"A key strength of the Bachman & Schutt text is that multiple learning style models are incorporated in the book that advance the learning needs of students."

—**Deborah Baskin**, *Loyola University Chicago*

Fundamentals of Research in Criminology and Criminal Justice, Fourth Edition, introduces students to the multifaceted subject of research methods and shows them why research is important in the field of criminology and criminal justice. This brief version of Bachman and Schutt's successful textbook *The Practice of Research in Criminology and Criminal Justice* simplifies complex concepts with real-world research examples found in everyday experiences in the criminology and criminal justice professions.

The thoroughly updated **Fourth Edition** of this bestseller reflects the most recent developments in research methods, including the use of big data, increased coverage of crime mapping, evidence-based and web-based research, along with the most current research examples impacting the field. This is an excellent introductory text for undergraduate research courses, and is ideal for students who want to understand how and why criminal justice research is done to become critical consumers of research.

New to the Fourth Edition

- **New sections reflecting recent developments in research methods ethics** include additional considerations needed when doing research with children and prisoners, as well as contemporary examples of covert participation research to highlight the ethical dilemmas encountered when informed consent would compromise the research objectives.
- **Updated examples of criminological research as they occur in real-world settings** capture students' attention with interesting studies taken from the literature on a variety of topics, including the effects of incarceration on employment, the effects of police body cameras on both police and citizen injury, the perceptions of citizens regarding police misconduct, and an investigation into the lives of gang members.
- **Increased focus on international research** introduces students to the expanded use of research conducted in countries around the world as well as global issues involving race, ethnicity, gender, and culture.
- **New *Careers and Research* stories in every chapter** highlight the career of a criminal justice professional who has used the methods discussed to show students how research impacts a variety of professions.
- **New *Research in the News* sections** engage students with recent headlines in the news to illustrate how research informs media stories and the impact research has on researchers and practitioners in criminal justice, as well as society as a whole.
- **End-of-chapter video exercises** take students to the Study Site to watch entertaining videos about the methods being presented in the chapter and then answer questions to ensure they understand the method.

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Bachman / Schutt Fundamentals of Research in CRIMINOLOGY AND CRIMINAL JUSTICE 4e

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4th EDITION

Fundamentals of Research in CRIMINOLOGY AND CRIMINAL JUSTICE

Ronet D. Bachman
Russell K. Schutt

Fourth Edition

In memory of my mother, Jan, who was my friend, teacher, mentor in all things that mattered, and role model—from her, I learned the importance of kindness and grace.

R. D. B.

To Elizabeth and Julia

R. K. S.

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.

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Fourth Edition

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After years of teaching courses in research methods, we have found that the best forum for learning is to link the teaching of key topics to contemporary research in the discipline. By combining discussions of research techniques with practical research examples from the field, students learn not only how to conduct research but also why it is important to do so. In the fourth edition of *Fundamentals of Research in Criminology and Criminal Justice*, we have drawn on comments by students in the classroom, insightful reviews by those who teach research methods, and our own continuing learning experience as scholars and teachers; we think the resulting innovations will add a great deal to your learning experience. We have retained our unique method of "instruction by example" that is used in our more comprehensive text, *The Practice of Research in Criminology and Criminal Justice*. We believe this approach not only increases students' understanding of complex research methods but also conveys to students the vital role that research plays in our discipline.

The purpose of this book is to introduce students to the basics of scientific methods of research and show how they are actually used. Each chapter in this book combines instruction in research methods with investigations of key research questions in our field: What are the causes of violent crime? What is the best police response to intimate partner violence? How do gang members perceive their world? Does wearing body cameras affect police and citizen rates of injury? Do community police officers perceive their roles as different from regular patrol officers? These and many other research questions are explored through the text in tandem with a discussion of research methods. These substantive examples will help you see how research methods are used in practice.

By the end of the course, students will not only have the ability to conduct research but also be more adept consumers of knowledge claims about "truth" that bombard us on a daily basis. We are careful to describe the benefits and liabilities of each major approach to research and emphasize why employing a combination of them is often preferable to a single-method approach. Students will come to appreciate why the results of particular research studies must always be interpreted within the context of prior research and through the lens of social and criminological theory. Extensive exercises are provided at the end of each chapter that allow students to engage in different research tasks both individually and within groups.

The way this book is organized reflects our beliefs in making research methods interesting, teaching students how to critique research, and viewing specific research techniques as parts of an integrated research strategy. Our concern with ethical issues in all types of research is underscored by the fact that we have a chapter devoted exclusively to research ethics in addition to sections on ethics in every methodology chapter. The first two chapters introduce the why and how of research in general. Chapter 1 shows how research has helped us understand the magnitude of and the factors related to youth violence. It also introduces you to different research philosophies and how these philosophies affect both our research questions and the appropriate methods for answering them. Chapter 2 illustrates the basic stages of research with a series of experiments on the police response to intimate partner violence. Chapter 3 highlights issues of research ethics by taking you inside Philip Zimbardo's prison experiment and Stanley Milgram's research on obedience to authority. Chapters 4 and 5 discuss how to evaluate the way researchers design their measures and draw their samples. Chapter 6 explores issues related to making causal connections and provides a summary of the strengths and limitations of various research designs in making causal conclusions. It offers a detailed discussion of how true experimental designs are the gold standard when making causal inferences.

Chapters 7 and 8 present the other important methods of data collection: surveys and qualitative methods (including participant observation, systematic observation, intensive interviews, and focus groups). Chapter 9 examines methodologies that rely on existing content and includes a discussion of secondary data analysis, comparative methods, content analysis, and an expanded discussion of crime mapping and a new section on the use of Big Data. Chapter 10 covers evaluation research and policy analysis and highlights the different alternatives to evaluation along with a discussion of the most appropriate methods to use for each evaluation question (e.g., process vs. impact). In this chapter, you will see how various methods have been used to investigate the effects of several programs and policies, including problem-oriented policing and the use of body cameras by law enforcement officers. You will also see why "evidence-based" policy is increasingly in demand and that applied research represents an increasing proportion of all studies conducted in the criminological sciences.

