

***A RESEARCH PRIMER  
FOR THE SOCIAL AND  
BEHAVIORAL SCIENCES***

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and Hyman Sardy*

**A  
RESEARCH PRIMER  
for the  
SOCIAL AND BEHAVIORAL SCIENCES**

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**A  
Research Primer  
for the  
Social and Behavioral Sciences**

## Preface

This book is directed to novice investigators in the broad category “social and behavioral sciences” who are already knowledgeable in their respective disciplines and whose research problems primarily concern human subjects, yield quantitative or quantifiable evidence, and involve statistical or related procedures for the analysis of that evidence. Most researchers, unless they have had years of experience, possess substantial technical skills but may need help in coordinating them or in filling in uneven preparation. Moreover, they may want to use as yet unfamiliar methodologies from related areas. Research requires a shift in attitudes and expectations from the patterns of earlier training; we outline the research process as a whole and emphasize the importance of organizing information and planning sequences of tasks. We discuss the selection of methodologies, not the details of their use. We cover such fundamental matters as how to choose a research topic and evaluate its suitability. Our approach is practical rather than sentimental or inspirational, because we believe that the best incentive to continue in a productive career is the successful completion of a commendable first project.

This book had its genesis in our experiences, working with doctoral students and other beginning researchers, over a period of several years, variously as instructor in statistics and research courses, principal dissertation advisor, committee member, informal and formal consultant, and friend. We believe the research task to be amenable to rational analysis. The needs for assistance in the decision-making aspect of research, and for an overview of how the many component pieces fit together in the entire process, seemed to us to be urgent for many individuals. We have tried to meet these needs in a way which combines common sense and sophisticated erudition.

## Acknowledgments

In this ambitious endeavor we have relied upon the contributions of many others. (Any errors and shortcomings are of course our own.) Richard A. Stein and Gerald Marotznik generously permitted us to use their data set. Elisa Adams edited the final draft of the manuscript with elegance, wit, and skill. Kathleen O'Donnell-Maguire typed and retyped with extraordinary diligence and meticulous accuracy.

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# Contents

|   |      |
|---|------|
| Preface   | xiii |
| Acknowledgments   | xv   |
| Introduction  | 1    |
| Appendix: Decision Trees  | 5    |
| Notes   | 7    |
| 1. Preliminaries  |      |
| Introduction  | 9    |
| Methods of Acquiring Knowledge                                    | 10   |
| The Scientific Method   | 11   |
| <i>Identifying a Problem as Researchable</i>                      | 12   |
| <i>The Role of Theory</i>   | 13   |
| <i>Causality</i>  | 15   |
| <i>Controlled Observations</i>                                    | 16   |
| <i>Statistical Analysis</i>                                       | 17   |
| <i>Overview of the Scientific Method</i>                          | 18   |
| Classification of Research  | 18   |
| <i>Formulative and Verificational Research</i>                    | 18   |
| <i>Basic, Applied, and Action Research</i>                        | 19   |
| Notes   | 21   |
| Additional Reading  | 22   |
| 2. Choosing the Research Problem and Stating the Problem-Question |      |
| The Importance of a Well-Chosen Problem                           | 25   |
| Sources of Problems   | 25   |
| The Role of Curiosity   | 28   |
| A Theoretical Basis for the Study                                 | 29   |
| Originality   | 34   |
| Amenability to Replication  | 34   |
| Practical Aspects of Problem Formulation                          | 35   |
| <i>Time</i>   | 35   |
| <i>Costs</i>  | 36   |
| <i>Availability of Other Resources</i>                            | 37   |
| <i>Availability of Information</i>                                | 38   |

|  |    |
|--|----|
| <i>Usefulness of the Findings</i>  | 39 |
| <i>Politics of Problem Selection</i>   | 39 |
| <i>Political Problems Peculiar to Doctoral Students: The Committee</i>                                     | 40 |
| <i>Capabilities and Limitations of the Researcher</i>  | 41 |
| Stating the Problem-Question: Avoiding Common Errors in Formulation  | 42 |
| A Research Plan  | 44 |
| <i>Design: Preliminaries</i>   | 44 |
| <i>Trouble: The Best-Laid Plans. . .</i>   | 45 |
| Appendix: Difficulties Nobody Mentions Because They Figure You Shouldn't Have To Be Told (Maybe You Don't) | 46 |
| Notes  | 48 |
| Additional Reading   | 49 |

