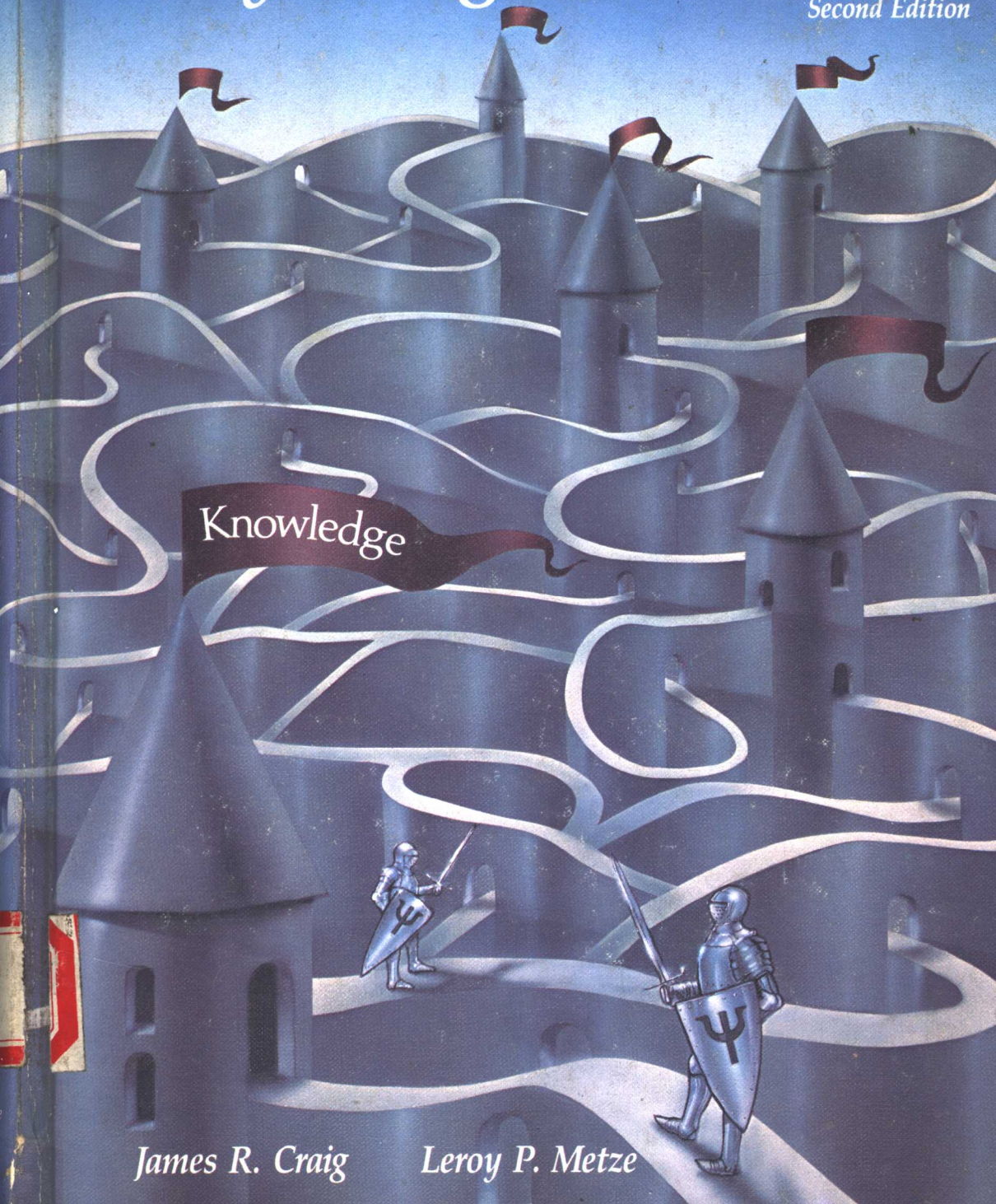
Methods of Psychological Research

Second Edition



James R. Craig Leroy P. Metze

METHODS OF PSYCHOLOGICAL RESEARCH

Second Edition

James R. Craig
Leroy P. Metze

Brooks/Cole Publishing Company
Monterey, California

Brooks/Cole Publishing Company
A Division of Wadsworth, Inc.

