

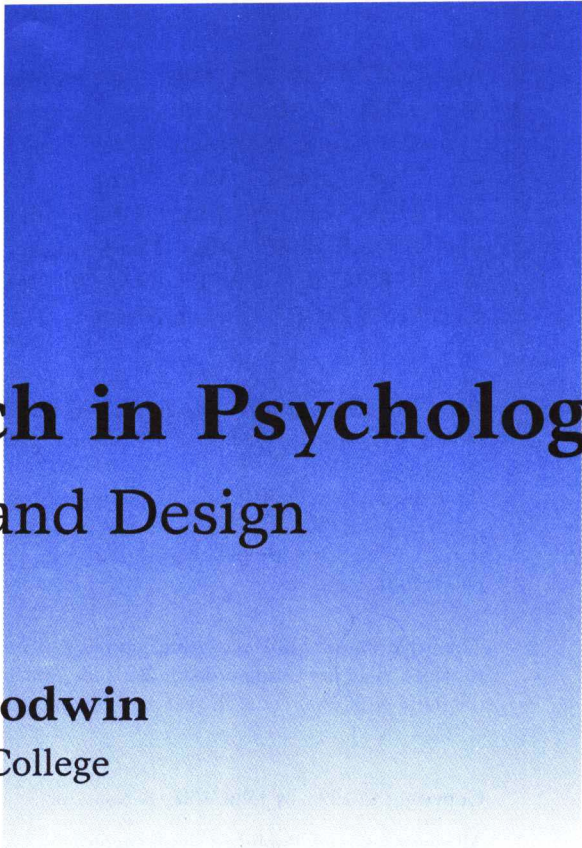
C. JAMES GOODWIN

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*RESEARCH IN PSYCHOLOGY*

METHODS AND DESIGN





# Research in Psychology

## Methods and Design

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Wheeling Jesuit College



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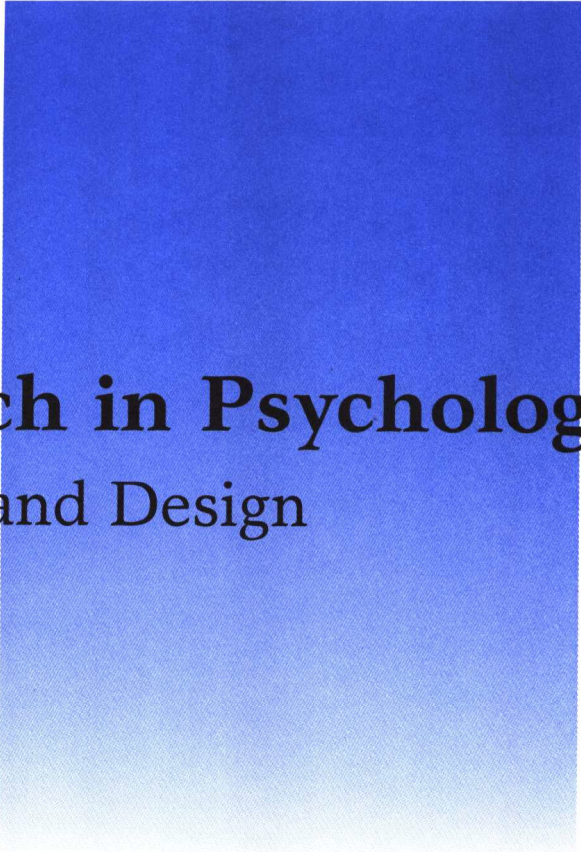
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To Susan





# Research in Psychology

## Methods and Design



# PREFACE

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Teaching the research methods course over the years has reminded me often of the opening sentence from *A Tale of Two Cities* by Charles Dickens. In “the best of times,” it can be an exhilarating experience. Every instructor remembers moments when a student developed a creative idea for a study that was a perfect next step from the experiment being discussed in class. It is truly rewarding to hear a student arguing in the hall with a peer and saying things like “OK, but let’s see some data;” and of course when the occasional student comes in after lab and asks about graduate programs in experimental psychology (and their first question is *not* “Can you get a job that way?”), it is a moment to be treasured. On the other hand, in “the worst of times,” the course can be very frustrating to teach. Semester after semester there are always students who view the course as boring, obtuse, unnecessary (“I’m going to be a counselor.”), and seemingly designed to destroy the quality of their lives.

For the interested, dynamic, creative students, a poor textbook can dampen their enthusiasm; for the bored group, resistant from the outset, it can confirm their worst fears. Thus it is important in experimental psychology that a text engage as well as instruct students. My goal in writing this book is to confirm the beliefs of the interested student and convince the uninterested student that experimental psychology can be intriguing, relevant, understandable, and even fun.

