Making Sense of the SOCIAL WORLD

Methods of Investigation 6e

Daniel F. Chambliss • Russell K. Schutt

Making Sense of the Social World

RELATED TITLES IN RESEARCH METHODS AND STATISTICS FROM SAGE

Investigating the Social World: The Process and Practice of Research, Ninth Edition, by Russell K. Schutt

The Practice of Research in Social Work, Third Edition, by Rafael J. Engel and Russell K. Schutt

The Practice of Research in Criminology and Criminal Justice, Sixth Edition, by Ronet K. Bachman and Russell K. Schutt

Fundamentals of Research in Criminology and Criminal Justice, Third Edition, by Ronet K. Bachman and Russell K. Schutt

Designing Surveys: A Guide to Decisions and Procedures, Second Edition, by Ronald F. Czaja and Johnny Blair

A Guide to Qualitative Field Research, Second Edition, by Carol A. Bailey

Adventures in Social Research, Seventh Edition, by Earl Babbie, Fred Halley, William E. Wagner, III, and Jeanne Zaino

Adventures in Criminal Justice Research, Fourth Edition, by Kim Logio, George Dowdall, Earl Babbie, and Fred Halley

Social Statistics for a Diverse Society, Sixth Edition, by Chava Frankfort-Nachmias and Anna Leon-Guerrero

Essentials of Social Statistics for a Diverse Society, by Anna Leon-Guerrero and Chava Frankfort-Nachmias

Research Methods in Psychology: Investigating Human Behavior, Third Edition, by Paul G. Nestor and Russell K. Schutt

Research Methods in Education, by Joseph Check and Russell K. Schutt

Fundamentals of Social Work Research, Second Edition, by Rafael J. Engel and Russell K. Schutt

Constructing Social Research, by Charles C. Ragin and Lisa M. Amoroso

Using IBM© SPSS© Statistics for Social Statistics and Research Methods, Third Edition, by William E. Wagner, III

Sara Miller McCune founded SAGE Publishing in 1965 to support the dissemination of usable knowledge and educate a global community. SAGE publishes more than 1000 journals and over 800 new books each year, spanning a wide range of subject areas. Our growing selection of library products includes archives, data, case studies and video. SAGE remains majority owned by our founder and after her lifetime will become owned by a charitable trust that secures the company's continued independence.

Los Angeles | London | New Delhi | Singapore | Washington DC | Melbourne

Making Sense of the Social World

Methods of Investigation

Sixth Edition

Daniel F. Chambliss
Hamilton College

Russell K. Schutt
University of Massachusetts Boston

SAGE

Los Angeles | London | New Delhi
Singapore | Washington DC | Melbourne

FOR INFORMATION:

SAGE Publications, Inc.
2455 Teller Road
Thousand Oaks, California 91320
E-mail: order@sagepub.com

SAGE Publications Ltd.
1 Oliver's Yard
55 City Road
London EC1Y 1SP
United Kingdom

SAGE Publications India Pvt. Ltd.
B 1/I 1 Mohan Cooperative Industrial Area
Mathura Road, New Delhi 110 044
India

SAGE Publications Asia-Pacific Pte. Ltd.
18 Cross Street #10-10/11/12
China Square Central
Singapore 048423

Printed in the United States of America

ISBN 978-1-5063-6411-7

Acquisitions Editor: Jeff Lasser
Content Development Editor: Liza Neustaetter
Editorial Assistant: Tiara Beatty
Production Editor: Andrew Olson
Copy Editor: Colleen Brennan
Typesetter: C&M Digitals (P) Ltd.
Proofreader: Barbara Coster
Indexer: May Hasso
Cover Designer: Scott Van Atta
Marketing Manager: Kara Kindstrom

This book is printed on acid-free paper.

18 19 20 21 22 10 9 8 7 6 5 4 3 2 1

/// BRIEF CONTENTS

/// DETAILED CONTENTS

/// ABOUT THE AUTHORS

Daniel F. Chambliss, PhD, is the Eugene M. Tobin Distinguished Professor of Sociology at Hamilton College in Clinton, New York, where he has taught since 1981. He received his PhD from Yale University in 1982; later that year, his thesis research received the American Sociological Association's (ASA's) Medical Sociology Dissertation Prize. In 1988, he published the book *Champions: The Making of Olympic Swimmers*, which received the Book of the Year Prize from the U.S. Olympic Committee. In 1989, he received the ASA's Theory Prize for work on organizational excellence based on his swimming research. Recipient of both Fulbright and Rockefeller Foundation fellowships, he published his second book, *Beyond Caring: Hospitals, Nurses, and the Social Organization of Ethics*, in 1996; for that work, he was awarded the ASA's Eliot Freidson Prize in Medical Sociology. In 2014, Harvard University Press published his book *How College Works*, coauthored with his former student Christopher G. Takacs. His research and teaching interests include organizational analysis, higher education, social theory, and comparative research methods. In 2018, he received the ASA's national career award for Distinguished Contributions to Teaching.

Russell K. Schutt, PhD, is professor of sociology at the University of Massachusetts Boston, where he received the 2007 Chancellor's Award for Distinguished Service. He is also a research associate in the Department of Psychiatry (Beth Israel Deaconess Medical Center) at the Harvard Medical School and at the Edith Nourse Rogers Memorial Veterans Hospital. He completed his BA, MA, and PhD degrees at the University of Illinois at Chicago and was a postdoctoral fellow in the Sociology of Social Control Training Program at Yale University (where he met Dan). In addition to nine editions of *Investigating the Social World: The Process and Practice of Research* and one of *Understanding the Social World*, as well as coauthored versions for the fields of social work, criminal justice, psychology, and education, his other books include *Homelessness, Housing, and Mental Illness* (2011), *Social Neuroscience: Brain, Mind, and Society* (coedited, 2015), and *Organization in a Changing Environment* (1986). He has authored and coauthored numerous journal articles, book chapters, and research reports on homelessness, mental health, organizations, law, and teaching research methods. His research has included a mixed-methods investigation of a public health coordinated care program, a study of community health workers and recruitment for cancer clinical trials, a mixed-methods study of a youth violence reduction program, a randomized trial of a peer support program for homeless dually diagnosed veterans, and a randomized evaluation of housing alternatives for homeless persons diagnosed with severe mental illness, with funding from the National Cancer Institute, the Veterans Health Administration, the National Institute of Mental Health, the John E. Fetzer Institute, and state agencies. His current scholarly foci are the impact of the social environment on cognitive and community functioning, the

meaning of housing and service preferences, and the value of alternative organizational and occupational structures for service delivery. His prior research has also included investigation of social factors in legal decisions and admission practices and of influences on job and service satisfaction. Details are available at http://rschutt.wikispaces.umb.edu.

/// PREFACE

If you have been eager to begin your first course in social science research methods, we are happy to affirm that you've come to the right place. We have written this book to give you just what you were hoping for—an introduction to research that is interesting, thoughtful, and thorough.

But what if you've been looking toward this course with dread, putting it off for longer than you should, wondering why all this "scientific" stuff is required of students who are really seeking something quite different in their major? Well, even if you had just some of these thoughts, we want you to know that we've had your concerns in mind, too. In *Making Sense of the Social World*, we introduce social research with a book that combines professional sophistication with unparalleled accessibility: Any college student will be able to read and understand it—even enjoy it—and experienced social science researchers, we hope, can learn from our integrated approach to the fundamentals. And whatever your predisposition to research methods, we think you'll soon realize that understanding them is critical to being an informed citizen in our complex, fast-paced social world.

TEACHING AND LEARNING GOALS

Our book will introduce you to social science research methods that can be used to study diverse social processes and to improve our understanding of social issues. Each chapter illustrates important principles and techniques in research methods with interesting examples drawn from formal social science investigations and everyday experiences.

Even if you never conduct a formal social science investigation after you complete this course, you will find that improved understanding of research methods will sharpen your critical faculties. You will become a more informed consumer, and thus a better user, of the results of the many social science studies that shape social policy and popular beliefs. Throughout this book, you will learn what questions to ask when critiquing a research study and how to evaluate the answers. You can begin to sharpen your critical teeth on the illustrative studies throughout the book. Exercises at the end of each chapter will allow you to find, discuss, critique, and actually do similar research.

If you are already charting a course toward a social science career, or if you decide to do so after completing this course, we aim to give you enough "how to" instruction so that you can design your own research projects. We also offer "doing" exercises at the end of each chapter that will help you try out particular steps in the research process.

Our goal is not just to turn you into a more effective research critic or a good research technician. We do not believe that research methods can be learned by rote or applied mechanically. Thus, you will learn the benefits and liabilities of each major research approach as well as the rationale for using a combination of methods in some situations. You will also come to appreciate why the results of particular research studies must be interpreted within the context of prior research and through the lens of social theory.

ORGANIZATION OF THE BOOK

The first three chapters introduce the why and how of research in general. Chapter 1 shows how research has helped us understand how social relations have changed in recent years and the impact of these changes. Chapter 2 illustrates the basic stages of research with studies of domestic violence, Olympic swimmers, and environmental disasters. Chapter 3 introduces the ethical considerations that should guide your decisions throughout the research process. The next three chapters discuss how to evaluate the way researchers design their measures (Chapter 4), draw their samples (Chapter 5), and justify their statements about causal connections (Chapter 6).

As we present the logic of testing causal connections in Chapter 6, we also present the basics of the experimental designs that provide the strongest tests for causality. In Chapter 7, we cover the most common method of data collection in sociology—surveys—and in Chapter 8, we present the basic statistical methods that are used to analyze the results of the quantitative data that often are collected in experiments and surveys. Here we examine the results of the 2012 General Social Survey to see how these statistics are used.

Chapters 9, 10, and 11 shift the focus from strategies for collecting and analyzing quantitative data to strategies for collecting and analyzing qualitative data. In Chapter 9, we focus on the basic methods of collecting qualitative data: participant observation and ethnography, intensive interviews, and focus groups. We also introduce approaches such as ethnomethodology and netnography. In Chapter 10, we review the logic of qualitative data analysis and several specific approaches: grounded theory, narrative analysis, conversation analysis, and visual sociology, as well as the "mixed-method" approach that combines various methods. In Chapter 11, we introduce "nonobtrusive measures" that are careful not to change what is being studied—that are "nonreactive." Chapter 12 explains how you can combine different methods to evaluate social programs. Chapter 13 covers the review of prior research, the development of research proposals, and the writing and reporting of research results.

DISTINCTIVE FEATURES OF THIS EDITION

In making changes for this edition, we have continued to emphasize making research methods accessible and enjoyable. We have incorporated valuable suggestions from many faculty reviewers and students who have used the book over the years since it was first released. As in the previous five editions, this book has also benefited from advances in its parent volume, Russell Schutt's *Investigating the Social World: The Process and Practice of Research* (now in its ninth edition).

Specific Changes

Continued updating on the uses and impact of digital technology. The widespread use of smartphones, social media, and Big Data analytics are revolutionizing social research and society itself. We have incorporated these changes throughout the text, especially in sections on web surveys—their strengths and weaknesses, and how to conduct them (Chapter 6).

Major changes to sections on qualitative research and analysis. Prompted by reviewers, we've expanded coverage of how to do ethnographic research, do coding and content analyses, and understand visual methods in social research (Chapters 9 and 10).

Updated "Careers and Research," "Research That Matters," and "Research in the News" features in most chapters.

Updated ethics sections. Following recent changes in federal guidelines, as well as the impact of Big Data scandals, we've enhanced sections on those issues (Chapters 3 and 11).

Clarification of difficult or important topics. Some particularly confusing topics—measurement (especially construct validity), the relevance and design of experiments, and questions of how political polls can go wrong—are all explained more clearly.

Updates of many statistical tables. Especially in Chapter 8, more recent data have been used.

Other Distinctive Features

Brief examples of social research. In each chapter, these illustrate particular points and show how research techniques are used to answer important social questions. Whatever your particular substantive interests in social science, you'll find some interesting studies that will arouse your curiosity.

Integrated treatment of causality and experimental design. We have combined the discussions of causation and experimental design in order to focus on the issues that are most often encountered during research in sociology, criminal justice, education, social work, communications, and political science.

Realistic coverage of ethical concerns and ethical decision making. Like the parent volume, *Investigating the Social World*, this text presents ethical issues that arise in the course of using each method of data collection, as well as comprehensive coverage of research ethics in a new chapter.

Engaging end-of-chapter exercises. We organize the research exercises under the headings of discussing, finding, critiquing, and doing, and end with questions about ethics. New exercises have been added, and some of the old ones have been omitted. The result is a set of learning opportunities that should greatly facilitate the learning process.

DIGITAL RESOURCES

Making Sense of the Social World includes a comprehensive ancillary package that utilizes new media and a wide range of instructional technologies designed to support instructor course preparation and student learning.