Within each of the methods chapters, there are examples of studies that have used mixed methods. However, because researchers are increasingly combining methods, Chapter 11 provides an overview of the philosophy and motivation for combining methods, the various techniques for doing so, and some exciting research examples to demonstrate the fruitfulness of such multiple methods projects. We finish up in Chapter 12 with an overview of the process of and techniques for reporting research results along with some ethical problems in writing.

In each chapter, we have retained the substantive case studies to show how each methodology has been used to improve our understanding of criminal justice–related issues, including the factors related to violence, how question wording affects estimates of victimization in surveys, how gang members perceive their world, how community police officers describe their role in comparison with regular patrol officers, the perceptions of jurors who have participated in a death penalty case, the effects of inmates' classification on institutional misconduct in prison, and the effects of poverty on homicide in a cross-national comparison, to name just a few of the examples provided.

The fourth edition of *Fundamentals of Research in Criminology and Criminal Justice* retains the strengths of the other versions of our other methods textbooks while breaking new ground with newly popular research methods, enhanced tools for learning in the text and online, and contemporary, fascinating research findings. We have reorganized the chapters to better connect related techniques, along with new pedagogical learning aids at the end of each chapter and on our Student Study Site. The other distinctive feature of this text compared to others in the field continues to be the integration into each chapter of in-depth substantive research examples from the real world highlighting researchers' decision-making processes in their own words. Examples from the literature are not simply dropped here and there to keep students' attention. Rather, each chapter presents a particular research method in the context of a substantive research story. This serves several purposes: It illustrates the process of research in the real world, it underscores why particular methods were selected over others, and it highlights the important role research plays in policy decisions in our field. As such, this book's success is due in no small measure to the availability of so many excellent research examples in our discipline. New examples of research have been added in all data collection chapters. The following points are additional strengths of this text, along with a few of the new innovations in this edition:

Instead of being discussed across two chapters, Chapter 1 now streamlines the discussion of positivist and interpretivist research philosophies that incorporates how these different philosophical assumptions often lead to different research questions. This provides the foundation for our overview of quantitative and qualitative research methods and why using mixed methods may sometimes provide the alternative to both.

We've added new sections in the ethics chapter on the additional considerations needed when doing research with children and prisoners. We

have also added some contemporary examples of covert participation research that highlights the ethical dilemmas encountered when informed consent would compromise the research objectives. We have also completely revised the survey methods chapter to illustrate questionnaire design using the Bureau of Justice Statistics' National Crime Victimization Survey and the Centers for Disease Control and Prevention's National Intimate Partner and Sexual Violence Survey as case studies. We also have expanded our section on crime mapping in Chapter 9 and have added a section that introduces the use of Big Data and how Big Data are being used to prevent both recidivism and crime by criminal justice agencies. Other chapters have been updated to reflect increased attention to the Internet as an avenue for research, including electronic surveys, growing reliance on smartphones, use of social media, and use of the Internet in qualitative research techniques.

We have incorporated contemporary and interesting studies taken from the literature on a variety of topics, including the effects of incarceration on employment, the effects of police body cameras on injuries sustained by police and citizens, the perceptions of citizens regarding police misconduct, and an investigation into the lives of gang members, to name just a few. These real-world research examples illustrate the exigencies and complexities that shape the application of research methods.

We have expanded our use of research conducted in countries around the globe as well as continuing our focus on issues involving diversity in race, ethnicity, gender, and culture within the United States and in other countries.

A new feature in each chapter highlights the career of a researcher who has used the methods discussed. Researchers include those with bachelor's, master's, and PhD degrees who are now working in the field. What better incentive to study hard and master these methods!

We have updated these boxes in each chapter that highlight the research that has made headlines in the news to illustrate the impact of our research not just for researchers and practitioners in criminal justice but also on society as a whole.

Updated "Research in the News" highlights in each chapter show how research informs media stories, with two questions to help you think about the methodological issues. End-of-chapter exercises now include two questions that refer to a chapter-specific video posted on the Study Site, in which researchers discuss their experiences with a method presented in that chapter. New empirical datasets are now included in the Study Site and each chapter contains new SPSS or Excel exercises that correspond to the chapter material. Subsets of data are posted in the study site, with the 2013 Youth Risk Behavior Survey, 2014 General Social Survey, 2013 Monitoring the Future Data, National Crime Victimization Survey lone offender assault data for 1992 through 2013, and a 2012 state-level dataset with social and crime indicators.

The many effective study aids included in the previous editions have been updated as needed. Lists of main points and key terms provide quick summaries at the end of each chapter. In addition, key terms are highlighted in boldface type when first introduced and defined in text. Definitions for these also can be found in the glossary/index at the end of the book.

It is a privilege to share with you the results of excellent research related to criminal justice and criminology. If this book communicates the excitement of research and the importance of evaluating carefully the methods we use in research, then we have succeeded in representing what social scientists interested in issues related to criminal justice and criminology do. We think it conveys the latest developments in research methodology and thereby demonstrates that researchers are committed to evaluating and improving their own methods of investigation.

We hope you enjoy learning how to investigate research questions related to criminal justice and criminology and perhaps do some research of your own along the way. We guarantee that the knowledge you develop about research methods will serve you well throughout your education, in your career, and in your community.

This web-based Student Study Site (available at https://study.sagepub.com/bachmanfrccj4e) provides a variety of additional resources to enhance students' understanding of the book content and take their learning one step further. The site includes quizzes, e-flashcards, a "Learning from SAGE Journal Articles" feature, exercises, podcasts, videos, real data related to criminal justice and criminology (detailed above), and appendices on how to use SPSS and Excel and how to use a qualitative analysis package. There is also an appendix on conducting descriptive data analysis.

A password-protected instructor teaching site is available at https://study.sagepub.com/bachmanfrccj4e. It offers a variety of resources to supplement the book material, including lecture notes, PowerPoint slides, test questions with answers, and student project ideas. The site also contains SAGE journal articles, podcasts, videos, Web resources, and articles on teaching criminal justice research methods.

To carry out the SPSS exercises at the end of each chapter, you must have SPSS installed on your computer. The Student Study Site includes several subsets of data that are listed above. Appendix C will get you up and running with SPSS for Windows, as will Appendix E with Excel. You then may spend as much time as you like exploring the datasets provided or you may even use your own data. You also may carry out analyses of the General Social Survey at the University of California, Berkeley, website (http://sda.berkely.edu/archive.htm).