### 3. The Background of the Problem: Review of the Literature

|   |    |
|---|----|
| Introduction  | 51 |
| Locating Reference Materials: Bibliographic           | 52 |
| Reviewing and Abstracting                             | 54 |
| <i>Checklist for Evaluating the Report of a Study</i> | 55 |
| Locating Reference Materials: Other Researchers       | 56 |
| Format: Notes and Bibliography                        | 57 |
| Recording and Storing Bibliographic Material          | 57 |
| When to Stop  | 58 |
| Common Errors   | 60 |
| Outcome of the Background Search                      | 60 |
| Appendix: Research Indexes                            | 61 |
| Notes   | 61 |
| Additional Reading                                    | 62 |

### 4. Definitions and Major Research Hypotheses

|  |    |
|--|----|
| Introduction: The Relationship between Theory-Building and Hypothesis-Testing  | 63 |
| Role of Definitions in Hypothesis Formulation                                  | 64 |
| Selection of Variables and Identification of Their Role in the Hypothesis      | 67 |
| The Hypothesis: What Is It?  | 69 |
| Stating the Expected Relationships   | 71 |
| Operationalizing Definitions and Hypotheses                                    | 73 |
| The Logic of Hypothesis Testing  | 75 |
| The Null Hypothesis  | 77 |
| Level of Significance, Region of Rejection, and Type I or $\alpha$ -Error      | 78 |
| Type II or $\beta$ -Error  | 79 |
| One-Tailed versus Two-Tailed Tests (Directional versus Nondirectional Effects) | 80 |
| When Significance Tests Are Not Appropriate or Useful                          | 82 |
| A Final Word   | 83 |
| Notes  | 83 |
| Additional Reading   | 85 |



## 5. Evaluating Method and Design

|  |     |
|--|-----|
| Introduction                             | 87  |
| Classification of Research               | 88  |
| Control                                  | 91  |
| Internal and External Validity           | 93  |
| Control of Variance                      | 95  |
| Common Sources of Invalidity in Practice | 99  |
| Notes                                    | 101 |
| Additional Reading                       | 102 |

## 6. Research Types

|   |     |
|---|-----|
| Introduction                                | 103 |
| Nonexperimental Research Types: Historical  | 104 |
| Nonexperimental Research Types: Descriptive | 109 |
| 1. <i>Longitudinal Studies</i>              | 110 |
| 2. <i>Case and Generalized Case Studies</i> | 112 |
| 3. <i>Correlational Studies</i>             | 114 |
| 4. <i>System Studies</i>                    | 116 |
| Experimental Research Types                 | 119 |
| Overlapping Research Types                  | 125 |
| Pilot Studies                               | 127 |
| Summary                                     | 128 |
| Notes                                       | 128 |
| Additional Reading                          | 130 |

## 7. Procedure: Measurement, Instrumentation, and Data Collection

|  |     |
|--|-----|
| Introduction                                       | 133 |
| Measurement  | 133 |
| Stevens' Classification of Scales                  | 134 |
| Other Ways to Classify Scales                      | 137 |
| Scales and Statistics                              | 138 |
| Instruments  | 140 |
| <i>Direct Observation</i>                          | 141 |
| <i>Equipment</i>                                   | 142 |
| <i>Questions and Schedules</i>                     | 143 |
| Some Vocabulary                                    | 151 |
| <i>Questions</i>                                   | 151 |
| <i>Scaling: Constructing Scales</i>                | 152 |
| <i>Indexes</i>                                     | 154 |
| <i>Normative and Ipsative Scoring</i>              | 155 |
| Criteria for Evaluating Instruments                | 156 |
| <i>Validity</i>                                    | 156 |
| <i>Reliability</i>                                 | 159 |
| <i>Standardization</i>                             | 161 |
| <i>Sensitivity and Differentiability</i>           | 161 |
| <i>The Role of Measurement and Instrumentation</i> | 162 |

|  |     |
|--|-----|
| Problems of Developing Your Own Instrument | 162 |
| Notes                                      | 164 |
| Additional Reading                         | 166 |

