

INVESTIGATING COMMUNICATION

**An Introduction
to Research Methods**

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to Research Methods*

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PRENTICE HALL

Englewood Cliffs, New Jersey 07632

Library of Congress Cataloging-in-Publication Data

Investigating communication : an introduction to research methods /
Lawrence R. Frey . . . [et al.].

p. cm.

Includes bibliographical references.

ISBN 0-13-503426-4

1. Communication—Research—Methodology. I. Frey, Lawrence R.
P91.I58 1991 90-30320
302.2'072—dc20 CIP

Editorial/production supervision and
interior design: Bayani Mendoza de Leon
Cover design: Patricia Kelly
Manufacturing buyer: Ed O'Dougherty



© 1991 by Prentice-Hall, Inc.
A Division of Simon & Schuster
Englewood Cliffs, New Jersey 07632

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

ISBN 0-13-503426-4

Prentice-Hall International (UK) Limited, *London*
Prentice-Hall Australia Pty. Limited, *Sydney*
Prentice-Hall Canada, Inc., *Toronto*
Prentice-Hall Hispanoamericana, S.A., *Mexico*
Prentice-Hall of India Private Limited, *New Delhi*
Prentice-Hall of Japan, Inc., *Tokyo*
Simon & Schuster Asia Pte. Ltd., *Singapore*
Editora Prentice-Hall do Brasil Ltda., *Rio de Janeiro*

Preface

On March 23, 1989, two respected chemists, B. Stanley Pons, chair of the chemistry department at the University of Utah, and Martin Fleischmann of England's University of Southampton, called a press conference to announce several "table-top" experiments that had generated fusion, the nuclear reaction that powers the sun. Their discovery held the promise of solving the world's energy problems for all time.

Since then, unfortunately, efforts to replicate their discovery have proved futile, and general scientific opinion holds that they were mistaken. Their intentions were good, and their reasoning was promising—but their research methods were faulty.

Pons and Fleischmann inferred that fusion had taken place because they measured its "symptoms"—additional neutrons and heat produced when an electric current was sent through a palladium rod immersed in heavy water. Their critics question this conclusion. They maintain that the two indicators of fusion are more likely outcomes of other processes, and the two researchers could have determined this if they had conducted controlled experiments, such as using other chemicals under the same conditions to learn whether the same results would occur. But they did not. Concerned that their work would leak out and be usurped by others, they rushed to report their findings, thereby creating enormous excitement about the promise of their "discovery" and enormous disappointment when its significance was deflated.

This scientific argument, carried out on the front pages of newspapers all over the world, reflects the potential and the limitations of research. If we understand what makes essential processes work, such as fusion—or in our own discipline, communication—we can harness them to meet the needs of humanity. Yet these processes, which we observe around us naturally every day, contain elements that remain mysterious and elusive. *Time* magazine, when reporting the fusion controversy, pulled from its files reports of purported breakthroughs in fusion research from 1926, 1951, 1956, and 1958. All proved to be false alarms because the research methods used were insufficient to the task.

Today, scholars all over the world are conducting research to improve our understanding of the complex, profoundly important process called communication. Research on communication is somewhat analogous to that on fusion. Conventional methods for achieving fusion have not yet put out more energy than must be put in to conduct the experiment. Yet Harold Furth, director of Princeton's effort, says, "We are essentially within a factor of two of break-even now. Seeing that it used to be a factor of a million, we feel optimistic" (Elmer-De Witt, 1989, p. 72). Likewise, great progress has been achieved in communication research, and there is also a long way to go. We know a lot about communication, and we have a lot yet to learn.

Like fusion, whenever progress has been made toward understanding communication, it has involved rigorous research methodologies. False leads have emerged from research using invalid methods. In this book we will share with you the excitement of research, the discipline required for rigorous research, and common errors that impede researchers' progress. You will learn characteristics of high-quality research and what it takes to achieve them. You will learn shortcomings in research and what it takes to avoid them.

We have tried to write a text that encourages you to become excited about studying research methods. We start by equating learning about research methods with learning about a new culture. Like a foreign culture, research methods have their own language, rules, and social customs. Learning about a foreign culture takes time and patience. As professors, we must remember what our entry period into the culture of research was like; we must start at the very beginning and proceed slowly, making sure that everyone is with us along the way. Learning about a foreign culture is also helped by actual experience with it. You need to be exposed to many examples of research and gain experience in conducting your own research.