Student Study Site

An open-access student study site, available at edge.sagepub.com/chamblissmssw6e, provides a variety of additional resources to build students' understanding of the book content and extend their learning beyond the classroom. Students will have access to the following features:

- eFlashcards and Web Quizzes: These mobile-friendly resources reinforce understanding of key terms and concepts that have been outlined in the chapters.
- SAGE Journal Articles: Exclusive full-text journal articles have been carefully selected for each chapter. Each article supports and expands on the concepts presented in the chapter.

- Video, Audio, and Web Links: These carefully selected, Web-based resources feature relevant articles, interviews, lectures, personal stories, inquiries, and other content for use in independent or classroom-based explorations of key topics.
- Additional Data Resources: A portion of the 2012 General Social Survey (GSS) is available so students can try out quantitative data analysis (if provided access to the SPSS statistical package).

And much more!

Instructor-Teaching Site

A password-protected instructor teaching site, available at edge.sagepub.com/chamblissmssw6e, provides integrated sources for all instructor materials, including the following key components for each chapter:

- The test bank, available in Word and ExamView, contains multiple-choice, true/false,matching, and essay questions for each chapter. The test bank provides you with a diverse range of prewritten options as well as the opportunity to edit any question and/or insert your own personalized questions to assess students' progress and understanding effectively.
- Editable, chapter-specific Microsoft PowerPoint slides offer you complete flexibility in easily creating a multimedia presentation for your course. Highlight essential content, features, and artwork from the book.
- Lecture notes summarize key concepts on a chapter-by-chapter basis to help with preparation for lectures and class discussions.
- Sample course syllabi for courses provide suggested models for use in the creation of syllabi for your courses.
- Chapter-specific discussion questions can help you launch classroom interaction by prompting students to engage with the material and by reinforcing important content.
- Lively and stimulating ideas for class activities can be used to reinforce student learning.

SAGE Coursepacks

SAGE coursepacks makes it easy to import our quality instructor and student resource content into your school's learning management system with minimal effort. Intuitive and simple to use, SAGE coursepacks gives you the control to focus on what really matters: customizing course content to meet your students' needs. The SAGE coursepacks, created specifically for this book, are customized and curated for use in Blackboard, Canvas, Desire2Learn (D2L), and Moodle.

In addition to the content available on the SAGE edge site, the coursepacks include the following:

- Pedagogically robust assessment tools that foster review, practice, and critical thinking and offer a better, more complete way to measure student engagement. This includes diagnostic chapter pretests and posttests that identify opportunities for student improvement, track student progress, and ensure mastery of key learning objectives.

/// ACKNOWLEDGMENTS

First, we would like to thank Jeff Lasser, publisher and senior editor at SAGE, our main managerial contact and source of encouragement as we developed this edition, as well as Jerry Westby, who guided us through earlier editions. Andrew Olson smoothly guided the manuscript through the production process, and Colleen Brennan did an exceptional job of copyediting.

The reviewers for this edition helped us to realize the potential for the revision. We are very grateful for the wisdom and critical acumen of the following:

James I. Bowie, Northern Arizona University

Heather McLaughlin, Oklahoma State University

S. Hooshang Pazaki, East Stroudsburg University of Pennsylvania

J. Lotus Seeley, Florida Atlantic University

Beth Williford, Manhattanville College

And for previous editions:

Sandy D. Alvarez, Indiana State University

James David Ballard, California State University, Northridge

Diane C. Bates, Sam Houston State University

Irenee R. Beattie, University of California, Merced

Cristina Bodinger-deUriarte, California State University, Los Angeles

Julio Borquez, University of Michigan–Dearborn

Rebecca Brooks, Ohio Northern University

Matthew W. Brosi, Oklahoma State University

Vandeen Campbell, Lehman College

Matthew M. Caverly, University of Florida

Jin Young Choi, Sam Houston State University

Amy Dennissen, University of Colorado

Candan Duran-Aydintug, University of Colorado Denver

Keith F. Durkin, Ohio Northern University

Mark Edwards, Oregon State University

Juanita M. Firestone, The University of Texas at San Antonio

David Folz, The University of Tennessee, Knoxville

Martie Gillen, University of Florida

Kellie J. Hagewen, University of Nebraska–Lincoln

Dena Hartley, University of Akron

Laura Hecht, California State University, Bakersfield

Jerome L. Himmelstein, Amherst College

Vanessa P. Jackson, University of Kentucky

Margaret Platt Jendrek, Miami University (Oxford)

Ann Marie Kinnell, The University of Southern Mississippi

Julie A. Kmec, Washington State University

Manfred Kuechler, Hunter College

Jill Littrell, PhD, Georgia State University

Vera Lopez, Arizona State University

Liz Marie Marciniak, University of Pittsburgh at Greensburg

Karen McCue, University of New Mexico

Dianne Mosley, Texas Southern University

Ed Nelson, California State University, Fresno

Sookhee Oh, University of Missouri–Kansas City

Colin Olson, University of New Mexico

Kate Peirce, Texas State University

Ronald Perry, Arizona State University

Deborah A. Potter, PhD, University of Louisville

Travis N. Ridout, Washington State University

Linda Rouse, University of Texas

Nick Sanyal, University of Idaho

Steve Swinford, Montana State University

Felicia P. Wiltz, Suffolk University

Chenyang Xiao, Washington State University

Xiaohe Xu, The University of Texas at San Antonio

Fritz W. Yarrison, Kent State University

David Zefir, Plymouth State College

Kristen Zgoba, Rutgers University

We are grateful to Peter Marsden, of Harvard University, who updated us on web surveys; to Philip Brenner, of the University of Massachusetts Boston, who informed us about nonresponse error; and to Sunshine Hillygus, former director of Harvard University's Program on Survey Research, for sharing with us findings about survey response rates. Steve Ellingson and Bonnie Urciouli of Hamilton College made valuable suggestions, as did Morten Ender of the U.S. Military Academy, Dan Ryan Jr. of Mills College, and Elizabeth Schneider (Russ's wife) with respect to Appendix A. We thank Candace Cantrell for writing interactive exercises that link to new SAGE journal articles in this edition, and Whitney Gecker, Kate Russell, Megan Reynolds, and Kathryn Stoeckert for their work on previous sets of exercises, Amanda Colligan and Robyn Brown for their help on the eBook, and Vital Source (and the former VPG Integrated Media) for the online programming.

We also have some personal thank-yous:

Dan Chambliss: For this edition, Elizabeth House has been invaluable in typing and proofreading large sections of new and rewritten text, painstakingly deciphering masses of my red ink. I also wish to gratefully acknowledge the assistance, in many areas, of Robin Vanderwall, who, as administrative assistant and daily conscience, is simply irreplaceable. My students at Hamilton College have been a blessing throughout many editions: Chris Takacs helped to design and create several of the exhibits, solving intellectual problems through graphic displays; Shauna Sweet told me where the book was good and where it wasn't, clarified the

regression effect, and showed me how people actually should read contingency tables; Katey Healy-Wurzburg, in one of many moments of intellectual brilliance, explained the underlying rhetorical problem of the ecological fallacy; and Erin Voyik, as a teaching assistant in my Methods class, laid out for me time and again what students do and don't actually understand, and enjoy, about social research methods. For this edition, Sarah Salimi and Katherine Hayse provided a wealth of substantive suggestions. Finally, I hope that my wife, Susan Morgan, enjoyed, at least vicariously, the thrills I felt in working on this book as much as I enjoyed sharing them with her.

Russ Schutt: I am grateful to the many reviewers of this and previous editions of *Making Sense of the Social World* and of *Investigating the Social World*, as well as to the many staff and consultants at SAGE who helped make these texts a success. My special thanks to Whitney Gecker, the outstanding graduate student who checked web exercises and updated statistical examples throughout the text and wrote new interactive exercises based on the "Research That Matters" highlights in this edition. I also want to express my appreciation to my many research collaborators, with whom I have shared so many fascinating and educational experiences and from whom I have learned so much, and for the many fine students at the University of Massachusetts Boston, who continue to renew my enthusiasm for quality teaching. Most importantly, I thank my wife, Elizabeth, for her ongoing support and love, and my daughter, Julia, for being such a marvelous young woman.

Dan and Russ: Finally, Dan wants to say that Russ Schutt is a wonderful coauthor, with whom he is honored to work: totally responsible and respectful, hardworking, serious in his scholarship but without a trace of arrogance. His generous personality has allowed this collaboration to sail along beautifully. Russ adds that Dan is the perfect model of the gentleman and scholar, whose research savvy and keen intelligence are matched to a warm and caring persona. We both like to think that our talents are almost entirely complementary. We are immensely grateful for the chance to work together.

Dan:

To my sweetheart, Susan, and to the gifts she brought to me—
Sarah, Daniel, Anne, and Rebecca

Russ:

To Beth and Julia

CHAPTER 1

SCIENCE, SOCIETY, AND SOCIAL RESEARCH

LEARNING OBJECTIVES

1. Describe the four common errors in everyday reasoning.
2. Define *social science,* and identify its limitations.
3. Identify the four goals for social research in practice.
4. Define valid knowledge, and indicate the three components of validity.

How do you contact friends and relatives you don't live with—Direct message? E-mail? Social media like Facebook, Instagram, or Snapchat? Do you call, or do you prefer in-person contact? Is in-person contact better when you need someone to confide in? What do your grandparents, who grew up without the Internet or smartphones, think about digital communication? Do they use them?

In the past few decades, the Internet, cell phones, and all the interrelated forms of communication they support—e-mail, texting, social media, Skype, Zoom, and others—added new forms of social connection across the globe. By December 2017, 54.4% of the total world population of 7,634,758,428 was connected to the Internet—an increase of more than 900% since 2000. Across continents, the percentage connected ranged from highs of 95.0% in North America and 85.2% in Europe to 48.1% in Asia to a low of just 35.2% in Africa (Internet World Statistics 2017). As you can imagine, many social scientists wonder how these developments have affected our lives.

That's where social researchers begin: with questions about the world and a desire to accurately answer them. Social research differs from ordinary thinking in its use of systematic scientific research methods.

In this chapter, we raise questions about Internet use, social networking services, and social ties to suggest how the use of scientific research methods can result in knowledge that's more important, more trustworthy, and more useful than personal opinions or individual experiences. You will learn how social scientists' investigations are helpful in answering questions about social ties and about the impact of the Internet on these ties. You will also learn about the challenges that researchers confront. By the chapter's end, you should know what is "scientific" in social science and appreciate how the methods of science can help us understand the problems of society.

LEARNING ABOUT THE SOCIAL WORLD

We can get a sense of how social scientists investigate the social world by reviewing some questions that social researchers have asked about the Internet and social ties.

1. What percentage of Americans are connected to the Internet?

That's a pretty simple question, with a straightforward answer. The Pew Research Center's surveys have found that Internet use in the United States has risen rapidly from 52% of U.S. adults in 2000 to 84% in 2015 (Perrin and Duggan 2015).

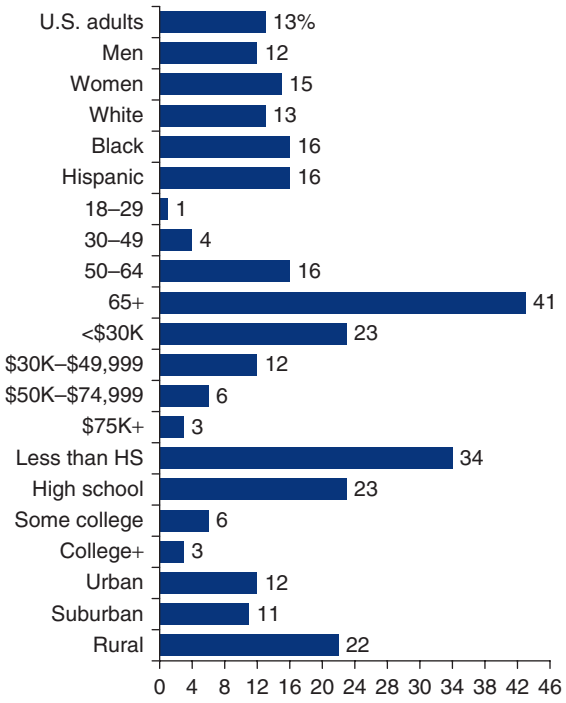
2. How does Internet use vary across social groups?

Internet use is quite high in the United States, but whereas the percentage of U.S. adults who are not online (to flip the question) in 2016 is similar for men and women, and for different races (about 13%), it varied dramatically by age—from a low of 1% of those ages 18 to 29 to a high of 41% among those 65 or older—and by income, education, and location (Anderson and Perrin 2016) (Exhibit 1.1). In other words, older folks are far more likely not to use the Internet.