*SPSS is a registered trademark of International Business Machines Corporation.

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We continue to be indebted to the many students we have had an opportunity to teach and mentor at both the undergraduate and graduate levels. In many respects, this book could not have been written without these ongoing reciprocal teaching and learning experiences. You inspire us to become better teachers!

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Russ would like to thank his wife, Elizabeth Schneider Schutt, and daughter, Julia. They have provided love, support, patience, and remarkable joy in my life.

, PhD, is a professor in the Department of Sociology and Criminal Justice at the University of Delaware. She is coauthor of *Statistical Methods for Crime and Criminal Justice* (3rd ed.) and coeditor of *Explaining Crime and Criminology: Essays in Contemporary Criminal Theory.* In addition, she is author of *Death and Violence on the Reservation,* coauthor of *Stress, Culture, and Aggression in the United States* and *Violence: The Enduring Problem,* as well as numerous articles and papers that examine the epidemiology and etiology of violence, with a particular emphasis on women, the elderly, and minority populations. Her most recent federally funded research was a mixed-methods study that investigated the long-term trajectories of offending behavior using official data of a prison cohort released in the early 1990s and then interviewed in 2009.

, PhD, is a professor and the chair of sociology at the University of Massachusetts, Boston, and a lecturer on sociology in the Department of Psychiatry at the Harvard Medical School (Massachusetts Mental Health Center). He completed his BA, MA, and PhD (1977) at the University of Illinois at Chicago and a postdoctoral fellowship in the Sociology of Social Control Training Program at Yale University (1977–1979). His other books include *Investigating the Social World: The Process and Practice of Research*, *Fundamentals of Social Work Research* (with Ray Engel), *Making Sense of the Social World* (with Dan Chambliss), and *Research Methods in Psychology* (with Paul G. Nestor)—all with SAGE Publications, as well as *Homelessness, Housing, and Mental Illness* (Harvard University Press) and *Social Neuroscience: Brain, Mind, and Society* (coedited with Larry J. Seidman and Matcheri S. Keshavan, also Harvard University Press). Most of his peer-reviewed journal articles and book chapters focus on the effect of social context on cognition, satisfaction, functioning, and recidivism; the orientations of service recipients and of service and criminal justice personnel; and the organization of health and social services. He is currently a coinvestigator for a randomized trial of peer support for homeless dually diagnosed veterans funded by the Veterans Administration.

CHAPTER 1

LEARNING OBJECTIVES

Describe the four common errors in everyday reasoning.

Define social science compared to pseudoscience.

Explain the motivations of social research.

Identify the four types of social research.

Explain the difference between the positivist and constructivist orientations to social research.

Understand the differences between quantitative and qualitative methods and the advantages of mixed methods.

The population of the United States all too frequently mourns the deaths of young, innocent lives taken in school shootings. The deadliest elementary school shooting took place on December 14, 2012, when a 20-year-old man named Adam Lanza walked into an elementary school in Newtown, Connecticut, armed with several semiautomatic weapons and killed 20 children and six adults. On April 16, 2007, Cho Seung-Hui perpetrated the deadliest college mass shooting by killing 32 students, faculty, and staff and left over 30 others injured on the campus of Virginia Tech in Blacksburg, Virginia. Cho was armed with two semiautomatic handguns that he had legally purchased and a vest filled with ammunition. As police were closing in on the scene, he killed himself. The deadliest high school shooting occurred on April 20, 1999, when Eric Harris and Dylan Klebold killed 12 students and a teacher before killing themselves at Columbine High School in suburban Colorado.

None of these mass murderers were typical terrorists, and each of these incidents caused a media frenzy. Headlines such as "The School Violence Crisis" and "School Crime Epidemic" were plastered across national newspapers and weekly news journals. Unfortunately, the media plays a large role in how we perceive both problems and solutions. In fact, 95% of Americans say that mass media sources such as television and newspapers are their main source of information on crime and violence (Surrette, 1998). What are your perceptions of violence committed by youth, and how did you acquire them? What do you believe are the causes of youth violence? Many factors have been blamed for youth violence in American society, including the easy availability of guns, the lack of guns in classrooms for protection, the use of weapons in movies and television, the moral decay of our nation, poor parenting, unaware teachers, school and class size, racial prejudice, teenage alienation, the Internet and the World Wide Web, anti-Semitism, and rap and rock music, and the list goes on.

You probably have your own ideas about the factors related to violence in general and youth violence in particular. However, these beliefs may not always be supported by empirical research. In fact, the factors often touted by politicians and the media to be related to violence are not always supported by empirical evidence. In the rest of this chapter, you will learn how the methods of social science research go beyond stories in the popular media to help us answer questions such as "What are the causes of youth violence?" By the chapter's end, you should understand how scientific methods used in criminal justice and criminology can help us understand and answer research questions in this discipline.

The story of just one murderous youth raises many questions. Take a few minutes to read each of the following questions and jot down your answers. Don't overthink or worry too much about the questions. This is not a test; there are no wrong answers.

How would you describe Eric Harris?

Why do you think Eric Harris wanted to kill other students?

Was Eric Harris typical of other teenage murderers?

How have you learned about youth violence?

Now let us consider the possible answers to one of these questions. The information about Eric Harris is somewhat inconsistent (Duggan, Shear, & Fisher, 1999). He was the 18-year-old son of white, middle-class professionals. He had an older brother who attended the University of Colorado. Harris apparently thought of himself as a white supremacist, but he also loved music by antiracist rock bands. On his webpage, he quoted from KMFDM, a German rock band whose song "Waste" includes these lyrics: "What I don't say I don't do. What I don't do I don't like. What I don't like I waste." Online, Harris referred to himself as "Darkness."

Do you have enough information now to understand why Eric went on a shooting rampage in his school?

A year before the shootings at Columbine High School, Harris was arrested on a felony count of breaking into a car. A juvenile court put him on probation, required him to perform community service and take criminal justice classes, and sent him to a school counseling program. He was described by one of his probation officers as a "very bright young man who is likely to succeed in life."