We also begin by equating the individual researcher with a detective. The social detective starts with a topic worth studying, poses research questions that need asking, and then attempts to find the answers in a systematic manner. Research methods are thus the strategies that researchers use to solve puzzling questions asked about communication. Like a detective, a researcher searches for evidence as carefully and systematically as possible, sorts the meaningful from the trivial, and offers the best solution.

Although a number of research methods textbooks are available, our approach is unique. First, we aim at students with little or no familiarity with primary

research in communication. We seek to provide you with an understanding of this culture by demystifying the research process, making it accessible instead of esoteric. This does not mean that we do not deal with important, substantive, and at times difficult material; we do, but we never forget that you are an introductory student. Instead of throwing you into the deep end of the pool where you must swim or drown, we prefer to take you into the water slowly, allowing you to get your feet wet first and then to immerse yourself into the pool at a comfortable rate.

Second, this text is not designed to train professional researchers. Though some limited production of research may be appropriate, we believe that an introductory research methods course should aim primarily at enabling students to become knowledgeable and critical consumers of research. Only secondarily should the course aim at enabling you to do original research. You may not have to conduct research in future jobs, but certainly you will have to be able to find, read, understand, and evaluate research related to your work. Doing research in this course should improve your understanding of the research you read.

Third, we have written this textbook explicitly for students who wish to understand how research methods are used to study communication. Most research methods textbooks are written for psychology and sociology classes. A general knowledge of research methods and how they cut across disciplines is certainly desirable. This approach, however, ignores the particular characteristics of communication as a discipline. It does not prepare communication majors to study, research, and analyze the real-world communication problems they encounter in the various careers they pursue. For this reason, we have chosen to focus on how research methods apply directly to the study of communication behavior. To help accomplish this goal, we provide a thorough grounding in the nature of communication and current communication research in two chapters before discussing how to design and conduct communication research.

Fourth, in a national survey about the teaching of undergraduate communication research methods, Frey and Botan (1988) found that most professors require students to read and report on communication research published in scholarly journals. If you are to remain current and make use of primary source material in this field, you must find and understand the information generated by scholars. Doing so, however, is far more difficult than merely obtaining the leading journals and reading them. Students often feel bewildered by what they encounter in these scholarly academic journals and vow to avoid all further contact with them. To combat these feelings, we try to provide you with the “code” in which scholarly research articles are written. Once you know the purpose and the meaning of each section in research articles, the internal logic of an article emerges more clearly. This textbook thus follows the format of a traditional journal article by proceeding in a logical sequence:

1. Introducing you to the research process
2. Exposing you to topics that communication scholars consider worth studying and how research questions are posed

3. Showing you how to find and read previous research
4. Examining how researchers plan and design their studies
5. Explaining how researchers conduct their studies using appropriate methodologies
6. Understanding how the information collected is analyzed
7. Discussing how these results are interpreted in a meaningful manner

Finally, the field of communication is fragmented into many subspecialties. Differences in method and levels of analysis sometimes result in a lack of convergence. Diversity, though rich, also means the possibility of losing sight of what others in the field are doing. Too often textbooks aim at one particular subspecialty of the discipline (such as mass communication) or promote one kind of research method (such as experimental) while giving only lip service to some of the other research methods.

We believe firmly that understanding research methods fosters the complementary integration of these subspecialties. Each of the four authors in this project has extensive experience in both teaching introductory communication research methods courses and conducting research. Our various research efforts have spanned the three major areas of the communication discipline (speech communication, journalism, and mass communication), the four methodologies we examine (experimental, survey, textual analysis, and ethnography), and the two major types of data analyses (quantitative and qualitative). We believe that this diversity of interest and experience has resulted in a balanced approach to this textbook that could not possibly have been achieved had any one of us written it alone. We try to maintain consistency in how we present the material while at the same time respecting differences among the methodologies used to conduct communication research.

In the final analysis, we encourage you to approach this textbook and this course with an open mind. Too often preexisting attitudes obstruct learning new ones, and certainly this is the case with the introductory communication research methods course. So expose yourself to research; as the saying goes, “Try it, you might like it!”

ACKNOWLEDGMENTS

Writing this textbook on communication research methods was a grand endeavor that spanned three years of hard work. We are indebted to many people whose time, energy, and knowledge have shaped this text. We would like to express our sincere thanks to these colleagues and friends.

We would like to thank Steve Dalphin, executive editor at Prentice Hall, for his faith in this project from the very start, and Sandra Johnson, editorial assistant at Prentice Hall, for being so responsive to our many requests for advice and information. We also thank the superb team of reviewers selected by Prentice Hall—Marshall Scott Poole, University of Minnesota; Robert D. McPhee, University of

Wisconsin at Milwaukee; and Michael E. Mayer, Arizona State University—whose insightful comments, criticisms, and suggestions guided our rewrites.