3. Does Internet use damage other relationships?

This kind of question is a bit harder to answer, but the answer seems to be no. In the United States during the Internet boom years, social isolation—not having anyone to confide in—did not change much from 1985 (8%) to 2008 (12%) (Fischer 2009;

Exhibit 1.1 /// Percentage of Individuals Not Using Internet, by Personal Characteristics



Source: Anderson, Monica, and Andrew W. Perrin. 2016. *13% of Americans don't use the Internet. Who are they?* Pew Research Center, September 7. From http://www.pewresearch.org/fact-tank/2016/09/07/some-americans-dont-use-the-internet-who-are-they/ (accessed July 28, 2017).

Hampton et al. 2009; Marsden 1987; McPherson, Smith-Lovin, and Brashears 2006:358; Paik and Sanchagrin 2013). In fact, Internet users tend to have even larger and more diverse social networks than others, and are just as likely as nonusers to participate in community activities (Hampton et al. 2009).

4. Does wireless access (Wi-Fi) in public places such as Starbucks decrease customer interaction?

Hampton and Gupta (2008) observed Internet use in Wi-Fi'd coffee shops in two cities and concluded that there were two types of Wi-Fi users: those who used their Internet connection to create a work space and those who used it as a tool for meeting others in the coffee shop. So among some customers, Wi-Fi was associated with less social interaction, whereas among others, there was more interaction.

5. Do cell phones and smartphones hinder the development of strong social ties?

Based on surveys in Norway and Denmark, Rich Ling and Gitte Stald (2010) concluded that mobile phones increase social ties among close friends and family members, but e-mail communication tends to decrease them. Other research by the Pew Center, however, has identified more positive effects of the Internet and e-mail on social ties (Boase et al. 2006). In some cases, then, answers may be predictable; in others they aren't. This variability should lead you to be cautious about using your own experience as a basis for estimating the behavior of others. Have you heard people question what effect the Internet has on relationships? It turns out that answers are not obvious.

But the more that you begin to think like a social scientist, the more such questions will come to mind, and that's a good thing! As you've just seen, in our everyday reasoning about the social world, prior experiences and orientations may have a major influence on what we perceive and how we interpret these perceptions. As a result, one person may think that posting messages on Facebook is what's wrong with modern society, but another person may see the same action as helping people get connected. We need to move beyond first impressions and gut reactions to more systematic methods of investigation. That's what social research does.

People misunderstand society and social life for various reasons. It's easy to do, particularly when we are analyzing the world in which we are self-interested participants. We can call some of these mistakes *everyday errors*, because they occur so frequently in the nonscientific, unreflective conversations that we hear on a daily basis.

Consider the case of two timid cats. This comes from a letter sent to Ann Landers, a popular newspaper advice columnist, some years ago. See if you can spot the everyday errors here: The letter was written by a woman who had just moved, with her two pet cats, from an apartment in the city to a house in the country. In the city, she had not let the cats go outside, but she felt guilty about keeping them locked up. Upon arrival at the country house, she opened the door to let the cats outside. The cats tiptoed cautiously to the door, looked outside, then went right back into the living room and lay down!

The woman concluded that people shouldn't feel guilty about keeping cats indoors, because even when cats have the chance, they don't really want to play outside.

Can you spot the woman's errors in reasoning?

- *Overgeneralization*—She observed only two cats, both of which were previously confined indoors. Maybe they aren't like most cats.
- *Selective or inaccurate observation*—She observed the cats at the outside door only once. But maybe if she let them out several times, they would become more comfortable with going out.
- *Resistance to change*—She was quick to conclude that she had no need to change her approach to the cats. But maybe she just didn't want to change her own routines and was eager to believe that she was managing her cats just fine already.
- *Illogical reasoning*—She assumed that other people feel guilty about keeping their cats indoors. But maybe they don't.

You don't have to be a scientist or use sophisticated research techniques to avoid these four errors in reasoning. If you recognize and make a conscious effort to avoid them, you can improve your own reasoning. Along the way, you also will be heeding advice you probably heard from your parents (minister, teacher, adviser) not to stereotype people, to avoid jumping to conclusions, and to look at the big picture. These are all roughly the kinds of mistakes that the methods of social science systematically help us to avoid.

Let's look at each kind of error in turn.

Overgeneralization

Overgeneralization occurs when we unjustifiably conclude that what is true for some cases is true for all cases. We are always drawing conclusions about people and social processes from our own interactions with them, but sometimes we forget that our experiences are limited. The social (and natural) world is, after all, a complex place. Maybe someone made a wisecrack about the ugly shoes you're wearing today, but that doesn't mean that everyone is talking about you. Or there may have been two drunk-driving accidents following fraternity parties this year, but by itself, this doesn't mean that all fraternity brothers are drunk drivers. Or maybe you had a boring teacher in your high school chemistry class, but that doesn't mean all chemistry teachers are boring. We can interact with only a small fraction of the individuals who inhabit the social world, especially in a limited span of time; rarely are they completely typical people. One heavy Internet user found that his online friendships were "much deeper and have better quality" than his other friendships (Parks and Floyd 1996). Would his experiences generalize to yours? To those of others?

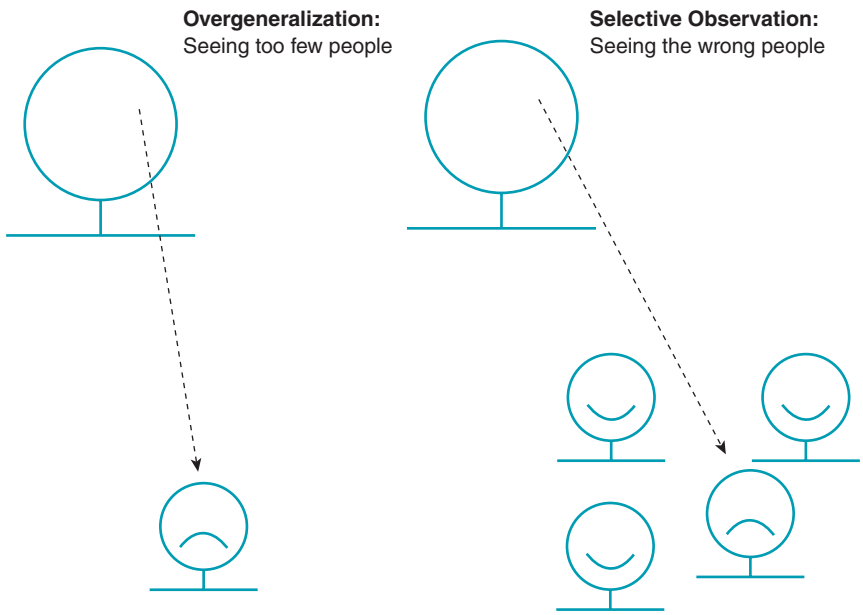
Overgeneralization: Occurs when we unjustifiably conclude that what is true for some cases is true for all cases.

Selective or Inaccurate Observation

We also have to avoid **selective** or **inaccurate observation**—choosing to look only at things that are in line with our preferences or beliefs. When we dislike individuals or institutions, it is all too easy to notice their every failing. For example,

Selective (inaccurate) observation: Choosing to look only at things that are in line with our preferences or beliefs.

Exhibit 1.2 /// Overgeneralization vs. Selective Observation: "Everybody's Unhappy!"



if we are convinced that heavy Internet users are antisocial, we can find many confirming instances. But what about elderly people who serve as Internet pen pals for grade school children or therapists who deliver online counseling? If we acknowledge only the instances that confirm our predispositions, we are victims of our own selective observation. Exhibit 1.2 depicts the difference between selective observation and overgeneralization.

Exhibit 1.3 /// An Optical Illusion

Our observations can also simply be inaccurate. When you were in high school, maybe your mother complained that you were "always" staying out late with your friends. Perhaps that was inaccurate; perhaps you stayed out late only occasionally. And when you complained that she "yelled" at you, even though her voice never actually increased in volume, that, too, was an inaccurate observation. In social science, we try to be more precise than that.

Such errors often occur in casual conversation and in everyday observation of the world around us. What we think we have seen is not necessarily what we really have seen (or heard, smelled, felt, or tasted). Even when our senses are functioning fully, our minds have to interpret what we have sensed (Humphrey 1992). The optical illusion in Exhibit 1.3, which can be viewed as either two faces or a vase, should help you realize that even simple visual perception requires interpretation.

Illogical Reasoning

When we prematurely jump to conclusions or argue on the basis of invalid assumptions, we are using **illogical reasoning**. For example, we might think that people who don't have many social ties just aren't friendly, even if we know they have just moved into a community and started a new job. Obviously, that's not logical. Conversely, an unquestioned assumption that everyone seeks social ties or benefits from them overlooks some important considerations, such as the impact of childhood difficulties on social trust and the exclusionary character of many tightly knit social groups. Logic that seems impeccable to one person can seem twisted to another—but people having different assumptions, rather than just failing to "think straight," usually causes the problem.

Illogical reasoning: The premature jumping to conclusions or arguing on the basis of invalid assumptions.

Resistance to Change

Resistance to change, the reluctance to change our ideas in light of new information, is a common problem. After all, we know how tempting it is to make statements that conform to our own needs rather than to the observable facts ("I can't live on that salary!"). It can also be difficult to admit that we were wrong once we have staked out a position on an issue ("I don't want to discuss this anymore"). Excessive devotion to tradition can stifle adaptation to changing circumstances ("This is how we've always done it, that's why"). People often accept the recommendations of those in positions of authority without question ("Only the president has all the facts"). In all of these ways, we often close our eyes to what's actually happening in the world.

Resistance to change: The reluctance to change our ideas in light of new information.

Research That Matters

Are face-to-face contacts between people being displaced by modern indirect ("mediated") contact through texting, Skype, social media, e-mails, or cell phones? And if so, does it matter? Do people feel less supported when they communicate indirectly compared to when their social contacts are physically present? Since the spread of cell phones and the development of the Internet in the 1980s, social scientists have been concerned with the impact of these new forms of mediated connections on the quantity and quality of social interaction. Professor Roger Patulny and PhD candidate Claire Seaman at the University of Wollongong in Australia investigated these questions with data collected in the Australian Bureau of Statistics' (ABS's) General Social Survey (GSS). The procedures for the ABS-GSS involve in-person interviews with more than 10,000 Australians selected from throughout Australia so that they are very similar to the total population. In the years studied by Patulny and Seaman (2002, 2006, and 2010), the GSS included questions about frequency and methods of contacting family or friends (who respondents were not living with). There were also survey questions about feelings of social support, as well as personal characteristics like age and education. The researchers found that face-to-face contact had declined and use of the new "mediated" forms of social contact had increased, but there had been no general decline in feelings of having social support. However, there were some disadvantages in

(Continued)

(Continued)

frequency of contact and feelings of social support among older men and in relation to having less education or less income.

In this chapter, you will learn more about the methods that Patulny and Seaman used as well as about other studies of social interaction and mediated forms of communication. By the end of the chapter, you will have a good overview of the approach that researchers use to study social issues like these and others. As you read the chapter, you can check details about this in the 2017 *Journal of Sociology* article by Roger Patulny and Claire Seaman at the *Making Sense of the Social World* study site for Chapter 1: **edge.sagepub.com/chamblissmssw6e**.

Source: Adapted from Patulny, Roger, and Claire Seaman. 2017. "I'll just text you": Is face-to-face social contact declining in a mediated world? *Journal of Sociology* 53(2): 285–302.

CAN SOCIAL SCIENTISTS SEE THE SOCIAL WORLD MORE CLEARLY?

Science: A set of logical, systematic, documented methods for investigating nature and natural processes; the knowledge produced by these investigations.

Social science: The use of scientific methods to investigate individuals, societies, and social processes; the knowledge produced by these investigations.

Can social science do any better? Can we see the social world more clearly if we use the methods of social science? **Science** relies on logical and systematic methods to answer questions, and it does so in a way that allows others to inspect and evaluate its methods. So social scientists develop, refine, apply, and report their understanding of the social world more systematically, or "scientifically," than the general public does.

- **Social science** research methods reduce the likelihood of overgeneralization by using systematic procedures for selecting individuals or groups to study so that the study subjects are representative of the individuals or groups to which we want to generalize.
- Social science methods can reduce the risk of selective or inaccurate observation by requiring that we measure and sample phenomena systematically.
- To avoid illogical reasoning, social researchers use explicit criteria for identifying causes and for determining whether these criteria are met in a particular instance.
- Scientific methods lessen the tendency to answer questions about the social world from ego-based commitments, excessive devotion to tradition, or unquestioning respect for authority. Social scientists insist, "Show us the evidence!"

Social Research in Practice

Although all social science research seeks to minimize errors in reasoning, different projects may have different goals. The four most important goals of social research are (1) description, (2) exploration, (3) explanation, and (4) evaluation. Let's look at examples of each.