## 8. The Study Population: Sampling

|   |     |
|---|-----|
| Introduction                                      | 169 |
| Sampling: Advantages and Disadvantages            | 172 |
| Nonprobability Sample Types                       | 172 |
| Estimation Based on Probabilistic Sampling        | 174 |
| Determining a Sampling Procedure: Initial Steps   | 175 |
| Sampling Types                                    | 176 |
| <i>Simple Random Sampling</i>                     | 176 |
| <i>Stratified Sampling</i>                        | 176 |
| <i>Systematic Sampling</i>                        | 177 |
| <i>Cluster Sampling</i>                           | 178 |
| <i>Matched Samples</i>                            | 179 |
| <i>Two-Phased Sampling</i>                        | 179 |
| <i>Sequential Sampling</i>                        | 180 |
| <i>Interpenetrating Replicate Subsampling</i>     | 180 |
| <i>Other Sampling Types</i>                       | 181 |
| Determining Sample Size                           | 181 |
| Sampling Errors to Avoid                          | 185 |
| Sampling and Studying Human Populations           | 186 |
| Sampling and External Validity: A Concluding Note | 187 |
| Notes   | 188 |
| Additional Reading                                | 189 |

## 9. Role of Computer in Research

|  |     |
|--|-----|
| Computer Processing of Data  | 191 |
| Some Basic Computer Terminology  | 192 |
| Access to Computing Facilities   | 192 |
| Who Processes Your Data?   | 194 |
| Computer Costs   | 195 |
| Timely Processing  | 195 |
| Coding and Documentation   | 197 |
| Computerizing Input Information  | 198 |
| Verification of Input Information  | 199 |
| Security of Machine-Readable Information   | 199 |
| Automated Data Acquisition and Process Control   | 200 |
| Data Base Management (Management Information) Systems and<br>Computer Simulation (Automated Data Generation) | 200 |
| Your Own Software  | 202 |
| Computer Packages for the Social Sciences  | 202 |
| Computer Graphics  | 204 |
| Text Editors   | 204 |
| Keeping Data Records (Archiving)   | 205 |
| Notes  | 206 |
| Additional Reading   | 206 |

## 10. Techniques for Analysis of Data

|   |     |
|---|-----|
| Introduction  | 207 |
| A Note on Word Usage  | 208 |
| Questions That Data Analysis Can and Cannot Answer                    | 208 |
| Experts   | 210 |
| <i>Choosing and Using a Statistical Resource Person or Consultant</i> | 210 |
| <i>Choosing and Using a Computer Resource Person</i>                  | 212 |
| Classification of Data Analysis or Statistical Techniques             | 213 |
| Evaluating Competing Procedures                                       | 217 |
| Computer Use  | 218 |
| Decision Trees for Choosing Statistical Procedures                    | 219 |
| Notes   | 220 |
| Additional Reading  | 221 |

## 11. Probabilistic Methods: Univariate and Bivariate Statistics

|  |     |
|--|-----|
| Introduction   | 223 |
| Graphs and Charts  | 223 |
| <i>Bar Charts</i>  | 224 |
| <i>Line Plots or Line Charts</i>                         | 225 |
| <i>Scattergrams</i>                                      | 227 |
| <i>Pie Charts</i>  | 227 |
| <i>Exploratory Graphing Techniques</i>                   | 227 |
| <i>Statistical Maps</i>                                  | 229 |
| <i>Miscellaneous Schematic Graphs</i>                    | 230 |
| Tables   | 230 |
| Percentages  | 233 |
| Cross Sorts and Cross Breaks                             | 233 |
| Univariate Measures and Techniques                       | 235 |
| The Measurement of Difference                            | 246 |
| Measurement of Relationships and Strength of Association | 256 |
| Nonparametric Relationships                              | 264 |
| Afterword  | 266 |
| Notes  | 267 |
| Additional Reading                                       | 268 |