Now can you construct an adequate description of Eric Harris? Can you explain the reason for his murderous rampage? Or do you feel you need to know more about him, about his friends and the family in which he grew up? And

how about his experiences in school and with the criminal justice system? We have attempted to investigate just one person's experiences, and already our investigation is spawning more and more questions.

We cannot avoid asking questions about the actions and attitudes of others. We all try to make sense of the complexities of our social world and our position in it, in which we have quite a personal stake. In fact, the more that you begin to think like a social scientist, the more questions will come to mind.

But why does each question have so many possible answers? Surely our individual perspectives play a role. One person may see a homicide offender as a victim of circumstance, while another person may see the same individual as inherently evil. Answers to questions we ask in the criminological sciences vary because individual life experiences and circumstances vary. When questions concern not just one person but many people or general social processes, the number of possible answers quickly multiplies. In fact, people have very different beliefs about the factors responsible for mass shootings. Exhibit 1.1 displays Gallup Poll results from the following question, "Thinking about mass shootings that have occurred in the U.S. in recent years, from what you know or have read, how much do you think each of the following factors is to blame for the shootings?" As you can see, a large percentage blame the mental health system—4 out of 10 blame easy access to guns as well—but nearly 1 out of 5 blame inflammatory language from political commentators.

People give different answers to research questions for yet another reason: It is simply too easy to make errors in logic, particularly when we are analyzing the social world in which we ourselves are conscious participants. We can call some of these *everyday errors,* because they occur so frequently.

For evidence of everyday errors, just listen to your conversations or the conversations of others for one day. At some point in the day, it is inevitable that you or someone you are talking with will say something like, "Well, I knew a person who did *X*, and then *Y* happened." From this one piece of information, you draw a conclusion about the likelihood of *Y*. Four general errors in everyday reasoning can be made: overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change.

Responses to the Question, "Thinking About Mass Shootings That Have Occurred in the U.S. in Recent Years, From What You Know Or Have Read, How Much Do You Think Each of the Following Factors Is to Blame for the Shootings?"

	Great deal %	*Fair amount %*	*Not much %*	*Not at all %*
Failure of the mental health system to identify Individuals who are a danger to others	48	32	11	8
Easy access to guns	40	21	16	20
Drug use	37	29	17	15
Violence in movies, video games, and music lyrics	32	24	23	20
The spread of extremist viewpoints on the Internet	29	28	22	15
Insufficient security at public buildings including businesses and schools	29	29	26	14
Inflammatory language from prominent political commentators	18	19	30	28

Reprinted with permission from Gallup.

, an error in reasoning, occurs when we conclude that what we have observed or what we know to be 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. We have the ability (and inclination) to interact with just a small fraction of the individuals who live in the world, especially in a limited span of time.

is choosing to look only at things that align with our preferences or beliefs. When we are inclined to criticize individuals or institutions, it is all too easy to notice their every failing. We are also more inclined to see the failings of others who are "not like us." If we are convinced in advance that all kids who are violent are unlikely to be rehabilitated and will go on to commit violent offenses in adulthood, we will probably find many cases confirming our beliefs. But what about other youths who have become productive and stable citizens after engaging in violence as adolescents? 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 overgeneralization and selective observation.

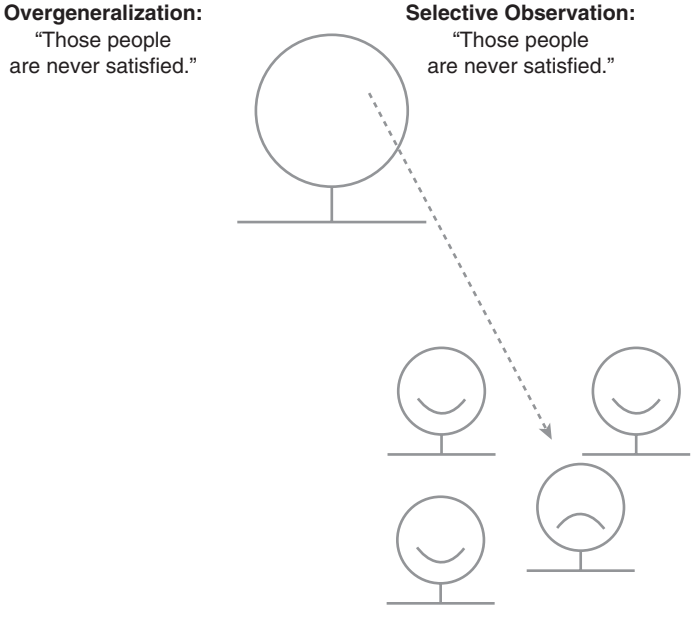
Overgeneralization An error in reasoning that occurs when we conclude that what we have observed or know to be true for a subset of cases holds true for the entire set

Selective observation Observations chosen because they are in accord with preferences or beliefs of the observer

Inaccurate observation Observations based on faulty perceptions of empirical reality

Our observations also can simply be inaccurate. If a woman says she is *hungry* and we think she said she is *hunted,* we have made an . If we think five people are standing on a street corner when there are actually seven, we have also made an inaccurate observation. Such errors occur often in casual conversation and in everyday observation of the world around us. In fact, our perceptions do not provide a direct window to the world around us, for what we think we have sensed is not necessarily what we 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 Difference Between Overgeneralization and Selective Observation



When we prematurely jump to conclusions or argue on the basis of invalid assumptions, we are using
. For example, it is not reasonable to propose that depictions of violence in media such as television and movies cause violence if evidence indicates that the majority of those who watch such programs do not become violent. However, it is also illogical to assume that media depictions of gratuitous violence have no effect on individuals. Of course, logic that seems valid to one person can seem twisted or unsound to another; the problem emerges when our reasoning stems from different assumptions rather than a failure to think straight.

, the reluctance to change our ideas in light of new information, may occur for several reasons:

Ego-based commitments. We all learn to greet with some skepticism the claims by leaders of companies, schools, agencies, and so on that people in their organization are happy, that revenues are growing, that services are being delivered in the best possible way, and so forth. We know how tempting it is to make statements about the social world that conform to our own needs rather than to the observable facts. It also can be difficult to admit that we were wrong once we have staked out a position on an issue.