To accomplish this goal, I have attempted to provide some insight into the excitement that research in psychology can generate and I have tried to give students things to do other than just read the text. For example, I have tried to enhance the understanding of how specific methods work by including numerous “case studies”—detailed descriptions of actual research. Most are recent, but some are classics. I have also included several first-hand accounts of research, highlighting the passion that research psychologists have for their work. In addition, to keep students actively involved and to help them develop and appreciate scientific thinking

in psychology, I have placed numerous “Applications Exercises” at the end of each chapter.

The book is organized into 12 chapters and 4 appendices. The introductory chapter lays the groundwork for all that follows by thoroughly explaining the scientific way of thinking; the final chapter returns to the theme and provides closure. Chapter 2 is devoted to research ethics. It concerns how the American Psychological Association’s code of ethics is applied to research with both human and animal subjects. Scientific fraud is also discussed. Chapter 3 examines the question of how ideas for research originate and explains the continually evolving relationship between theory and research. Issues related to measuring behavior and statistical analysis are the focus of Chapter 4. The following three chapters explore the experimental method, the Cadillac of research methodology. There is a basic introduction to the experimental method (Chapter 5), a discussion of control problems in experimental research (Chapter 6), and an extensive treatment of experimental design (Chapter 7). Descriptions of other traditions in psychological research follow in subsequent chapters. These include correlational research (Chapter 8), applied research (Chapter 9), research using “small N” designs (Chapter 10), and several varieties of descriptive research (Chapter 11). The appendices describe how to prepare the (in)famous APA-style research report in accordance with the most recent *Publication Manual* (1994) and how experimental psychologists use statistical analysis for decision-making purposes.

At various points in the text, boxed sections highlight three distinct topics. *Origins* boxes supply interesting information about the historical roots of experimental psychology and show how various research concepts and methods, such as maze learning, have evolved over the years. *Classic Studies* boxes describe well-known experiments, such as the Bobo doll studies, that illustrate particular research designs and methodological issues. Finally, *Ethics* boxes deal with controversial problems of concern to researchers, such as the issue of whether some psychological research invades privacy.

For the student, there are several features designed to facilitate learning. First, there is a built-in study guide: Each chapter ends with a Student Review, which includes fill-in and multiple-choice questions. These sample test items are not just definitional; they ask students to apply some of the concepts learned in the chapter. The Student Review also includes the previously mentioned Applications Exercises. Second, because chapter summaries should always be read before the chapters themselves, I have placed them at the *beginning* of each chapter and called them “Chapter Overviews.” Reading and studying the Chapter Overviews gives the student an idea of what’s to come and provides a general framework for the chapter. Third, although there is a separate Glossary that includes every term that is boldfaced in the text, the Index is also structured to make it easy to find key descriptions of concepts. Thus the Index includes the following:

**Counterbalancing** 169–177, 196–198, 204, 274

This entry indicates that (a) counterbalancing is a glossary term, because one of the page numbers is boldfaced in the index, and (b) page 169 contains the place in the text where the term appears in boldface and is defined.

To help instructors prepare and teach the methods course, the accompanying *Instructor's Manual* includes detailed chapter outlines and an extensive test bank of multiple-choice, fill-in, and essay questions. It also includes numerous "Course Enhancements"—lecture/discussion/demonstration ideas—for each chapter. Finally, the instructor will find detailed descriptions of 18 data collection exercises that give the student (with proper guidance) hands-on experience in doing research in psychology.

For instructors, I hope this book will make your difficult task easier. For students, I hope the text will either affirm your excitement about research in psychology or at least lead you to develop an understanding of and an appreciation for it. For both instructors and students, I hope this book will help make the course in research methods among the best of times for you.

## Acknowledgments

---

This book would not have been started, much less completed, without the encouragement and support of many people. The hundreds of students who have passed through my research methods course over the years have been my principle source of inspiration—many of them have told me to stop complaining about the textbook and write my own. I would especially like to acknowledge three students. Michelle Koloff and Nan Armstrong served arduously as "in house" reviewers for me and although they seemed to take more pleasure than was really necessary in wielding the red pencil, they improved the book's ability to communicate to students. Aimee Faso was the leader of a group of students interested in cognitive mapping and was the senior author of the sample study on that topic in Appendix A.

To Darryl Bruce, my dissertation director, I owe a great debt. He first showed me just how exciting research in psychology can be. Through our (somewhat) annual three-hour APA breakfasts, he continues to be a mentor (his latest communication made it clear that with the text finished, I should get back to work). I would also like to thank two of my APA Division 2 colleagues, Wayne Weiten and Steve Davis. Both were instrumental in convincing me that I actually could write a text and both provided much support and encouragement along the way.

Thanks also go to the stalwart reviewers for the text, who include:

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