We are also indebted to a number of colleagues who wrote research overviews of some areas covered in this text and allowed us liberal use of their material: Richard Johannesen, Northern Illinois University, for his help with rhetorical criticism; Kathleen Kendall, State University of New York at Albany, for her help with political communication; Leah Lievrouw, Rutgers University, for her help with bibliometrics; Tom Socha, Old Dominion University, for his help with conversation analysis; and Myoung Chung Wilson, Rutgers University Library, for her help with online databases and CD-ROM.

We want to thank Steve Spear, Loyola University of Chicago, and Charles Larson, Northern Illinois University, for pretesting an earlier draft of this book in their communication research methods course, and all the students at Loyola University of Chicago, Northern Illinois University, and Rutgers University who offered comments. We also are deeply indebted to JoAnn Fricke of Loyola University of Chicago for all of her secretarial help.

The authors extend special acknowledgment to Sandra Metts of Illinois State University. Sandra's only formal commitment was to write the instructor's manual, but she went over each draft of the manuscript with a fine-toothed comb, literally rewrote much of the material, and offered important suggestions. Thanks for your rigor, enthusiasm, and professionalism, Sandra.

We would like to dedicate this text to the 390 colleagues throughout the United States who completed Frey and Botan's lengthy questionnaire on teaching undergraduate communication research methods. The information you provided was extremely valuable, and we sincerely hope that this text meets your needs.

Finally, each of us would like to thank the following people:

I want to thank Elaine Bruggemeier, chair of the Department of Communication of Loyola University of Chicago, for her continual support of me and my work. I couldn't ask for a better chairperson, colleague, and friend. I also want to thank my family for their love and support, especially my father, Harvey H. Frey, who has always been there for me. Thanks to all my friends (especially Betsy, Bill, Bruce, Gary, Ken, Kerstin, Mark, Mike, and Stephanie in Chicago) for putting up with me during this project. Most of all, this book is dedicated to the one I love, Marni Cameron.

L.R.F.

A number of colleagues and students have provided me with ideas and encouragement over the past several years. Particularly helpful were Sandra Metts, William Cupach, and Mark Comadena of the Illinois State University Department of Communication, who welcomed and helped a freshly graduated assistant professor when he wanted to teach research methods. Syllabi, a test item bank, classroom exercises, and handouts were offered freely, and many hours were spent thrashing out some

of the finer points of course content. In the same vein, I also want to acknowledge the role of my coauthor, Larry Frey of the Department of Communication at Loyola University of Chicago, for the hundreds of hours we have spent in conversation refining each other's grasp of research methods in communication. My current colleagues in the Department of Communication at Rutgers University, including Bob Kubey and Leah Lievrouw, have provided helpful contributions to this effort, as has Myoung Chung Wilson of the Rutgers University Library.

C.H.B.

I wish to thank the students at the University of Kansas for their inspiration and input as we learned together about the research process, and my wife, Reva, and children, Jeremy, Joy, and Glen, for being the loving core of everything I do.

P.G.F.

My sincerest thanks to my wife, Stephanie; my daughter, Becky; and my son, David for their love and support.

G.L.K.

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part I

CONCEPTUALIZING COMMUNICATION RESEARCH

chapter 1

Introduction to the Research Culture

Research methods! To some people these words are intimidating, conjuring up pictures of scientists in white coats studying mice in a laboratory. Indeed, we asked a group of college students to write the first thought that came to mind in response to the words *research methods*. They said such things as “Time-consuming,” “Difficult,” “Worth the crap?” “Boring,” and “Grade:C.” In contrast, faculty members, when asked the same question, responded with “The pursuit of truth,” “Planned investigation,” and “Proof.”

To quote the title character of the movie *Cool Hand Luke*, “What we have here is a failure to communicate.” Students don’t understand the full value of learning research methods. They see research as the province of the elite, as difficult or even impossible to master. This attitude is often validated, unfortunately, by how research methods are taught. The research methods course becomes a battleground or a proving ground, students wishing merely to survive it and then forgetting what they learned as soon as possible thereafter.

In short, the gap between teachers’ and students’ attitudes is an obstacle to learning about research methods. In this chapter we try to convey the excitement of research. We first examine the difference between everyday ways of knowing and research methods and then explore in more depth the key characteristics of the research methods culture.

EVERYDAY WAYS OF KNOWING

It would surely be impossible to question and test every piece of knowledge we possess. **Everyday ways of knowing** are based on faith, accepting things at face value. When we rely on knowledge that we have not questioned or tested, we are using everyday ways of knowing.