Description: How Often Do Americans "Neighbor"?

During the last quarter of the 20th century, the annual (biennial since 1996) General Social Survey (GSS) investigated a wide range of characteristics, attitudes,

and behaviors. Each year, more than 1,000 adults in the United States completed GSS phone interviews; many questions repeated from year to year so that trends could be identified. Robert Putnam often used GSS data in his famous *Bowling Alone* investigation of social ties in America.

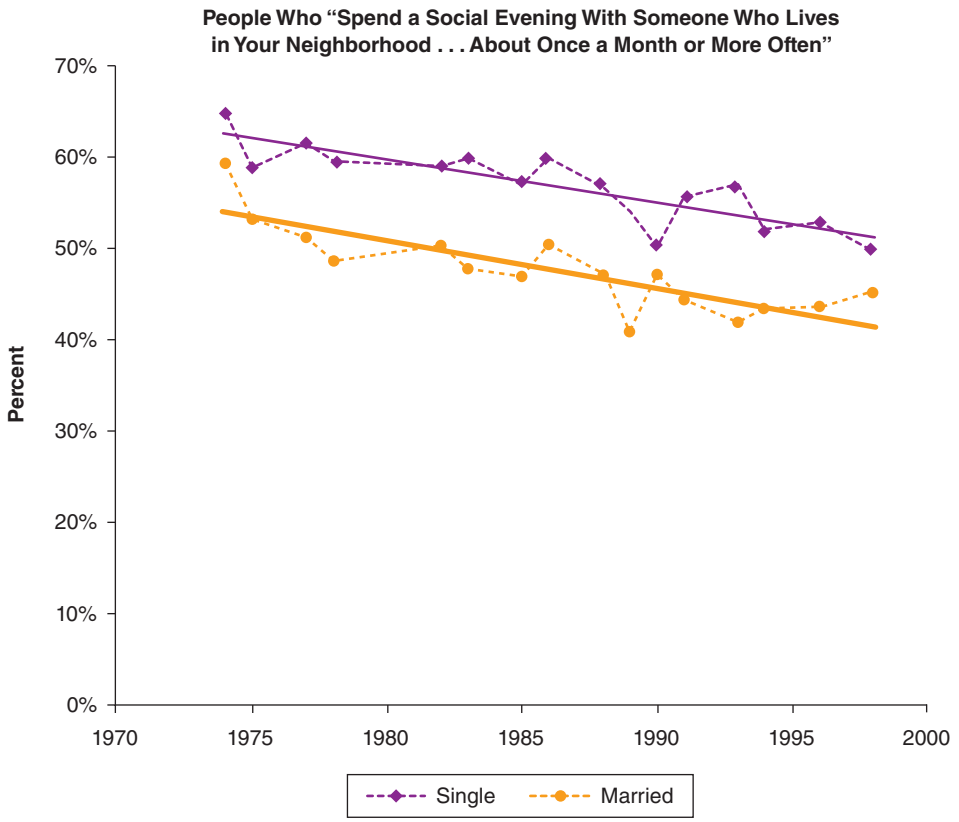
Survey responses indicated that "neighboring" declined throughout this period. As indicated in Exhibit 1.4 (Putnam 2000: 106), the percentage of GSS respondents who reported spending "a social evening with someone who lives in your neighborhood . . . about once a month or more often" was 60% for married people in 1975 and about 65% for singles. By 1998, the comparable percentages were 45% for married people and 50% for singles. This is **descriptive research** because the findings simply describe differences or variations in social phenomena.

Descriptive research: Research in which social phenomena are defined and described.

Exploration: How Do Athletic Teams Build Player Loyalty?

Organizations such as combat units, surgical teams, and athletic teams must develop intense organizational loyalty among participants if organizations are to maximize their performance. How do they do it? This question motivated Patricia and Peter Adler (2000) to study college athletics. They wanted to explore this topic

Exhibit 1.4 /// The Decline of Neighboring 1974–1998



Source: Reprinted with permission of Simon & Schuster, Inc. from *Bowling Alone* by Robert D. Putnam. Copyright © 2000 Robert D. Putnam.

without preconceptions or fixed hypotheses. So Peter Adler joined his college basketball team as a "team sociologist," while Patti participated in some team activities as his wife and as a professor at the school. They recorded observations and comments at the end of each day for a period of 5 years. They also interviewed at length the coaches and all 38 basketball team members during that period.

Careful and systematic review of their notes led Adler and Adler (2000) to conclude that intense organizational loyalty emerged from five processes: (1) domination, (2) identification, (3) commitment, (4) integration, and (5) goal alignment. We won't review each of these processes here, but the following quote indicates how they found the process of integration into a cohesive group to work:

> By the time the three months were over [the summer before they started classes] I felt like I was there a year already. I felt so connected to the guys. You've played with them, it's been 130 degrees in the gym, you've elbowed each other, knocked each other around. Now you've felt a relationship, it's a team, a brotherhood type of thing. Everybody's got to eat the same rotten food, go through the same thing, and all you have is each other. So you've got a shared bond, a camaraderie. It's a whole houseful of brothers. And that's home to everybody in the dorm, not your parents' house. (p. 43)

Participating in and observing the team over this long period enabled Adler and Adler (2000) to identify and to distinguish particular aspects of such loyalty-building processes, such as identifying three modes of integration into the group: (1) unification in opposition to others, (2) development of group solidarity, and (3) sponsorship by older players. Adler and Adler also identified negative consequences of failures in group loyalty, such as the emergence of an atmosphere of jealousy and mistrust, and the disruption of group cohesion, as when one team member focused only on maximizing his own scoring statistics.

In this project, Adler and Adler did more than simply describe what people did—they tried to explore the different elements of organizational loyalty and the processes by which loyalty was built. **Exploratory research** seeks to find out how people get along in the setting under question, what meanings they give to their actions, and what issues concern them. You might say the goal is to learn "what's going on here?"

Exploratory research: Seeks to find out how people get along in the setting under question, what meanings they give to their actions, and what issues concern them.

Explanation: Does Social Context Influence Adolescent Outcomes?

Often, social scientists want to explain social phenomena, usually by identifying causes and effects. Bruce Rankin at Koç University in Turkey and James Quane at Harvard University (Rankin and Quane 2002) analyzed data collected in a large survey of African American mothers and their adolescent children to test the effect of social context on adolescent outcomes. The source of data was a study funded by the MacArthur Foundation, Youth Achievement and the Structure of Inner City Communities, in which face-to-face interviews were conducted with more than 636 youth living in 62 poor and mixed-income urban Chicago neighborhoods.

Explanatory research: Seeks to identify causes and effects of social phenomena and to predict how one phenomenon will change or vary in response to variation in another phenomenon.

Explanatory research like this seeks to identify causes and effects of social phenomena and to predict how one phenomenon will change or vary in response to variation in another phenomenon. Rankin and Quane (2002) were most concerned

In the News

Research in the News

Social Media and Political Polarization?

Is the growing importance of social media responsible for increasing political polarization in the United States? After all, social media help people restrict their information to news with the slant they prefer and their social connections to like-minded partisans. But using data from the American National Election Studies, economics professors at Brown and Stanford Universities found that polarization has been most extreme among older Americans—the age group that is least likely to use social media. So it seems that at least there is more to the story of polarization than the use of social media.

For Further Thought

1. What else do you think might explain increasing political polarization?
2. In addition to surveys, what data sources could you use to study political polarization?

Sources: Bromwich, Jonah Engel. 2017. Social media is not contributing significantly to political polarization, paper says. *New York Times*, April 13; Crawford, Susan P. 2011. The new digital divide. *New York Times,* December 4: A1.

with determining the relative importance of three different aspects of social context—neighborhoods, families, and peers—on adolescent outcomes (both positive and negative). To make this determination, they had to conduct their analysis in a way that allowed them to separate the effects of neighborhood characteristics, such as residential stability and economic disadvantage, from parental involvement in child rearing and other family features, as well as from peer influence. They found that neighborhood characteristics affect youth outcomes primarily by influencing the extent of parental monitoring and the quality of peer groups.

Evaluation: Does More Social Capital Result in More Community Participation?

The "It's Our Neighbourhood's Turn" project (Onze Buurt aan Zet, or OBAZ) in the city of Enschede, the Netherlands, was one of a series of projects initiated by the Dutch Interior and Kingdom Relations ministry to increase the quality of life and safety of individuals in the most deprived neighborhoods in the Netherlands. In the fall of 2001, residents in three of the city's poorest neighborhoods were informed that their communities had received funds to use for community improvement and that residents had to be actively involved in formulating and implementing the improvement plans (Lelieveldt 2003: 1). Political scientist Herman Lelieveldt (2004: 537) at the University of Twente, the Netherlands, and others then surveyed community residents to learn about their social relations and their level of local political participation; a second survey was conducted 1 year after the project began.

Lelieveldt wanted to evaluate the impact of the OBAZ project—to see whether the "livability and safety of the neighborhood" could be improved by taking steps like those Putnam (2000: 408) recommended to increase "social capital," meaning that citizens would spend more time connecting with their neighbors.

It turned out that residents who had higher levels of social capital participated more in community political processes. However, not every form of social capital made much of a difference. Neighborliness—the extent to which citizens are engaged in networks with their neighbors—was an important predictor of political participation, as was a feeling of obligation to participate. By contrast, a sense of trust in others (something that Putnam emphasizes) was not consistently important (Lelieveldt 2004: 535, 547–548): Those who got more involved in the OBAZ political process tended to distrust their neighbors. When researchers focus their attention on social programs such as the OBAZ project, they are conducting **evaluation research**—research that describes or identifies the impact of social policies and programs.

Evaluation research: Research that describes or identifies the impact of social policies and programs.

Certainly many research studies have more than one such goal—all studies include some description, for instance. But clarifying your primary goal can often help when deciding how to do your research.

HOW WELL HAVE WE DONE OUR RESEARCH?

Social scientists want validity in their research findings—they want to find the truth. The goal of social science is not to reach conclusions that other people will like or that suit our personal preferences. We shouldn't start our research determined to "prove" that our college's writing program is successful, or that women are portrayed unfairly in advertisements, or that the last presidential election was

Careers and Research

Jessica LeBlanc, Research Assistant

Jessica LeBlanc

Jessica LeBlanc majored in sociology at the University of New Hampshire, but she didn't really know what kind of career it would lead to. Then she took an undergraduate statistics course and found she really enjoyed it. She took additional methods courses—survey research and an individual research project course—and really liked those also.

By the time she graduated, LeBlanc knew she wanted a job in social research. She looked online for research positions in marketing, health care, and other areas. She noticed an opening at a university-based research center and thought their work sounded fascinating. As a research assistant, LeBlanc designed survey questions, transcribed focus group audiotapes, programmed web surveys, and managed incoming data. She also conducted interviews, programmed computer-assisted telephone surveys, and helped conduct focus groups.

The knowledge that LeBlanc gained in her methods courses about research designs, statistics, question construction, and survey procedures prepared her well for her position. Her advice to aspiring researchers: Pay attention in your first methods class!

rigged, or that homeless people are badly treated. We may learn that all of these are true, or aren't, but our goal as social scientists should be to learn the truth, even if it's sometimes disagreeable to us. The goal is to figure out how and why some part of the social world operates as it does and to reach valid conclusions. We reach the goal of **validity** when our statements or conclusions about empirical reality are correct. In *Making Sense of the Social World: Methods of Investigation*, we will be concerned with three kinds of validity: (1) measurement validity, (2) generalizability, and (3) causal validity (also known as internal validity). We will learn that invalid measures, invalid generalizations, or invalid causal inferences result in invalid conclusions.

Validity: The state that exists when statements or conclusions about empirical reality are correct.

Measurement Validity

Measurement validity is our first concern because without having measured what we think we've measured, we don't even know what we're talking about. So when Putnam (2000: 291) introduces a measure of "social capital" that has such components as number of club meetings attended and number of times worked on a community project, we have to stop and consider the validity of this measure. Measurement validity is the focus of Chapter 4.

Measurement validity: Exists when an indicator measures what we think it measures.

Problems with measurement validity can occur for many reasons. In studies of Internet forums, for instance, researchers have found that some participants use fictitious identities, even pretending to be a different gender (men posing as women, for instance) (Donath 1999). Therefore, it's difficult to measure gender in these forums, and researchers could not rely on gender as disclosed in the forums when identifying differences in usage patterns between men and women. Similarly, if you ask people, "Are you an alcoholic?" they probably won't say yes, even if they are; the question elicits less valid information than would be forthcoming by asking them how many drinks they consume, on average, each day. Some college students may be hesitant to admit they binge-watch *The Walking Dead* on television 6 hours a day, so researchers use electronic monitoring devices on TV sets to measure what programs people watch and how often.