Printed in the United States of America
10 9 8 7 6 5 4 3 2

Library of Congress Cataloging in Publication Data

Craig, James Richard, [date]
Methods of psychological research.
Includes index.
1. Psychology—Research—Methodology.
2. Experimental design. 3. Psychometrics. I. Metze,
Leroy P. II. Title.
BF76.5.C69 1985 150'.72 85-9656

ISBN 0 534 05358 0

Sponsoring Editor: *C. Deborah Laughton*
Marketing Representative: *Mark Francisco*
Editorial Assistant: *Mary Tudor*
Production Editor: *Ellen Brownstein*
Manuscript Editor: *Paul Monsour*
Permissions Editor: *Carline Haga*
Interior and Cover Design: *Sharon L. Kinghan*
Cover Illustration: *David Aguero*
Art Coordinator: *Judith Macdonald*
Interior Illustration: *Maggie Stevens*
Photo Editor: *Judy Blamer*
Photo Researcher: *Marquita Flemming*
Typesetting: *Bi-Comp, Inc., York, Pennsylvania*
Printing and Binding: *Maple Vail Book Manufacturing Group, York, Pennsylvania*

Photo Credits: p. 44, University of Wisconsin Primate Laboratory; p. 110, Elizabeth Crews; p. 132, Community Substance Abuse Services; p. 165, Burt Glinn, Magnum Photos, Inc.; p. 204, Elizabeth Crews

Dedicated to the late Wayne H. Bartz
and our wives Janet Craig and Barbara Metze

PREFACE

The book you hold is a product of our experiences in working with undergraduate students of research methods in psychology. In both our teaching and our writing, we have attempted to demonstrate that research methods are simply a set of structured procedures for observing the world and that there are logical reasons for that structure.

By keeping the format and content as simple as possible, we have tried to write a book that is easy to read and use. The writing style is uncomplicated and we have avoided complex constructions and unnecessary vocabulary. Topics, such as the scientific approach to problem solving, using the research literature, and defining variables, are presented in a straightforward manner. Examples from all areas of psychology illustrate the material being presented. Boxes are used to present special information. User-oriented aids, such as the steps in the use of a design and the method selection tree (inside the front cover), are frequently referenced and their uses demonstrated. Furthermore, questions and exercises are included at the end of each chapter to assist the reader in reviewing and understanding the material presented.

Outstanding features maintained from the first edition are:

- Design checklists for implementing the various research designs,
- Student progress checks with answers,
- Frequent examples from specific research studies to illustrate different research designs,
- A decision tree for selecting the right design alternative, and
- Boxed examples recapping important research studies.

Features new to the second edition are:

- The problems of doing a study in an area for which no research literature exists,
- Thorough and updated coverage of program evaluation,
- Expanded coverage of experimental error, which includes a more thorough review of the logic of control,
- Concepts and applications of multivariate analysis, and
- An updated description of report writing with a new sample research report (Chapter 14).

The content of the book represents a blend of the various group- and individual-research procedures used by most psychologists. Two chapters—research ethics and program evaluation—have been included that are not typically found in other research methods books. In addition, an effort was made to make the chapter on report writing (Chapter 14) more than just a reprint of the *Publication Manual* of the American Psychological Association. This chapter includes writing guidelines, examples, and report production hints and suggestions.

While writing this book, we received encouragement, support, and assistance from many relatives, friends, colleagues, and students. We would like to thank each and every one of them—especially our families and students—for putting up with us throughout the entire process: It was not always easy. A special thanks goes to our colleague and friend, Dr. Daniel L. Roenker, who read and criticized several chapters and who served as a general, hard-headed critic: His assistance is gratefully acknowledged. Likewise, we acknowledge the help of our reviewers: Peter Bedrosian, East Stroudsburg State University, East Stroudsburg, Pennsylvania; Stanley Cohen, West Virginia University at Morgantown; Steven Falkenburg, East Kentucky University at Richmond; Virginia Falkenburg, East Kentucky University at Richmond; Ilse Gayl, University of Colorado at Boulder; Stuart Karabenick, Eastern Michigan University at Ypsilanti; Lynne Werner Olsho, Virginia Commonwealth University at Richmond; W. Kirk Richardson, Georgia State University at Atlanta; Jon Roeckelein, Mesa Community College, Mesa, Arizona; Mark Sanders, California State University at Northridge; and Billy Smith, University of Central Arkansas at Conway, whose comments, criticisms, and insights were very helpful in completing this edition. Lastly, we thank Ms. C. Deborah Laughton, Psychology Editor for Brooks/Cole Publishing Company, for her encouragement and support and the various authors and publishers who have graciously granted us permission to reprint all or parts of their works. Certainly, any deficiencies that remain in this book are ours and should not be taken to reflect on anyone other than us.

James Craig
Leroy Metze

CONTENTS

PART

INITIAL STEPS

1