the selection of a research problem, as well as the style of its investigation, reflects his knowledge, interests, and circumstances.

If today's world were not riven with racial strife, much of today's research on race relations, intergroup conflict, and stereotype would not be undertaken. And the particular way each researcher feels affected by racial strife affects the aspects of it that he chooses to investigate. His feelings also affect the methods he chooses—for example, methods that will give imprecise but usable information quickly or methods that will give precise and detailed information after a lengthy period.

The aim of research is to gain knowledge, and knowledge is inherently a social commodity to be shared and used. A research study is therefore not complete—indeed it does not even exist as an increment of knowledge—until the evidence it develops and some form of interpretation of that evidence are communicated by report or by practical application to relevant audiences in the embedding context. Thus the research process begins and ends in interaction with its social context. Research is an open system with internal dynamics of its own, but is continually influenced by interaction with many aspects of the social environment in which it is conducted.

Certain parts of the research process can be described as a series of complex logical operations going on in the head of the researcher. Other parts, as we have suggested, involve a series of disciplined communications between the researcher and relevant parts of the social context. Still other parts can be viewed as highly technical interactions between the researcher and various tools or technical aids—computers, statistical tests, measuring devices, observational aids, and the like. We should also note that the term *researcher* is a somewhat misleading label, since today few research studies in the social sciences are carried out by a single person but more often involve an organization or a team of researchers. Effectively organizing the research team is also important to the success of research.

### **1-2. The Research Process as a Network of Interdependent Choices**

The research process has directionality, but it is not a single direct path from start to end. It is more like a network of intersecting paths. Each intersection is a choice point where the investigator must decide which of a number