Excessive devotion to tradition. Some degree of devotion to tradition is necessary for the predictable functioning of society. Social life can be richer and more meaningful if it is allowed to flow along the paths charted by those who have preceded us. But too much devotion to tradition can stifle adaptation to changing circumstances. When we distort our observations or alter our reasoning so that we can maintain beliefs that "were good enough for my grandfather, so they're good enough for me," we hinder our ability to accept new findings and develop new knowledge.

Uncritical agreement with authority. If we lack the courage to critically evaluate the ideas of those in positions of authority, we will have little basis for complaint if they exercise their authority over us in ways we do not like. And if we do not allow new discoveries to call our beliefs into question, our understanding of the social world will remain limited. People often accept the beliefs of those in positions of authority without question.

Now take just a minute to reexamine the beliefs about youth violence that you recorded earlier. Did you settle on a simple explanation even though the reality was far more complex? Were your beliefs influenced by your own ego and feelings about your similarities to or differences from individuals prone to violence? Are your beliefs perhaps based on depictions of violence in the media or fiction? Did you weigh carefully the opinions of authority figures, including politicians, teachers, and even your parents, or just accept or reject those opinions? Could knowledge of research methods help to improve your own understanding of the factors related to violent behavior? By now, you can see some of the challenges faced by social scientists who study issues related to crime and the criminal justice system.

You do not have to be a scientist or use sophisticated research techniques to recognize and avoid these four errors in reasoning. If you recognize these errors for what they are and make a conscious effort to avoid them, you can improve your own reasoning. Simply stated, refrain from stereotyping people, avoid jumping to conclusions, and look at the big picture. These are the same errors that the methods of social science are designed to help us avoid.

Illogical reasoning Prematurely jumping to conclusions and arguing on the basis of invalid assumptions

Resistance to change Reluctance to change ideas in light of new information due to ego-based commitments, excessive devotion to tradition, or uncritical agreement with authorities

Social science The use of scientific methods to investigate individuals, societies, and social processes, including questions related to criminology and criminal justice; the knowledge produced by these investigations

The approach to answering questions about the social world is designed to greatly reduce these potential sources of error in everyday reasoning.

relies on systematic methods to answer questions, and it does so in a way that allows others to inspect and evaluate its methods. In the realm of social research, these methods are not so unusual. After all, they involve asking questions, observing social groups, and counting people, which we often do in our everyday lives. However, social scientists develop, refine, apply, and report their understanding of the social world more systematically, or specifically, than Joanna Q. Public.

Social science research methods can reduce the likelihood of over-generalization by using systematic procedures for selecting individuals or groups to study that are representative of the individuals or groups about whom we wish 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 develop answers about the social world from ego-based commitments, excessive devotion to tradition, or unquestioning respect for authority.

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

Epistemology A branch of philosophy that studies how knowledge is gained or acquired

Transparent An important feature of the scientific method that requires procedures, methods, and data analyses of any study to be presented clearly for the purposes of replication

Peer review A process in which a journal editor sends a submitted article to two or three experts who judge whether the paper should be accepted, revised, and resubmitted or rejected; the experts also provide comments to explain their decision and guide any revisions

Pseudoscience Dubious but fascinating claims that are touted as "scientifically proven" and bolstered by fervent, public testimonials of believers who have experienced firsthand or have claimed to have witnessed the phenomenon; however, such evidence is not based on the principles of the scientific method

Phrenology A now defunct field of study, once considered a science in the 19th century, which held that bumps and fissures of the skull determined the character and personality of a person

In philosophical terms, the scientific method represents an —that is, a way of knowing that relies on objective, empirical investigation. Its techniques must be so that the methods, procedures, and data analyses of any study can be replicated. This transparency allows other researchers to see if the same results can be reproduced. If findings can be replicated, then we have greater confidence that the finding is real and not based on bias. Transparency also relies on , the process by which other independent researchers evaluate the scientific merit of the study.

In contrast, if we relied on findings based on intuition, gut reactions, or our own experience, we would be open to the errors we just covered above. If we based findings on this, it would not be science, but instead fall under the classification of . Pseudoscientific beliefs are not based on the scientific method but rather on claims that may be touted as "scientifically proven" but are only bolstered by testimonials of believers who have experienced the event firsthand or who have claimed to have witnessed the phenomenon (Nestor & Schutt, 2012).

Of course, today's pseudoscience could be yesterday's science. In criminological research, is a good example. In the 19th century, phrenology was the belief that bumps and fissures of the skull determined the character and personality of a person. Doctors doing entry examinations at American prisons would examine a new inmate's head for bumps or cavities to develop a criminal profile. Advances in cognitive psychology and neurology have largely discredited phrenology and placed it within the domain of pseudoscience. It didn't take a genius to question phrenology, just a group of researchers adhering to the scientific method. When inmates' heads were compared with individual heads in the general population, they were essentially the same!

Like you, social scientists read and hear stories about incidents of violence committed by youth, observe this violence occasionally in their lives, and try to make sense of what they see. For most, that is the end of it. But for some social scientists, the problem of youth violence has become a major research focus. The motivations for selecting this particular research focus, as with any social science topic, can be any one or some combination of the following:

Many social service agencies and elected officials seek better assessments and descriptions of youth violence so they can identify needs and allocate responsibility among agencies that could meet these needs. For example, federal agencies such as the U.S. Department of Justice and the Centers for Disease Control and Prevention want to identify the magnitude of youth violence, and many state and local officials use social research to guide development of their social service budgets. Programs designed to rehabilitate young offenders often use research to learn more about the needs of their clientele. These policy guidance and program management needs have resulted in numerous research projects.

Young offenders have been a logical focus for researchers interested in a number of questions, ranging from how an individual's connection to parents and peers influences his or her behavior to how the social conditions under which the person lives, such as poverty, affect his or her behavior. For example, social scientists have long been concerned with the impact that social disorganization has on individual behavior. In the 1920s, researchers at the University of Chicago were interested in the effects that residential mobility and immigration had on levels of crime and delinquency in urban neighborhoods. Today, researchers are exploring similar questions concerning the impact of disintegrating economic bases in central cities and their relationship to crime and violence. Other researchers have focused on individual-level explanations such as neurological damage. Those who study social policy also have sought to determine whether correctional programs such as boot camps and other forms of shock incarceration serve to decrease the probability of juveniles reoffending in the future.