## 12. Probabilistic Methods: Multivariate Statistics I: Basic Strategies

|   |     |
|---|-----|
| Introduction  | 271 |
| Charts and Tables for Three or More Variables                       | 272 |
| Multiple Causality  | 276 |
| Partial and Semipartial (Part) Correlation                          | 282 |
| Multiple Regression Analysis  | 284 |
| <i>Least Squares Assumptions</i>                                    | 285 |
| <i>Nonlinear Regression: Transforming (Re-Expressing) Variables</i> | 287 |
| <i>Path Analysis</i>  | 291 |
| The Analysis of Variance (ANOVA)                                    | 292 |
| <i>Assumptions Underlying Analysis of Variance</i>                  | 293 |

|  |     |
|--|-----|
| <i>n-Way Analysis of Variance and Factorial Design</i> | 295 |
| <i>Other Types of Design</i>                           | 300 |
| <i>Analysis of Covariance (ANCOVA)</i>                 | 300 |
| <i>Multiple Comparison Procedures</i>                  | 302 |
| Notes  | 304 |
| Additional Reading                                     | 306 |

### 13. Probabilistic Methods: Multivariate Statistics II: Clustering and Classification Techniques

|   |     |
|---|-----|
| Introduction                                  | 309 |
| Factor Analysis                               | 309 |
| Discriminant Analysis                         | 317 |
| <i>Assumptions and Procedures</i>             | 318 |
| <i>Interpreting Discriminant Functions</i>    | 320 |
| <i>Classification of Cases</i>                | 321 |
| <i>Calculating Procedures</i>                 | 321 |
| <i>A Last Word on Discriminant Analysis</i>   | 326 |
| Canonical Correlation Analysis                | 326 |
| Multivariate Linear Methods: Some Comparisons | 331 |
| Notes   | 335 |
| Additional Reading                            | 337 |

### 14. Probabilistic Methods: Multivariate Statistics III: Techniques Free of Linear Assumptions

|   |     |
|---|-----|
| Introduction  | 339 |
| Time Series: Special Issues in Bivariate and Multivariate Analyses            | 339 |
| Nonparametric Multivariate Methods  | 342 |
| <i>Introduction</i>   | 342 |
| <i>Nonparametric Analysis of Variance (Kruskal-Wallis and Friedman Tests)</i> | 343 |
| <i>The Coefficient of Concordance</i>   | 347 |
| <i>Cochran's Q Test</i>   | 347 |
| The Chi-Square Tests  | 348 |
| Partialling Procedures  | 352 |
| Some Last Thoughts on Multivariate Statistical Techniques                     | 353 |
| Notes   | 353 |
| Additional Reading  | 354 |

### 15. Deterministic Problem Analysis Techniques

|  |     |
|--|-----|
| Introduction   | 357 |
| Elementary Mathematical Techniques                   | 358 |
| Calculus Based Techniques                            | 359 |
| Mathematical Programming                             | 361 |
| <i>Linear Programming</i>                            | 361 |
| <i>Integer Programming</i>                           | 364 |
| <i>Parametric Programming (Sensitivity Analysis)</i> | 364 |
| <i>Nonlinear Programming</i>                         | 364 |
| <i>Dynamic Programming</i>                           | 365 |

|                                   |     |
|-----------------------------------|-----|
| Network Models                    | 366 |
| <i>PERT</i>                       | 366 |
| <i>Critical Path Method (CPM)</i> | 368 |
| Decision Theory                   | 369 |
| Finite Markov Chain Processes     | 373 |
| Inventory Models                  | 374 |
| Waiting Line (Queueing) Models    | 375 |
| Afterword                         | 376 |
| Notes                             | 376 |
| Additional Reading                | 378 |