Generalizability

The **generalizability** of a study is the extent to which it can inform us about persons, places, or events that were not directly studied. For instance, if we ask our favorite students how much they enjoyed our Research Methods course, can we assume that other students (perhaps not as favored) would give the same answers? Maybe they would, but probably not. Achieving generalizability through correct sampling is the focus of Chapter 5.

Generalizability: Exists when a conclusion holds true for the population, group, setting, or event that we say it does, given the conditions that we specify; it is the extent to which a study can inform us about persons, places, or events that were not directly studied.

Generalizability is always an important consideration when you review social science research. Even the huge, international National Geographic Society (2000) survey of Internet users had some limitations in generalizability. Only certain people were included in the sample: people who were connected to the Internet, who had heard about the survey, and who actually chose to participate. This meant that many more respondents came from wealthier countries, which had higher rates of computer and Internet use, than from poorer countries. However, the inclusion of individuals from 178 countries and territories does allow some interesting comparisons among countries.

There are two kinds of generalizability: sample and cross-population.

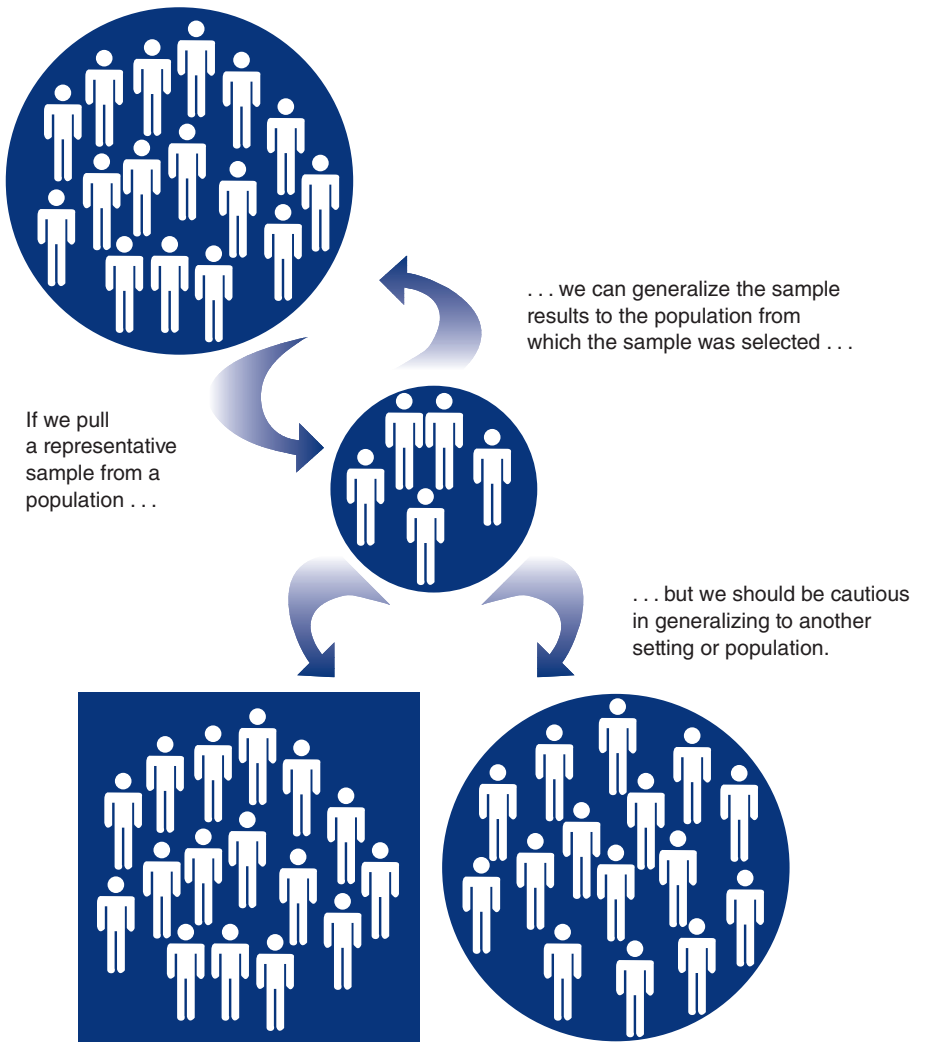
Sample generalizability: Exists when a conclusion based on a sample, or subset, of a larger population holds true for that population.

Sample generalizability is a key concern in survey research. Political polls, such as the Gallup Poll or Zogby International, may study a sample of 1,400 likely voters, for example, and then generalize the findings to the entire American population of 120 million likely voters. No one would be interested in the results of political polls if they represented only the tiny sample that actually was surveyed rather than the entire population.

Cross-population generalizability (external validity): Exists when findings about one group, population, or setting hold true for other groups, populations, or settings.

Cross-population generalizability occurs to the extent that the results of a study hold true for multiple populations; these populations may not all have been sampled, or they may be represented as subgroups within the sample studied (Exhibit 1.5). We can only wonder about the cross-population generalizability of Putnam's findings about social ties in the United States. Has the same decline occurred in Mexico, Argentina, Britain, or Thailand?

Exhibit 1.5 /// Sample and Cross-Population Generalizability



Causal Validity

Causal validity (internal validity): Exists when a conclusion that A leads to, or results in, B is correct.

Causal validity, also known as **internal validity**, refers to the truthfulness of an assertion that A causes B. It is the focus of Chapter 6.

Most research seeks to determine what causes what, so social scientists frequently must be concerned with causal validity. For example, Gary Cohen and Barbara Kerr (1998) asked whether computer-mediated counseling could be as effective as face-to-face counseling for mental health problems—that is, whether one type of counseling leads to better results than the other. Cohen and Kerr could have compared people who had voluntarily experienced one of these types of treatment, but it's quite likely that individuals who sought out a live person for counseling would differ, in important ways, from those who sought computer-mediated counseling. Younger people tend to use computers more; so do more educated people. Or maybe less sociable people would be more drawn to computer-mediated counseling. Normally, it would be hard to tell if different results from the two therapies were caused by the therapies themselves or by different kinds of people going to each.

So Cohen and Kerr (1998) designed an experiment in which students seeking counseling were assigned randomly (by a procedure somewhat like flipping a coin) to either computer-mediated or face-to-face counseling. In effect, people going to one kind of counseling were just like people going to the other; as it happens, their anxiety scores afterward were roughly the same. There seemed to be no difference (Exhibit 1.6). By using the random assignment procedure, Cohen and Kerr strengthened the causal validity of this conclusion.

Exhibit 1.6 /// Partial Evidence of Causality

Precounseling Anxiety Score	Type of Counseling	Postcounseling Anxiety Score
35	Computer-mediated	28
35	Face-to-face	29

Precounseling anxiety score: 35 — Computer-mediated counseling → Postcounseling anxiety score: 28

Precounseling anxiety score: 35 — Face-to-face counseling → Postcounseling anxiety score: 29

Conversely, even in properly randomized experiments, causal findings can be mistaken because of some factor that was not recognized during planning for the study. If the computer-mediated counseling sessions were conducted in a modern building with all the latest amenities, but face-to-face counseling was delivered in a run-down building, this difference might have led to different outcomes for reasons quite apart from the type of counseling. Also, Cohen and Kerr didn't have a group that received no counseling. Maybe just a little quiet time or getting older would provide the same benefits as therapy.

So establishing causal validity can be quite difficult. In subsequent chapters, you will learn in more detail how experimental designs and statistics can help us evaluate causal propositions, but the solutions are neither easy nor perfect. We always have to consider critically the validity of causal statements that we hear or read.

CONCLUSION

This first chapter should have given you an idea of what to expect in the rest of the book. Social science provides us with a variety of methods for avoiding everyday errors in reasoning and for coming to valid conclusions about the social world. We will explore different kinds of research, using different techniques, in the chapters to come, always asking, is this answer likely to be correct? The techniques are fairly simple, but they are powerful nonetheless if properly executed. You will also learn some interesting facts about social life. We have already seen, for instance, some evidence that

- The Internet and social media may have surprising effects on our relationships with others.
- Organizational processes that build loyalty, as happens on athletic teams, can strengthen social ties.
- Neighborhoods in which social ties are weaker may result in less effective forms of parenting, but both parenting and peer group quality have stronger effects than neighborhood social ties on adolescent outcomes.
- Government programs to increase social capital in neighborhoods can increase local political participation.
- Students may benefit as much from computer-mediated counseling as from face-to-face counseling.

Remember, you must ask a direct question of each research project you examine: How valid are its conclusions? The theme of validity ties the chapters in this book together. Each technique will be evaluated for its ability to help us with measurement validity, generalizability, and causal validity.

To illustrate the process of doing research, in Chapter 2, we describe studies of domestic violence, community disaster, student experience of college, and other topics. We review the types of research questions that social scientists ask, the role of theory, the major steps in the research process, and other sources of information that may be used in social research. In Chapter 3, we set out the general

principles of ethical research that social scientists try to follow. As well, examples of ethical challenges to good research will be presented in many of the chapters that follow.

Then, in Chapters 4, 5, and 6, we return to the subject of validity—the three kinds of validity and the specific techniques used to maximize the validity of our measures, our generalizations from a sample, and our causal assertions. Chapter 6 also introduces experimental studies, one of the best methods for establishing causal relationships.

Other methods of data collection and analysis are introduced in Chapters 7, 8, 9, and 10. Survey research is the most common method of data collection in sociology, and in Chapter 7, we devote attention to the different types of surveys. Chapter 8 is not a substitute for an entire course in statistics, but it gives you a good idea of how to use statistics honestly in reporting the results of your own studies using quantitative methods, in interpreting the results of research reported by others, and in analyzing secondary data sources. Chapter 9 shows how qualitative methods such as participant observation, intensive interviewing, and focus groups can uncover aspects of the social world that we are likely to miss in experiments and surveys, and Chapter 10, on qualitative data analysis, illustrates several approaches that researchers can take to the analysis of the data they collect in qualitative projects.

Chapter 11 introduces a range of unobtrusive measures that aren't experienced by the people being studied; these include historical and comparative methods, content analysis, and a variety of creative techniques. Chapter 12 explains the role of evaluation research in investigating social programs and how to design evaluation research studies. Finally, Chapter 13 focuses on how to review prior research, how to propose new research, and how to report original research. We give special attention to how to formulate research proposals and how to critique, or evaluate, reports of research that you encounter.

Throughout these chapters, we will try to make the ideas interesting and useful to you, both as a consumer of research (e.g., as reported in newspapers) and as a potential producer (if, say, you do a survey in your college, neighborhood, or business). Each chapter ends with several helpful learning tools. Lists of key terms and chapter highlights will help you review, and exercises will help you apply your knowledge. Social research isn't rocket science, but it does take some clear thinking, and these exercises should give you a chance to practice.

Here is a closing thought: Vince Lombardi, legendary coach of the Green Bay Packers of the National Football League during the 1960s, used to say that championship football was basically a matter of "four yards and a cloud of dust." Nothing too fancy, no razzle-dazzle plays, no phenomenally talented players doing it all alone—just solid, hard-working, straight-ahead fundamentals. This may sound strange, but excellent social research can be done—can "win games"—in the same way. We'll show you how to design and conduct surveys that get the right answers, interviews that discover people's true feelings, and experiments that pinpoint what causes what. And we'll show you how to avoid getting taken in by every "Studies Show . . . We're Committing More Crimes!" article you read on the Internet. It takes a little effort initially, but we think you will find it worthwhile and even enjoyable.

/// KEY TERMS

Causal validity (internal validity) 13

Cross-population generalizability (external validity) 12

Descriptive research 7

Evaluation research 10

Explanatory research 8

Exploratory research 8

Generalizability 11

Illogical reasoning 5

Measurement validity 11

Overgeneralization 3

Resistance to change 5

Sample generalizability 12

Science 6

Selective (inaccurate) observation 3

Social science 6

Validity 11

/// HIGHLIGHTS

- Four common errors in everyday reasoning are overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change. These errors result from the complexity of the social world, subjective processes that affect the reasoning of researchers and those they study, researchers' self-interestedness, and unquestioning acceptance of tradition or of those in positions of authority.
- Social science is the use of logical, systematic, documented methods to investigate individuals, societies, and social processes, as well as the knowledge these investigations produce.
- Social research can be descriptive, exploratory, explanatory, or evaluative—or some combination of these.
- Valid knowledge is the central concern of scientific research. The three components of validity are measurement validity, generalizability (both from the sample to the population from which it was selected and from the sample to other populations), and causal (internal) validity.

/// STUDENT STUDY SITE

SAGE edge™

The Student Study Site, available at **edge.sagepub.com/chamblissmssw6e**, includes useful study materials including practice quizzes, eFlashcards, videos, audio resources, journal articles, and more.