Many who conduct research on youth violence feel that doing so can help to prevent it or ameliorate the consequences of this violence when it occurs. Some social scientists first volunteered with at-risk youth in such organizations as Big Brothers Big Sisters and only later began to develop a research agenda based on their experiences.

Youth violence always has been a popular topic of social science research. However, the sharp increase in this violence in the United States that began in the late 1980s was unprecedented. Predictably, whenever a phenomenon is perceived as an epidemic, numerous explanations emerge to explain it. Unfortunately, most of these explanations are based on the media and popular culture, not on empirical research. Despite the anecdotal information floating around in the mass media about the factors that may have contributed to increases in youth violence, social scientists interested in this phenomenon have amassed a substantial body of findings that have refined knowledge about the problem and shaped social policy (Tonry & Moore, 1998). These studies fall into the four categories of purposes for social scientific research: descriptive, exploratory, explanatory, and evaluation.

Defining and describing social phenomena of interest are part of almost any research investigation, but is the primary focus of many studies of youth crime and violence. Some of the central questions used in these studies were "How many people are victims of youth violence?" "How many youth

Descriptive research Research in which phenomena are defined and described

are offenders?" "What are the most common crimes committed by youthful offenders?" and "How many of the different youth are arrested and incarcerated each year for crime?" Descriptive research is not interested in explaining some phenomenon, just in describing its frequency or its qualities. Measurement (see Chapter 4) and sampling (see Chapter 5) are central concerns in descriptive research.

Police reports. One of the most enduring sources of information on lethal violence in the United States is the Federal Bureau of Investigation's (FBI) Supplementary Homicide Reports (SHR). Homicide victimization rates indicate that for those under the age of 24, vulnerability to murder increased dramatically during the mid-1980s through about 1994, when rates began a steady decline and have remained relatively stable since (Smith & Cooper, 2013).

Data measuring the prevalence of nonlethal forms of violence such as robbery and assaults are a bit more complicated. How do we know how many young people assault victims each year? People who report their victimizations to police represent one avenue for these calculations. The FBI compiles these numbers in its Uniform Crime Reporting (UCR) system, which is slowly being replaced by the National Incident-Based Reporting System (NIBRS). Both of these data sources rely on state, county, and city law enforcement agencies across the United States to voluntarily participate in the reporting program. Can you imagine why relying on these data sources may be problematic for estimating prevalence rates of violent victimizations? If victimizations are never reported to police, they are not counted. This is especially problematic for victimizations between intimate partners and other offenses such as rape, in which only a fraction of incidents are ever reported to police.

Surveys. Instead of police reports, most social scientists believe the best way to determine the magnitude of violent victimization is through random sample surveys. While we will discuss survey methodology in greater detail in Chapter 7, this basically means randomly selecting individuals in the population of interest and asking them about their victimization experiences. The only ongoing annual survey to do this is the National Crime Victimization Survey (NCVS), which is sponsored by the U.S. Department of Justice's Bureau of Justice Statistics (BJS). Among other questions, the NCVS asks questions such as "Has anyone attacked or threatened you with a weapon (for instance, a gun or knife) or by something thrown (such as a rock or bottle)? Include any grabbing, punching, or choking." Estimates indicate that youth ages 12 to 24 have the highest rates of violent victimization. Despite the recent increases observed in homicide rates for this age group in some locations, their victimization trends have generally declined since the peak of the early 1990s mentioned earlier.

The Youth Risk Behavior Survey (YRBS) is another large research survey that estimates the magnitude of youth violence (along with other risk-taking behavior such as taking drugs and smoking) and has been conducted every two years in the United States since 1990. To measure the extent of youth violence, students are asked questions such as "During the past 12 months, how many times were you in a physical fight?" and "During the past 12 months, how many times were you in a physical fight in which you were injured and had to be seen by a doctor or nurse?"

Of course, another way to measure violence would be to ask respondents about their offending behaviors. Some surveys do this, including the National Youth Survey (NYS) and the Rochester Youth Development Study (RYDS). The RYDS sample consists of 1,000 students who were in the seventh and eighth grades in the Rochester, New York, public schools during the spring semester of the 1988 school year. This project has interviewed the original respondents at 12 different times, including the last interview that took place in 1997, when respondents were in their early twenties (Thornberry, Krohn, Lizotte, & Bushway, 2008). As you can imagine, respondents are typically more reluctant to reveal offending behavior compared with their victimization experiences. However, these surveys have proved to be very useful in examining the factors related to violent offending and other delinquency. We should also point out that although this discussion has been specific to violence, the measures we have discussed in this section, along with their strengths and weaknesses, apply to measuring all types of crime.

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. The goal is to answer the question "What is going on here?" and to investigate social phenomena without expectations. This purpose is associated with the use of methods that capture large amounts of relatively unstructured information. For example, researchers investigating the emergence of youth gangs in the 1980s were encountering a phenomenon of which they had no direct experience. Thus, an early goal was to find out what it was like to be a gang member and how gang members made sense of their situation.

Research that is exploratory in nature is generally concerned with uncovering detailed information about a given phenomenon, learning as much as possible about particular people and/or events. While there have been far too many school shootings in the United States during the past decade, there have also been numerous incidents in which students were plotting to kill their peers or faculty members but came to the attention of authorities before their plans could be carried out. To examine how these incidents were stopped, Eric Madfis (2014) selected 11 schools where a mass shooting had been diverted between 2000 and 2009 and conducted intensive interviews with people who were involved, including 11 principals and 21 other administrators, teachers, and police officers. He also corroborated the interview data with newspaper reports and, where possible, court transcripts and police incident reports.

Madfis's (2014) research was truly exploratory. You will learn much more about qualitative research in Chapter 8, but for now, we simply want to highlight how this study is different from the other research types listed above. He let the people he interviewed speak for themselves; he didn't come with questions that were designed to measure concepts such as violence or delinquency before the interviews. After examining all of the interview transcripts, Madfis developed themes that emerged among them all. This is what made the research exploratory instead of explanatory.