## 16. Endgame

|  |         |
|--|---------|
| Evaluating the Design of Your Study                                  | 379     |
| The Overall Structure of the Report                                  | 381     |
| Review of Related Literature: Suggesting the Importance of the Study | 381     |
| Presentation of Design and Methodology                               | 382     |
| What To Make of It   | 383     |
| The Statement of Findings  | 386     |
| <i>What Are Findings?</i>  | 386     |
| <i>Presentation of Findings</i>                                      | 387     |
| <i>Common Errors in Presentation of Findings</i>                     | 389     |
| Your Conclusions   | 390     |
| <i>Recapitulation of Problem Statement</i>                           | 390     |
| Critical Comment: Implications and (General) Discussion              | 391     |
| Resolution of Contradictions   | 392     |
| Negative Results   | 393     |
| Your Summary   | 394     |
| Journal Articles: Special Considerations                             | 394     |
| Evaluation Reports: Special Considerations                           | 395     |
| Pitfalls in Presentation of Conclusions                              | 396     |
| The Research Report: Recapitulation                                  | 397     |
| Developing a Readable Style  | 397     |
| Afterword  | 399     |
| Appendix: Dissertation Checklist                                     | 400     |
| Notes  | 401     |
| Additional Reading   | 402     |
| <br>References   | <br>405 |
| Index  | 425     |

# Introduction

“We face insurmountable opportunities”

Pogo (Walt Kelly)

This book is entitled *A Research Primer for the Social and Behavioral Sciences*. Traditionally, a primer is intended for beginners; it is gentle and friendly in tone; it offers an introduction to some domain of knowledge in a simple and direct way, and provides some suggestions for learning more about it, usually through further, more intensive reading. This primer is perhaps somewhat unusual in that it is addressed to individuals who have already acquired at least a fair degree of knowledge or expertise in one of the social or behavioral sciences. They may, nonetheless, need guidance in undertaking that most difficult of tasks, independent original research.

The goal of this book is threefold: to provide you with

- an introductory but comprehensive overview of the research process,
- a description of the difficulties you will probably encounter and the skills you will have to master in order to overcome them, and
- a discussion of differing and possibly conflicting points of view concerning certain aspects of your task.

We delineate the different facets of research, and offer guidelines for formulating and managing the interdependent procedures needed to attack your research problem. We make no attempt to duplicate the many excellent works on specific topics: manuals of design, textbooks on statistics, expositions of philosophy or methodology in the various social sciences, and handbooks of style, etc. We see this book as a primer of research concepts, not of techniques, and not directed to any one discipline. It deals with questions that arise in applied or cross-fields and that require researchers to integrate or decide among the methodologies and viewpoints of several different disciplines. It is not a book of “know-how.” It is certainly not encyclopedic and does not pretend to be.

The book is for you if you are undertaking a first research project in your own or a related field in the social or behavioral sciences, be it a doctoral dissertation or a substantial master’s thesis, senior honors, or major area paper.

Among the social and behavioral sciences we include social psychology, sociology, certain aspects of individual psychology (e.g., clinical, human learning, child and adolescent development), political science, anthropology, economics, history; also all the applied social relations (multidisciplinary or interdisciplinary) fields<sup>1</sup> such as education, ethnic, area and women's studies; the health sciences such as delivery of medical care, epidemiology, kinesics, and public health; human ecology, social work, and theory of management. We also include certain work in linguistics and analysis of style and period in the arts. We assume your research question is primarily concerned with human behavior, and exploits the application of statistical or related quantitative methods in the analysis of evidence.

We make certain assumptions about you, the reader, in addition to those mentioned above concerning fields of interest.

- You are sufficiently knowledgeable about the discipline within which the problem lies (e.g., education, sociology, public health) so as to be aware of related problems, fundamental definitions, pertinent theories. (You may, however, be unfamiliar with strategies of data collection and analysis more typical of work in other disciplines but quite adaptable to problems in your own.)
- You are able to obtain access to such needed facilities as calculating devices, a library, etc.
- You are informed about statistics to the extent of an intensive 1-year course,<sup>2</sup> and reasonably unperturbed at the prospect of learning and using additional techniques.
- You are oriented towards research as a problem-solving enterprise, whether the desired outcome is primarily theoretical or practical.
- You are energetic, persistent, and willing to assign a high priority to the research project for its duration: in other words, strongly motivated.

Many people find the prospect of undertaking their own research overwhelming. Why is this so?

- New researchers are neither selected nor trained for this set of tasks. Their earlier training, which may have concentrated on another field, emphasized different skills, those that are relevant to course work. In addition, it may have been very uneven or have taken place long ago. Throughout the college and earlier graduate years, retention and the ability to summarize and synthesize the work of others were emphasized. The shift from being consumer to producer of research is the shift from asking "What is known?" to "What do I want (or need) to know?" Formulating a coherent proposal for a research project and laying out the methodology can be formidable: It requires keeping several balls in the air at the same time.