/// EXERCISES

Discussing Research

1. Select a social issue that interests you, such as Internet use or crime. List at least four of your beliefs about this phenomenon. Try to identify the sources of each of these beliefs.
2. Does the academic motivation to do the best possible job of understanding how the social world works conflict with policy or personal motivations? How could personal experiences with social isolation or with Internet use shape research motivations? In what ways might the goal of influencing policy about social relations shape how a researcher approaches this issue?
3. Pick a contemporary social issue of interest to you. List descriptive, exploratory, explanatory, and evaluative questions that you could investigate about this issue.
4. Review each of the three sets of research alternatives. Which alternatives are most appealing to you? Which combination of alternatives makes the most sense to you (one possibility, for example, is quantitative research with a basic science orientation)? Discuss the possible bases of your research preferences relative to your academic interests, personal experiences, and policy orientations.

Finding Research

1. Read the abstracts (initial summaries) of each article in a recent issue of a major social science journal. (Ask your instructor for some good journal titles.) On the basis of the abstract only, classify each research project represented in the articles as primarily descriptive, exploratory, explanatory, or evaluative. Note any indications that the research focused on other types of research questions.
2. From the news, record statements of politicians or other leaders about some social phenomenon. Which statements do you think are likely to be in error? What evidence could the speakers provide to demonstrate the validity of these statements?
3. Check out Robert Putnam's website (robertdputnam.com) and review survey findings about social ties in several cities. Prepare a 5- to 10-minute class presentation on what you found about social ties and the ongoing research-based efforts to understand them.

Critiquing Research

1. Scan one of the publications about the Internet and society at the Berkman Klein Center for Internet & Society website (http://cyber.law.harvard.edu/). Describe one of the projects discussed: its goals, methods, and major findings. What do the researchers conclude about the impact of the Internet on social life in the United States? Next, repeat this process with a report from the Pew Internet Project (www.pewinternet.org), or with the Digital Future report from the University of Southern California's Center for the Digital Future site (www.digitalcenter.org). What aspects of the methods, questions, or findings might explain differences in their conclusions? Do you think the researchers approached their studies with different perspectives at the outset? If so, what might these perspectives have been?
2. Research on social ties was publicized in a *Washington Post* article that also included comments by other sociologists (http://www.washingtonpost.com/wp-dyn/content/article/2006/06/22/AR2006062201763.html). Read the article, and continue the commentary. Do your own experiences suggest that there is a problem with social ties in your community? Does it seem, as Barry Wellman suggests in the *Washington Post* article, that a larger number of social ties can make up for the decline in intimate social ties that McPherson et al. (2006: 358) found?

Doing Research

1. What topic would you focus on if you could design a social research project without any concern for costs? What are your motives for studying this topic?
2. Develop four questions that you might investigate about the topic you just selected. Each question should reflect a different research goal: description, exploration, explanation, or evaluation. Be specific. Which question most interests you? Why?

Ethics Questions

Throughout the book, we will discuss the ethical challenges that arise in social research. At the end of each chapter, we ask you to consider some questions about ethical issues related to that chapter's focus. We introduce this critical topic formally in Chapter 3, but we begin here with some questions for you to ponder.

1. The chapter began with a brief description of research on social media and Internet use. What would you do if you were interviewing college students who spent lots of time online and found that some were very isolated and depressed or even suicidal, apparently as a result of the isolation? Do you believe that social researchers have an obligation to take action in a situation like this? What if you discovered a similar problem with a child? What guidelines would you suggest for researchers?
2. Would you encourage social researchers to announce their findings about problems such as social isolation in press conferences and to encourage relevant agencies to adopt policies encouraged to lessen social isolation? Should policies regarding attempts to garner publicity and shape policy depend on the strength of

the research evidence? Do you think there is a fundamental conflict between academic and policy motivations? Do social researchers have an ethical obligation to recommend policies that their research suggests would help other people?

Video Interview Questions

Listen to the researcher interview for Chapter 1 at edge.sagepub.com/chamblissmssw6e, found in the Video and Multimedia Section.

1. What are the benefits to breaking down questions in text-based interview structure?
2. As Janet Salmons mentions, one can enhance his or her research by deciding carefully on the various kinds of technology to be used. What are some of the considerations Salmons mentions in deciding whether to use text-based interviews or video conference calls?

CHAPTER 2

THE PROCESS AND PROBLEMS OF SOCIAL RESEARCH

LEARNING OBJECTIVES

1. Name the three characteristics of a good research question.
2. Define *theory*.
3. Contrast the process of research reflecting deductive reasoning with that reflecting inductive reasoning.
4. Understand why an explanation formulated after the fact is necessarily less certain than an explanation presented before the collection of data.
5. Diagram the research circle, and explain the role of replication in relation to that circle.
6. Distinguish research designs using individuals and groups, and explain their relation to the ecological and individualist fallacies.
7. Understand the differences between cross-sectional research designs and the three types of longitudinal research design.

In Chapter 1, we introduced the reasons *why* we do social research: to describe, explore, explain, and evaluate. Each type of social research can have tremendous impact. Alfred Kinsey's descriptive studies of the sex lives of Americans, conducted in the 1940s and 1950s, were at the time a shocking exposure of the wide variety of sexual practices that apparently staid, "normal" people engaged in behind closed doors, and the studies helped introduce the unprecedented sexual openness we see 70 years later (Kinsey, Pomeroy, and Martin 1948; Kinsey, Pomeroy, Martin, and Gebhard 1953). At around the same time, Gunnar Myrdal's exploratory book, *An American Dilemma* (1944/1964), forced our grandparents and great-grandparents to confront the tragedy of institutional racism. Myrdal's research was an important factor in the 1954 Supreme Court decision *Brown v. Board of Education of Topeka*, which ended school segregation in the United States. The explanatory *broken windows* theory of crime, which was developed during the 1980s by George L. Kelling and James Q. Wilson (1982), dramatically changed police practices in our major cities. The theory's usefulness in reducing crime, and on feeding controversial "stop and frisk" programs, is hotly debated both in academic journals (Sampson and Raudenbusch 1999) and on the front pages of newspapers (Goldstein 2014). Evaluative social research actively influences advertising campaigns, federal housing programs, the organization of military units (from U.S. Army fire teams to U.S. Navy submarine crews), drug treatment programs, and corporate employee benefit plans.

We now introduce the *how* of social research. In this chapter, you will learn about the process of specifying a research question, developing an appropriate research strategy and design with which to investigate that question, and choosing appropriate units of analysis. By the chapter's end, you should be ready to formulate a question, to design a strategy for answering the question, and to begin to critique previous studies that addressed the question.

WHAT IS THE QUESTION?

A **social research question** is a question about the social world that you seek to answer through the collection and analysis of firsthand, verifiable, empirical data. Questions like this may emerge from your own experience, from research by other investigators, from social theory, or from a *request for research* issued by a government agency that needs a study of a particular problem.

Social research question: A question about the social world that is answered through the collection and analysis of firsthand, verifiable, empirical data.

Some researchers of the health care system, for example, have had personal experiences as patients with serious diseases, as nurses or aides working in hospitals, or as family members touched directly and importantly by doctors and hospitals. These researchers may want to learn why our health care system failed or helped them. Feminist scholars study violence against women in hopes of finding solutions to this problem as part of a broader concern with improving women's lives. One colleague of ours, Veronica Tichenor, was fascinated by a prominent theory of family relations that argues that men do less housework than women do because men earn more money; Professor Tichenor did research on couples in which the woman made far more money than the man to test the theory. (She found, by the way, that the women still did more of the housework.) Some researchers working for large corporations or major polling firms conduct marketing studies simply to make money. So, a wide variety of motives can push a researcher to ask research questions.

A good research question doesn't just spring effortlessly from a researcher's mind. You have to refine and evaluate possible research questions to find one that is worthwhile. It's a good idea to develop a list of possible research questions as you think about a research area. At the appropriate time, you can narrow your list to the most interesting and feasible candidate questions.

What makes a research question "good"? Many social scientists evaluate their research questions in terms of three criteria: *feasibility* given the time and resources available, *social importance*, and *scientific relevance* (King, Keohane, and Verba 1994):

- Can you start and finish an investigation of your research question with available resources and in the time allotted? If so, your research question is feasible.
- Will an answer to your research question make a difference in the social world, even if it only helps people understand a problem they consider important? If so, your research question is socially important.
- Does your research question help resolve some contradictory research findings or a puzzling issue in social theory? If so, your research question is scientifically relevant.

Here's a good example of a question that is feasible, socially important, and scientifically relevant: Does arresting accused spouse abusers on the spot prevent repeat incidents? Beginning in 1981, the Police Foundation and the Minneapolis Police Department began an experiment to find the answer. The Minneapolis experiment was first and foremost scientifically relevant: It built on a substantial body of contradictory theory regarding the impact of punishment on criminality (Sherman and Berk 1984). Deterrence theory predicted that arrest would deter individuals from repeat offenses, but labeling theory predicted that arrest would make repeat offenses more likely. The researchers found one prior experimental study of this issue, but it had been conducted with juveniles. Studies among adults had not yielded consistent findings. Clearly, the Minneapolis researchers had good reason for conducting a study.

As you consider research questions, you should begin the process of consulting and then reviewing the published literature. Your goal here and in subsequent stages of research should be to develop a research question and specific expectations that build on prior research and to use the experiences of prior researchers to chart the most productive directions and design the most appropriate methods. Appendix A describes how to search the literature, and Chapter 13 includes detailed advice for writing up the results of your search in a formal review of the relevant literature.

WHAT IS THE THEORY?

Theory:
A logically interrelated set of propositions about empirical reality.

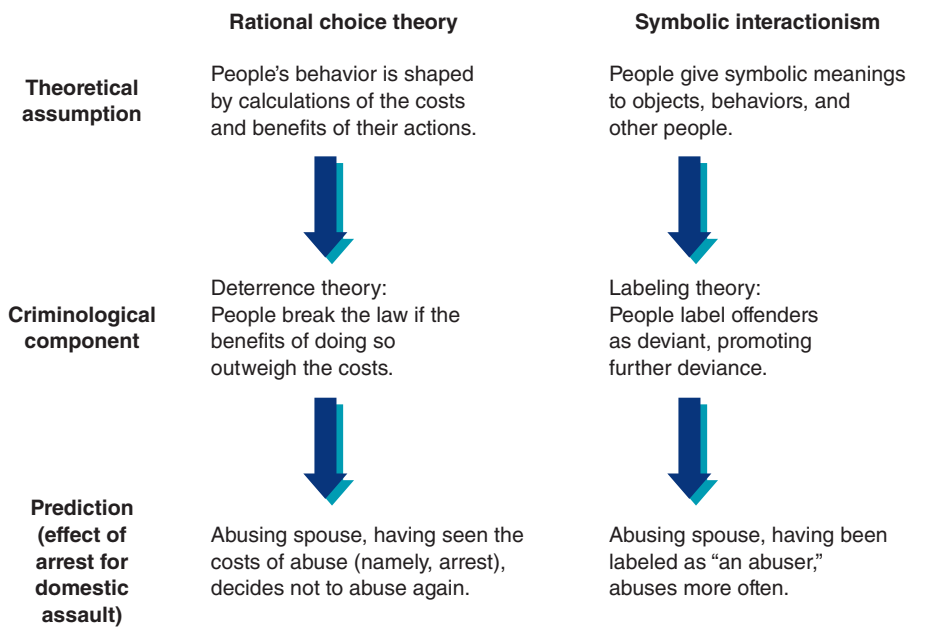
Theories have a special place in social research because they help us make connections to general social processes and large bodies of research. Building and evaluating theory is, therefore, one of the most important objectives of social science. A social **theory** is a logically interrelated set of propositions about empirical reality (i.e., the social world as it actually exists). You may know, for instance,

about conflict theory, which proposes that (1) people are basically self-interested, (2) power differences between people and groups reflect the different resources available to groups, (3) ideas (religion, political ideologies, etc.) reflect the power arrangements in a society, (4) violence is always a potential resource and the one that matters most, and so on (Collins 1975). These statements are related to each other, and the sum of conflict theory is a sizable collection of such statements (entire books are devoted to it). Dissonance theory in psychology, deterrence theory in criminology, and labeling theory in sociology are other examples of social theories.

Social theories suggest the areas on which we should focus and the propositions that we should consider testing. For example, Lawrence Sherman and Richard Berk's (1984) domestic violence research in the Minneapolis spouse abuse experiment was actually a test of predictions that they derived from two varying theories on the impact of punishment on crime (Exhibit 2.1).