Five out of the 11 school shootings were thwarted by other students who were not directly involved with or entrusted by the accused students but who came about the information indirectly. For example, one student reported the existence of disturbing postings and images on another student's network website. The second most common category of intervention involved people who had been told directly by students accused of plotting the attacks. For example, after one student was sent threatening messages, she told her mother, who then called the police. When the accused student was questioned, he confessed and weapons were discovered in his bedroom.

School administrators believed that students have been more likely to come forward with information about their peers since the Columbine High School shootings than they had been before this catalyzing mass shooting. One school principal stated, "Columbine absolutely made kids much more vigilant about things going on around them. . . . I think it made kids less afraid to speak up if something wasn't sitting right with them" (Madfis, 2014, p. 235). Another theme that was clear from the interviews was that if school environments were going to break the "student code of silence," they must be supporting, cohesive, and trusting. For example, another principal stated, "The best mechanism we have as a deterrent for these sorts of violent acts is good relationships between kids and adults, because kids will tell you" (Madfis, 2014, p. 235).

As you can see from this discussion of Madfis's results, the goal of his research was to explore the factors related to instances in which a school shooting had been successfully thwarted. He did not go into the school with a survey filled with questions because little is known about these factors in the existing literature. As such, the investigation was explorative in nature. It is different from descriptive, because prevalence estimate of some phenomenon are not the goal. Rather, a deeper understanding of the processes and perceptions of study participants is the desired outcome in exploratory research.

Exploratory research Research in which social phenomena are investigated without a priori expectations to develop explanations of them

Many people consider explanation to be the premier goal of any science. seeks to identify causes and effects of social phenomena, to predict how one phenomenon will change or vary in response to variation in some other phenomenon. Researchers adopted explanation as a principal goal when they began to ask such questions as "Why do people become offenders?" and "Does the unemployment rate influence the frequency of youth crime?" Methods with which to identify causes and effects are the focus of Chapter 6.

When we move from description to exploration and finally to explanatory research, we want to understand the direct relationship between two or more things. Does *X* explain *Y*? Or if *X* happens, is *Y* also likely to occur? What are some of the factors related to youth violence? Sarah Koon-Magnin and her colleagues (2016) were interested in understanding whether differences in parenting, delinquent peers, and self-control could help explain why male adolescents were more likely to engage in violent delinquency compared to female adolescents. They collected surveys from a sample of 833 high school and middle school students. To measure violent offending, the survey asked students whether they had engaged in several behaviors in the past year, including carrying a hidden weapon, hitting someone with the idea of hurting him or her, attacking someone with a weapon, using force to get something from someone, being in a gang fight, or shooting someone when someone told them to do so.

Parental supervision was measured with several variables including questions like "When you are away from home, do your parents know where you are and who you are with?" To measure peer influence, students were asked to respond to several questions about whether they went along with peers who encouraged vandalism, drinking, skipping school, and so on. Students' self-control was measured by their agreement to several questions including "Sometimes you have to physically fight to get what you want." In addition to these questions, other factors were also controlled in the models predicting violent behavior, including whether the student participated in a gang, whether one or both of their parents had been "in trouble with the police," and other demographic controls. Results indicated that males reported engaging in a greater variety of violent offending than females, but females had higher levels of self-control and were more heavily monitored by their parents than males. When predicting violent offending, however, males appeared to be more influenced by their peers than females. However, males were still more likely to engage in violence even after controlling for their self-control, parental supervision, and peer influence. The authors concluded, "This study suggests that gender remains a critical consideration in studies of delinquent behavior" (2016, p. 834).

seeks to determine the effects of a social program or other type of intervention. It is a type of explanatory research because it deals with cause and effect. However, evaluation research differs from other forms of explanatory research because it considers the implementation and outcomes of social policies and programs. These issues may not be relevant in other types of explanatory research. The increase of youth violence in the 1980s spawned many new government programs and, with them, evaluation research to assess the impact of these programs. Some of these studies are reviewed in Chapter 10, which covers evaluation research.

Explanatory research Research that seeks to identify causes and/or effects of social phenomena

Evaluation research Research about social programs or interventions

As many school administrators will tell you, there are direct mail, e-mail, and in-person direct sales efforts to sell them programs that reduce violence, increase empathy among students, promote a positive school environment, promote other forms of mental well-being, and on and on. Unfortunately, not many of these

programs have been rigorously evaluated to ensure that they actually do what they promise. One program that has been the target of rigorous evaluation is the Gang Resistance Education and Training (G.R.E.A.T.) program, which is a school-based gang and violence prevention program. This program is a cognitive-based program intended to (among other things) teach students about crime and its effects on victims, how to resolve conflicts without violence, and how to improve individual responsibility through goal setting. The G.R.E.A.T. program addresses multiple risk factors for violent offending among three domains: school, peer, and individual. Because it is curriculum-based in the school, it does not address risk factors present in the family or neighborhood. It is a 13-week program taught in sixth or seventh grade and attempts to affect several risk factors, including school commitment and performance, association with conventional or delinquent peers, empathy, and self-control, among others.

Finn-Aage Esbensen and his colleagues (Esbensen, Osgood, Peterson, Taylor, & Carson, 2013) evaluated the long-term effects of the G.R.E.A.T. program in seven cities across the United States. Schools selected for the program randomly assigned some seventh-grade classrooms to get the treatment (*experimental groups*) while the other classrooms did not (*control groups*). As you will later learn, this is called a *true experimental design*. It is an extremely strong research method for determining the effects of programs or policies because if groups are truly randomly assigned, there is a strong reason to believe that differences between the groups after program implementation, such as reduced violent offending, are because of the program and not some other factor that existed before the introduction of the treatment.