- Beginning researchers frequently do not know which skills they need, nor how to acquire them. They are often uncertain about what is expected of them. Their most important—and perhaps most difficult—task is learning to take responsibility for their own work, to develop and use their own critical ability rather than depending on the traditional “grading” by an authority. Doing this involves willingness to undertake a risk.

To address these concerns, this primer outlines the research process as a whole, from the initial selection of a problem area, through problem formulation, identification of variables, development of design, decisions about sampling and instrumentation, exploitation of the computer, choice of statistical analysis, and finally presentation of findings.<sup>3</sup> It describes the steps involved under each of these headings, with particular attention to the interdependence of decisions and warnings of common pitfalls. It indicates what skills the researcher will need, and which can be best obtained in the form of a consultant’s services. Although each chapter deals with its topic in some detail, the book’s main purpose is to convey the importance of intelligent choice among alternatives.

We emphasize the importance of organizing information for research purposes.

We stress the decision-making that goes into research, not how to use specific techniques but when to use them. We make a consistent effort to employ terminology that will be compatible with usage in all, or at least several, disciplines.

- Research requires asking as well as answering questions. It requires a skeptical rather than an accepting attitude towards intellectual authority.

This primer emphasizes the need to accomplish a major shift in attitudes about knowledge. It consistently describes the research process as a set of plausible procedures together with a set of questions to be answered, and emphasizes that the investigator’s choices among these alternatives determine and characterize the particular piece of research.

- This book is practical in its approach. It emphasizes realistic estimates of time, money, and other resources, and careful planning of procedures so as to make the most effective use of whatever is available. Almost everyone operates under constraints of time and money. Research is an open-ended enterprise: unlike the set curricula for the training of lawyers and physicians, it offers no guarantee of completion at the end of a fixed time.
- This book acknowledges the inevitable difficulties instead of implying that their occurrence is somehow the beginner’s fault. Here are some facts of life we recognize and take into account: finding sources, checking references, revising endlessly, setting up calculations, and summarizing



statistical results are frustrating tasks; rewriting can be tedious; finding the appropriate way to state what seems already obvious may be very difficult, especially if one finds writing burdensome; the problem may be elusive and difficult; unexpected snags may develop; the researcher, having lost some initial enthusiasm, may become impatient; subjects may be uncooperative, supervisors who give permission may change their minds (or their assignments); books may mysteriously disappear from the library that has the only copy within 200 miles, etc., etc. A heavy investment must be made in a search for what often turns out not to be there.

Researchers cannot depend on external approval as a source of motivation. Neither is there usually available an ongoing collaboration from which they can obtain the social support to which they may be accustomed. Friends and family may not understand their work or even why it is worth doing. Researchers must set their own standards and proceed in a frequently lonely enterprise.

Finally, beginning researchers are likely to be intimidated by examples of “great research.” While there is much to be said for ambition and elevated goals, it is painful to have to accept the greater wisdom of striving to do a workmanlike job on a well-defined and contained problem whose solution is valuable and interesting.

We address these concerns directly. We make every effort to assist you to develop a sense of proportion—and a sense of humor—about the enterprise in which you are entangled. We do not minimize the uncertainty or the gratuitous character of some of the snags that may impede your progress. This is likely to relieve some of your “it’s just me” feelings of inadequacy. We believe that straightforwardness about certain problems is helpful even when no direct solutions can be offered.

For convenience, we frequently refer to the beginning researcher as *the student*, using this in both the specific sense of graduate (or undergraduate) student and the more general one of learner. We hope any necessary distinction will be self-explanatory. *We* almost always means the authors; very occasionally it means “the profession.” *He* should be understood as *he or she* unless the antecedent is clearly male. *You* means you, the reader.

The best way to use this book is to read the table of contents and the preface, skim the first few paragraphs of each chapter, then return to read more carefully the chapters that seem most relevant to your interests and state of progress. Some of the “philosophical” material seems very simple and the “statistical” very difficult, but it is important not to confuse technical and profound.