Deterrence theory expects punishment to deter crime in two ways. General deterrence occurs when people see that crime results in undesirable punishments—that "crime doesn't pay." The persons who are punished serve as examples of what awaits those who engage in proscribed acts. Specific deterrence occurs when persons who are punished decide not to commit another offense so they can avoid further punishment (Lempert and Sanders 1986: 86–87). Deterrence theory leads to the prediction that arresting spouse abusers will lessen their likelihood of reoffending.

Exhibit 2.1 /// Two Social Theories and Their Predictions About the Effect of Arrest on Domestic Assault



Source: Data from Sherman, Lawrence W., and Richard A. Berk. 1984. The specific deterrent effects of arrest for domestic assault. *American Sociological Review* 49: 267.

Labeling theory distinguishes between primary deviance, the acts of individuals that lead to public sanction, and secondary deviance, the deviance that occurs in response to public sanction (Hagan 1994: 33). Arrest or some other public sanction for misdeeds labels the offender as deviant in the eyes of others. Once the offender is labeled, others will treat the offender as a deviant, and the offender is then more likely to act in a way that is consistent with the deviant label. Ironically, the act of punishment stimulates more of the very behavior that it was intended to eliminate. This theory suggests that persons arrested for domestic assault are more likely to reoffend than are those who are not punished, which is the reverse of the deterrence theory prediction.

How do we find relevant social theory and prior research? You may already have encountered some of the relevant material in courses pertaining to research questions that interest you, but that won't be enough. The social science research community is large and active, and new research results appear continually in scholarly journals and books. The World Wide Web contains reports on some research even before it is published in journals (like some of the research reviewed in Chapter 1). Conducting a thorough literature review in library sources and checking for recent results on the web are essential steps for evaluating scientific relevance. (See Appendix A for instructions on how to search the literature and the web.)

Deductive research: The type of research in which a specific expectation is deduced from a general premise and is then tested.

Inductive research: The type of research in which general conclusions are drawn from specific data.

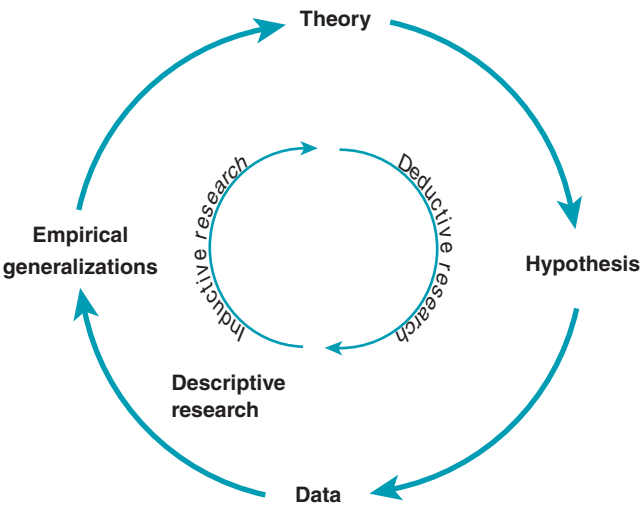
Research circle: A diagram of the elements of the research process, including theories, hypotheses, data collection, and data analysis.

WHAT IS THE STRATEGY?

When conducting social research, we try to connect theory with empirical data—the evidence we obtain from the real world. Researchers may make this connection in one of two ways:

1. By starting with a social theory and then testing some of its implications with data. This is called **deductive research**; it is most often the strategy used in quantitative methods.
2. By collecting the data and then developing a theory that explains the data. This **inductive research** process is typically used with qualitative methods.

Exhibit 2.2 /// The Research Circle



A research project can use both deductive and inductive strategies. Let's examine the two different strategies in more detail. We can represent both within what is called the **research circle**.

Deductive Research

In deductive research, we start with a theory and then try to find data that will confirm or deny it. Exhibit 2.2 shows how deductive research starts with a theoretical premise and logically *deduces* a specific expectation. Let's begin with an example of a theoretical idea:

In the News

Research in the News

Control and Fear: What Mass Killings and Domestic Violence Have in Common

The June 2016 Pulse nightclub massacre in Orlando, Florida, was committed by a man, Omar Mateen, who had beaten his wife severely until she left him in 2009. FBI data reveal that a family member of the perpetrator was one of the victims in 57% of mass shootings, and social science research suggests that a desire for extreme control is a common factor in "intimate terrorism" and mass terrorism.

For Further Thought

1. Does the proposal that these two forms of violence may stem from a similar underlying orientation make sense to you? Why or why not?
2. What type of research could improve understanding of this possible link between domestic and mass violence?

News Source: Taub, Amanda. 2016. Control and fear: What mass killings and domestic violence have in common. *New York Times*, June 15.

When people have emotional and personal connections with coworkers, they will be more committed to their work. We could extend this idea to college life by deducing that if students know their professors well, they will be more engaged in their work. And from this, we can deduce a more specific expectation—or hypothesis—that smaller classes, which allow more student–faculty contact, will lead to higher levels of engagement. Now that we have a hypothesis, we can collect data on levels of engagement in small and large classes and compare them. We can't always directly test the general theory, but we can test specific hypotheses that are deduced from it.

A **hypothesis** states a relationship between two or more **variables**—characteristics or properties that can vary, or change. Classes can be large, like a 400-student introductory psychology course, or they can be small, like an upper-level seminar. Class size is thus a variable. And hours of homework done per week can also vary (obviously); you can do 2 hours or 20 hours. So, too, can engagement vary, as measured in any number of ways. (Nominal designations such as religion are variables, too, because they can vary among Protestant, Catholic, Jew, etc.)

Hypothesis: A tentative statement about empirical reality involving a relationship between two or more variables. *Example:* The higher the poverty rate is in a community, the higher the percentage will be of community residents who are homeless.

Variable: A characteristic or property that can vary (take on different values or attributes). *Examples:* poverty rate, percentage of community residents who are homeless.

But a hypothesis doesn't just state that there is a connection between variables; it suggests that one variable actually influences another—that a change in the first one somehow propels (or predicts, influences, or causes) a change in the second. It says that *if* one thing happens, *then* another thing is likely: *If* you stay up too late, *then* you will be tired the next day. *If* you smoke cigarettes for many years, *then* you are more likely to develop heart disease or cancer. *If* a nation loses a major war, *then* its government is more likely to collapse. And so on.

So in a hypothesis, we suggest that one variable influences another—or that the second in some ways "depends" on the first. We may believe, again, that students' reported enthusiasm for a class "depends" on the size of the class. Hence, we call

enthusiasm the dependent variable—the variable that *depends* on another, at least partially, for its level. If cigarettes damage your health, then health is the dependent variable; if lost wars destabilize governments, then government stability is the dependent variable.

Dependent variable: A variable that is hypothesized to vary depending on or under the influence of another variable. *Example:* percentage of community residents who are homeless.

Independent variable: A variable that is hypothesized to cause, or lead to, variation in another variable. *Example:* poverty rate.

Direction of association: A pattern in a relationship between two variables—that is, the value of a variable tends to change consistently in relation to change in the other variable. The direction of association can be either positive or negative.

The predicted result in a hypothesis, then, is called the **dependent variable**. And the hypothesized cause is called the **independent variable** because in the stated hypothesis, it doesn't depend on any other variable. For instance, if we hypothesize that poverty leads to homelessness, then the poverty rate would be the independent variable, and the homeless rate would be the dependent variable.

These terms—*hypothesis, variable, independent variable*, and *dependent variable*—are used repeatedly in this book and are widely used in all fields of natural and social science, so they are worth knowing well!

You may have noticed that sometimes an increase in the independent variable leads to a corresponding increase in the dependent variable; in other cases, it leads to a decrease. An increase in your consumption of fatty foods will often lead to a corresponding increase in the cholesterol levels in your blood. But an increase in cigarette consumption leads to a decrease in health. In the first case, we say that the **direction of association** is positive; in the second, we say it is negative. Either way, you can clearly see that a change in one variable leads to a predictable change in the other.

In both explanatory and evaluative research, you should say clearly what you expect to find (your hypothesis) and design your research accordingly to test that hypothesis. Doing this strengthens the confidence we can place in the results. So the deductive researcher (to use a poker analogy) states her expectations in advance, shows her hand, and lets the chips fall where they may. The data are accepted as a fair picture of reality.

Domestic Violence and the Research Circle

The Sherman and Berk (1984) study of domestic violence is a good example of how the research circle works. Sherman and Berk's study was designed to test a hypothesis based on deterrence theory: Arrest for spouse abuse reduces the risk of repeat offenses. In this hypothesis, arrest or release is the independent variable, and variation in the risk of repeat offenses is the dependent variable (it is hypothesized to depend on arrest).

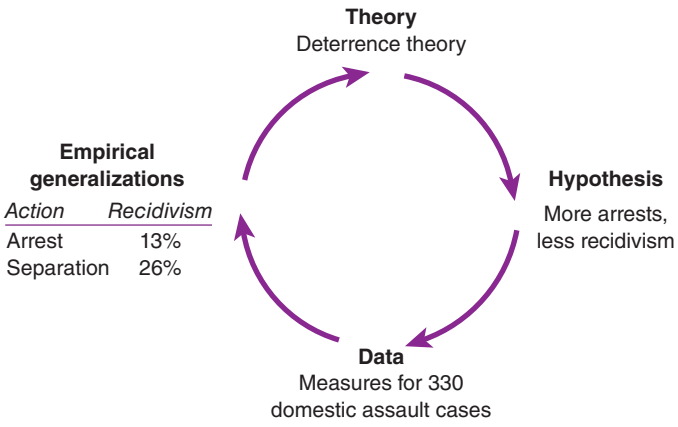
Sherman and Berk (1984) tested their hypothesis by setting up an experiment in which the police responded to complaints of spouse abuse in one of three ways, one of which was to arrest the offender. When the researchers examined their data (police records for the persons in their experiment), they found that of those arrested for assaulting their spouse, only 13% repeated the offense, compared with a 26% recidivism rate for those who were separated from their spouse by the police but were not arrested. This pattern in the data, or empirical generalization, was consistent with the hypothesis that the researchers deduced from deterrence theory. The theory thus received support from the experiment (Exhibit 2.3).

Inductive Research

In contrast to deductive research, inductive research begins with specific data, which are then used to develop (*induce*) a theory to account for the data. (Hint: When you start *in* the data, you are doing inductive research.)

One way to think of this process is in terms of the research circle. Rather than starting at the top of the circle with a theory, the inductive researcher starts at the bottom of the circle with data and then moves up to a theory. Some researchers committed to an inductive approach even resist formulating a research question before they begin to collect data. Their technique is to let the question emerge from the social situation itself (Brewer and Hunter 1989: 54–58). In the research for his book *Champions: The Making of Olympic Swimmers*, Dan Chambliss (1988) spent several years living and working with world-class competitive swimmers who were training for the Olympics. Chambliss entered the research with no definite hypotheses and certainly no developed theory about how athletes became successful, what their lives were like, or how they related to their coaches and teams. He simply wanted to understand who these people were, and he decided to report on whatever struck him as most interesting in his research.

Exhibit 2.3 /// The Research Circle: Minneapolis Domestic Violence Experiment



As it turned out, what Chambliss learned was not how special these athletes were but actually how ordinary they were. Becoming an Olympic athlete was less about innate talent, special techniques, or inspired coaching than it was about actually paying attention to all the little things that make one perform better in one's sport. His theory was *induced* from what he learned in his studies (Chambliss 1988) while being immersed *in* the data.

Research That Matters

The Sherman and Berk domestic violence study did not, however, end the debate about how best to respond to incidents. By the 1990s, the Charlotte-Mecklenburg (North Carolina) Police Department (CMPD) had been responding to reports of violence against intimate partners by arresting many of the suspects. Unfortunately, 6 months after the arrests, it appeared that suspects who had been arrested were just as likely to reoffend as were those who were simply advised to cool off. In 1995, the CMPD decided to try a different approach to domestic violence cases. CMPD developed a special domestic violence unit that took a comprehensive team approach to investigating cases and assisting victims. Professors M. Lyn Exum, Jennifer L. Hartman, Paul C. Friday, and Vivian B. Lord, at the University of North Carolina in Charlotte, set out to see if this approach worked. They checked the arrest records of 891 domestic violence cases to see if suspects processed through the special unit were less likely to reoffend than were those who were processed with standard police practices. Exum and her colleagues found that 29.3% of the suspects processed by the domestic violence unit reoffended, compared with 36.9% of those processed by a standard police patrol unit. There was a little, but not much, difference.

Source: Adapted from Exum, M. Lyn, Jennifer L. Hartman, Paul C. Friday, and Vivian B. Lord. 2010. Policing domestic violence in the post-SARP era: The impact of a domestic violence police unit. *Crime & Delinquency* 20(10): 1–34.

Inductive reasoning: The type of reasoning that moves from the specific to the general.

Anomalous: Unexpected patterns in data that do not seem to fit the theory being proposed.