One everyday way of knowing is relying on **authority**, believing something because of our faith in the person who said it. Numerous persuasion studies about source credibility, the characteristics that make a person believable, report that who says something may be as important as or even more important than what is said. Take the statement “Communication courses are worthwhile” and attribute it to four different sources: a high school student, a college senior, a college communication professor, and the president of a large corporation. Which source do you think knows best what he or she is talking about?

A second everyday way of knowing is **personal experience and introspection**. We believe that what’s in our own minds and social encounters is generally true. If I fear public speaking, I may assume that most people are judging my performance critically. If I have been hurt by an unfaithful spouse, I may believe that most marriages are not monogamous. Many police officers who deal frequently with criminals believe that most people are dishonest. Many psychologists who deal primarily with mentally ill patients believe that most people are neurotic. Their opinions are influenced by their own personal experiences.

Opinions acquired from personal experiences guide our behavior. Many of us learned as children, for example, that touching a hot stove burns, a personal experience that still guides our behavior toward stoves today.

A third everyday way of knowing is **intuition**, believing that something is true or false simply because it “makes sense.” We generally accept love and friendship as valuable goals of communication because people simply sense their value intuitively. Intuition also refers to leaps of insight that we can’t explain rationally. When you suspect that someone is lying but can’t explain why, you’re using intuition.

A fourth everyday way of knowing is **custom**, believing something simply because most people in our society assume it to be true. Some beliefs held on the basis of custom are racist or sexist stereotypes, such as “Women are less capable top managers than men.” When pressed about why they hold this belief, prejudiced people might respond, “Because it’s always been that way.” Other habits based on custom are less problematic but still reflect unquestioned beliefs. Should school vacations be scheduled in the summer? Should people touch glasses when making a toast? Most people hold these opinions, but they can’t necessarily say why.

A final everyday way of knowing is **magic or superstition**, as when we use the word *mystery* to explain an otherwise unexplainable event. Fortunetellers rely on crystal balls or tarot cards to predict the future. Even Nancy Reagan consulted her astrologer before making important decisions about President Reagan’s speaking schedule! A 1984 Gallup poll, in fact, found that 55 percent of American teenagers

believe in astrology, far more than the number of teenagers who understand the rudimentary physical science of how a lever works (Petersen, 1989).

The Value of Everyday Ways of Knowing

These everyday ways of knowing can certainly lead to valid and reliable knowledge. Relying on authorities, for example, serves an important purpose. We assume that doctors know how to diagnose diseases, mechanics know how to fix cars, and pilots know how to fly airplanes.

Personal experience can also be a starting point for gaining valid knowledge. Archimedes, a Greek mathematician, physicist, and inventor regarded by some historians as the father of experimental science, for example, was asked by King Hiero of Syracuse, Sicily, to determine whether his crown was made of pure gold or, as he suspected, a mixture of gold and silver. Just when he was about to give up, Archimedes stepped into the bathtub and noticed that the water ran over the edge. He reasoned that the spilled water equaled the volume of his own body. At that moment he realized that he could submerge both the crown and a piece of pure gold that weighed the same and observe whether both objects displaced the same amount of water. Legend has it that he was so excited about his discovery that he ran down the street naked shouting, "Eureka [I have found it]!" Archimedes found that the crown did indeed displace more water than the same weight of pure gold. This proved that the crown was not made of pure gold, an observation confirmed later by the goldsmith's confession.

Intuitive hunches also pay off in useful ideas. Campbell, Daft, and Hulin (1982), for example, asked well-known scholars in organizational behavior to trace the origins of their most successful projects. Several attributed their ideas to thinking intuitively about promising ideas. The investigators summed up one scholar's comments this way: "I threw out an idea in [a] doctoral seminar to which a student responded. Sense of great excitement—continuous interaction to test ideas against one another—couldn't let go" (p. 98). From this and subsequent exchanges a pioneering research project was born.

Some customary beliefs we now know make very good sense, such as cuddling babies and playing word games with them. Finally, many things remain a mystery. An example is fire-walking, walking across beds of burning coals that register over 1300 degrees Fahrenheit (Grosvernor & Grosvernor, 1966). Scientists can explain the lack of pain felt as mind over matter, but they can't explain why people don't burn their feet.

The Problems with Everyday Ways of Knowing

- The problem with everyday ways of knowing is not questioning what is assumed to be true, accepting things simply at face value or because someone says so. In effect, this cuts off the inquiry process, making people passive receivers of apparent truths