Serendipitous: Unexpected patterns in data, which stimulate new ideas or theoretical approaches.

Research designed using an inductive approach, as in Chambliss's study, can result in new insights and provocative questions. **Inductive reasoning** also enters into deductive research when we find unexpected patterns in data collected for testing a hypothesis. Sometimes such patterns are **anomalous**, in that they don't seem to fit the theory being proposed, and they can be **serendipitous**, in that we may learn exciting, surprising new things from them. Even if we do learn inductively from such research, the adequacy of an explanation formulated after the fact is necessarily less certain than an explanation presented before the collection of data. Every phenomenon can always be explained in some way. Inductive explanations are more trustworthy if they are tested subsequently with deductive research. Great insights and ideas can come from inductive studies, but verifiable proof comes from deductive research.

An Inductive Study of Response to a Disaster

Qualitative research is often inductive: To begin, the researcher observes social interaction or interviews social actors in depth, and then develops an explanation for what has been found. The researchers often ask such questions as these: What is going on here? How do people interpret these experiences? Why do people do what they do? Rather than testing a hypothesis, the researchers try to make sense of some social phenomenon.

In 1972, for example, towns along the 17-mile Buffalo Creek hollow (a long, deep valley among mountains) in West Virginia were wiped out when a dam at the top of the hollow broke, sending 132 million gallons of water, mud, and garbage crashing down through the towns that bordered the creek. After the disaster, sociologist Kai Erikson went to the Buffalo Creek area and interviewed survivors. In the resulting book, *Everything in Its Path*, Erikson (1976) described the trauma suffered by those who survived the disaster. His explanation of their psychological destruction—an explanation that grew out of his interviews with the residents—was that people were traumatized not only by the violence of what had occurred but also by the "destruction of community" that ensued during the recovery efforts. Families were transplanted all over the area with no regard for placing them next to their former neighbors. Extended families were broken up in much the same way, as federal emergency housing authorities relocated people with little concern for whether they knew the people with whom they would be housed. Church congregations were scattered, lifelong friends were resettled miles apart, and entire neighborhoods simply vanished, both physically—that is, their houses were destroyed—and socially. Erikson's explanation grew out of his in-depth immersion in his data—the conversations he had with the people themselves.

Inductive explanations such as Erikson's feel authentic because we hear what people have to say in their own words and we see the social world as they see it. These explanations are often richer and more finely textured than are those in deductive research; however, they are probably based on fewer cases and drawn from a more limited area.

Descriptive Research: A Necessary Step

Both deductive and inductive research move halfway around the research circle, connecting theory with data. Descriptive research does not go that far, but it is still part of the research circle shown earlier in Exhibit 2.2. Descriptive research

starts with data and proceeds only to the stage of making empirical generalizations; it does not generate entire theories.

Valid description is actually critical in all research. The Minneapolis Domestic Violence Experiment was motivated partly by a growing body of descriptive research indicating that spouse abuse is very common: 572,000 reported cases of women victimized by a violent partner each year; 1.5 million women (and 500,000 men) requiring medical attention each year from a domestic assault (Buzawa and Buzawa 1996: 1–3).

Much important research for the government and private organizations is primarily descriptive: How many poor people live in this community? Is the health of the elderly improving? How frequently do convicted criminals return to crime? Description of social phenomena can stimulate more ambitious deductive and inductive research. Simply put, good description of data is the cornerstone for the scientific research process and an essential component of understanding the social world.

WHAT IS THE DESIGN?

Researchers usually start with a question, although some begin with a theory or a strategy. If you're very systematic, the *question* is related to a *theory*, and an appropriate *strategy* is chosen for the research. All of these, you will notice, are critical defining issues for the researcher. If your research question is trivial (How many shoes are in my closet?), or your theory sloppy (More shoes reflect better fashion sense), or your strategy inappropriate (I'll look at lots of shoes and see what I learn), the project is doomed from the start.

But let's say you've settled these first three elements of a sound research study. Now we must begin a more technical phase of the research: the design of a study. From this point on, we will be introducing a number of terms and definitions that may seem arcane or difficult. In every case, though, these terms will help you clarify your thinking. Like exact formulae in an algebra problem or precisely the right word in an essay, these technical terms help, or even require, scientists to be absolutely clear about what they are thinking—and to be precise in describing their work to other people.

An overall research strategy can be implemented through several different types of research design. One important distinction between research designs is whether data are collected at one point in time—a **cross-sectional research design**—or at two or more points in time—a **longitudinal research design**. Another important distinction is between research designs that focus on individuals—the **individual unit of analysis**—and those that focus on groups, or aggregates of individuals—the **group unit of analysis**.

Cross-sectional research design:
A study in which data are collected at only one point in time.

Longitudinal research design:
A study in which data are collected that can be ordered in time; also defined as research in which data are collected at two or more points in time.

Individual unit of analysis:
A unit of analysis in which individuals are the source of data and the focus of conclusions.

Group unit of analysis:
A unit of analysis in which groups are the source of data and the focus of conclusions.

Cross-Sectional Designs

In a cross-sectional design, all of the data are collected at one point in time. In effect, you take a *cross-section*—a slice that cuts across an entire population—and use that to see all the different parts, or sections, of that population. Imagine cutting out a slice of a tree trunk, from bark to core. In looking at this cross-section, one can see all the different parts, including the rings of the tree. In social research,

you might do a cross-sectional study of a college's student body, with a sample that includes freshmen through seniors. This "slice" of the population, taken at a single point in time, allows one to compare the different groups.

But cross-sectional studies, because they use data collected at only one time, suffer from a serious weakness: They don't directly measure the impact of time. For instance, you may see that seniors at your college write more clearly than do freshmen. You might conclude, then, that the difference is because of what transpired over time, that is, what they learned in college. But it might actually be because this year's seniors were recruited under a policy that favored better writers. In other words, the cross-sectional study doesn't distinguish if the seniors have learned a lot in college or if they were just better than this year's freshmen when they first enrolled.

Or let's say that in 2015, you conduct a study of the U.S. workforce and find that older workers make more money than younger workers do. You may conclude (erroneously) that as one gets older, one makes more money. But you didn't actually observe that happening because you didn't track actual people over time. It *may* be that the older generation (say, people born in 1965) have just enjoyed higher wages all along than have people born in 1985.

With a cross-sectional study, we can't be sure which explanation is correct, and that's a big weakness. Of course, we could ask workers what they made when they first started working, or we could ask college seniors what test scores they received when they were freshmen, but we are then injecting a *longitudinal* element into our cross-sectional research design. Because of the fallibility of memory and the incentives for distorting the past, taking such an approach is not a good way to study change over time.

Longitudinal Designs

In longitudinal research, data are collected over time. By measuring independent and dependent variables at each of several different times, the researcher can determine whether change in the independent variable actually precedes change in the dependent variable—that is, whether the hypothesized cause comes before the effect, as a true cause must. In a cross-sectional study, when the data are all collected at one time, you can't really show if the hypothesized cause occurs first; in longitudinal studies, though, you can see if a cause occurs and then, later in time, an effect occurs. So if possible to do, longitudinal research is always preferable.

But collecting data more than once takes time and work. Often researchers simply cannot, or are unwilling to, delay completion of a study for even 1 year to collect follow-up data. In student research projects, longitudinal research is typically not possible because you have to finish up the project quickly. Still, many research questions really should have a long follow-up period: What is the impact of job training on subsequent employment? How effective is a school-based program in improving parenting skills? Under what conditions do traumatic experiences in childhood result in later mental illness? The value of longitudinal data is great, so every effort should be made to develop longitudinal research designs whenever they are appropriate.

Three basic research designs are shown in Exhibit 2.4. The first is a simple *cross-sectional* design; it is not longitudinal.

Exhibit 2.4 /// Three Types of Research Designs

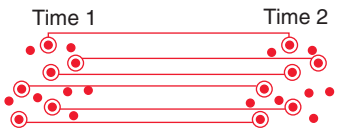
1. Cross-Sectional Design

One sample drawn at *one* time (not longitudinal).

2. Trend (or "Repeated Cross-Sectional") Design

At least two samples, drawn *at least two* different times (longitudinal).

3. Panel Design



One sample, measured *at least two* different times (longitudinal).

The second is a cross-sectional study that is then *repeated* at least once; therefore, this approach is referred to as a *repeated cross-sectional* or a *trend* design because it can capture trends over time; it is longitudinal. The frequency of the follow-up measurements can vary, ranging from a simple before-and-after design with just one follow-up to studies in which various indicators are measured every month for many years. In such trend studies, members of the sample are rotated or completely replaced each time a measurement is done.

The third design, also longitudinal, is called a *panel* study. A panel study uses a single sample that is studied at multiple points across time; the same people, for instance, will be asked questions on multiple occasions, so researchers can learn how they change and develop as individuals.

Let's consider the longitudinal designs to see how they are done and what their strengths and weaknesses are.

Trend Designs

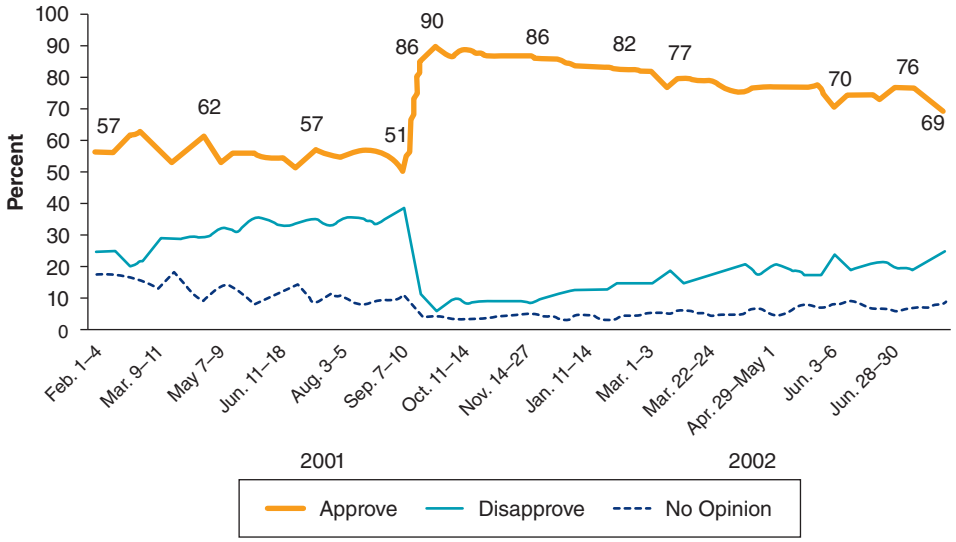
Trend (repeated cross-sectional) designs are conducted as follows:

Trend (repeated cross-sectional) design: A longitudinal study in which data are collected at two or more points in time from different samples of the same population.

1. A sample is drawn from a population at Time 1, and data are collected from the sample.
2. As time passes, some people leave the population and others enter it.
3. At Time 2, a different sample is drawn from this population.

The Gallup polls, begun in the 1930s, are a well-known example of trend studies. One Gallup poll, for instance, asks people how well they believe the U.S. president

Exhibit 2.5 /// George W. Bush Approval Ratings, Before and After Sept. 11, 2001: A Trend Study by the Gallup Organization



Source: Gallup Organization. 2002, August 20. *Poll analyses, July 29, 2002. Bush job approval update.*

is doing his job (Exhibit 2.5). Every so often, the Gallup organization takes a sample of the U.S. population (usually about 1,400 people) and asks them this question. Each time, Gallup researchers ask a different, though roughly demographically equivalent, group of people the question; they aren't talking to the same people every time. That is, they can see when support for presidents is high and when it is low, in general. This is a trend study. Exhibit 2.5 shows the dramatic increase in the public's approval rating of President George W. Bush following the September 11, 2001, World Trade Center attacks. In the entire history of Gallup polls, this is the single biggest approval increase ever recorded for an American president.

When the goal is to determine whether a population (not necessarily individuals) has changed over time, trend (or "repeated cross-sectional") designs are appropriate. Has support for gay marriage increased among Americans in the past 20 years? Are employers more likely to pay maternity benefits today than they were in the 1950s? Are college students today more involved in their communities than college students were 10 years ago? These questions concern changes in populations as a whole, not changes in individuals.

Panel Designs

Panel design: A longitudinal study in which data are collected from the same individuals—the panel—at two or more points in time.

When we need to know whether specific individuals in a population have changed, we must turn to a **panel design**. For their book *How College Works* (2014), Dan Chambliss and Chris Takacs selected a panel of 100 random students entering college in 2001. Each of those students was interviewed once a year for each of their 4 years in college; then they were interviewed every 2 years after graduation until 2010. The goal was to determine which experiences in their college career were valuable and which were a hindrance to their education. By