Both experimental and control group students in the Esbensen et al. (2013) study completed four follow-up surveys annually for four years. The researchers examined 33 outcome measures, including general delinquency, violent offending, gang affiliation, associations with delinquent peers, empathy, impulsivity, and problem solving. The statistical methods employed by Esbensen and his colleagues are very complicated and beyond the scope of this text, so we will simply highlight the general findings. When the data for all seven sites were combined, there were no differences in violent offending between experimental and control group students over the four-year period. Those students who participated in the G.R.E.A.T. program were, however, less likely to become members of gangs, had higher levels of altruism, showed less anger and risk taking, and had more favorable attitudes toward the police, among other things.

With these results, would you deem the G.R.E.A.T. program a success? These are the important questions evaluation research must address. Esbensen et al. (2013) agree that the program did not reduce general delinquency or violent offending but note that it was effective in reducing gang membership, which is also a risk factor for violent offending.

What influences the decision to choose one research strategy over another? The motive for conducting research is critical. The type of research questions we are answering is often influenced by a particular research philosophy.

A researcher's philosophical perspective on reality and on the appropriate role of the researcher also will shape his or her choice of methodological preferences. Researchers with a philosophy of believe that an objective reality exists apart from the perceptions of those who observe it; the goal of science is to better understand this reality.

> Whatever nature "really" is, we assume that it presents itself in precisely the same way to the same human observer standing at different points in time and space. . . . We assume that it also presents itself in precisely the same way across different human observers standing at the same point in time and space. (Wallace, 1983, p. 461)

Positivism The belief that there is a reality that exists quite apart from our own perception of it, although our knowledge of this reality may never be complete

This philosophy is traditionally associated with science (Weber, 1949), with the expectation that there are universal laws of human behavior, and with the belief that scientists must be objective and unbiased to see reality clearly.

A SCHOOL SHOOTING EVERY WEEK?

This article investigates a quote by Senator Chris Murphy (D-Conn) who said, "Since Sandy Hook, there has been a school shooting, on average, every week." He made this statement on the Senate floor after the killing of nine people at a prayer meeting in Charleston, South Carolina. This is not the first time this statistic has been used, but where did it come from? The article reports that it was calculated by a group called "Everytown for Gun Safety" that has counted the tally of school shootings since the Sandy Hook Elementary School shooting as 126 as of June 8, 2015. How does the group define a school shooting? Any incident in which a firearm was discharged inside a school building or on school or campus grounds, as documented by the press or confirmed through further inquiries with law enforcement, was deemed a school shooting.

Questions About the Article

Does this definition of *school shootings* capture what we typically mean by a school shooting? For example, it would include accidental shootings as well as suicides or attempted suicides.

What other types of incidents would be included in this definition that we don't typically associate with school shootings? What definition would you use if you were going to measure the incidence of school shootings?

Lee, M. Y. H. (2015, June 29). Has there been one school shooting per week since Sandy Hook? *The Washington Post*. Retrieved August 2, 2015, from http://www.washingtonpost.com/blogs/fact-checker/wp/2015/06/29/has-there-been-one-school-shooting-per-week-since-sandy-hook/

is a philosophy of reality that is closely related to positivism. Postpositivists believe that there is an external, objective reality, but they are sensitive to the complexity of this reality and the limitations of the scientists who study it. Social scientists in particular recognize the biases they bring to their research, as they are social beings themselves (Guba & Lincoln, 1994). As a result, they do not think scientists can ever be sure that their methods allow them to perceive objective reality. Rather, the goal of science can only be to achieve among scientists about the nature of reality (Wallace, 1983). For example, postpositivists may worry that researchers' predispositions may bias them in favor of deterrence theory. Therefore, they will remain somewhat skeptical of results that support predictions based on deterrence until a number of researchers feel that they have found supportive evidence. The postpositivist retains much more confidence in the ability of the community of social researchers to develop an unbiased account of reality than in the ability of any individual social scientist to do so (Campbell & Russo, 1999).

Postpositivism The belief that there is an empirical reality but that our understanding of it is limited by its complexity and by the biases and other limitations of researchers

Intersubjective agreement Agreement among scientists about the nature of reality, often upheld as a more reasonable goal for science than certainty about an objective reality

To achieve an accurate understanding of the social world, a researcher operating within the positivist or postpositivist tradition must adhere to some basic guidelines about how to conduct research:

Test ideas against empirical reality without becoming too personally invested in a particular outcome. This guideline requires a commitment to "testing" as opposed to just reacting to events as they happen or looking for what we want or expect to see (Kincaid, 1996, pp. 51–54).

Plan and carry out investigations systematically. Social researchers have little hope of conducting a careful test of their ideas if they do not fully think through in advance how they should go about the test and then proceed accordingly.

Document all procedures and disclose them publicly. Social researchers should disclose the methods on which their conclusions are based so that others can evaluate for themselves the likely soundness of these conclusions (Kincaid, 1996).

Clarify assumptions. No investigation is complete in itself. Whatever the researcher's method(s), the effort rests on some background assumptions. For example, research to determine whether arrest has a deterrent effect assumes that potential law violators think rationally and that they calculate potential costs and benefits prior to committing crimes.

Specify the meanings of all terms. Words often have multiple or unclear meanings. *Recidivism*, *self-control*, *poverty*, *overcrowded*, and so on can mean different things to different people. In scientific research, all terms must be defined explicitly and used consistently.

Maintain a skeptical stance toward current knowledge. The results of any particular investigation must be examined critically, although confidence about interpretations of the social or natural world increases after repeated investigations yield similar results.

Replicate research and build social theory. No one study is definitive by itself. We cannot fully understand a single study's results apart from the larger body of knowledge to which it is related, and we cannot place much confidence in these results until the study has been replicated.

Search for regularities or patterns. Positivist and postpositivist scientists assume that the natural world has some underlying order of relationships so that unique events and individuals can be understood at least in part in terms of general principles (Grinnell, 1992).

Real investigations by social scientists do not always include much attention to theory, specific definitions of all terms, and so forth. However, all social researchers should be compelled to study these guidelines and to consider the consequences of not following any with which they do not agree.

The goal of the traditional positivist scientific approach is to advance scientific knowledge. This goal is achieved when research results are published in academic journals or presented at academic conferences.

The positivist approach regards value considerations to be beyond the scope of science. In Max Weber's (1949) words, "An empirical science cannot tell anyone what he should do—but rather what he can do—and under certain circumstances—what he wishes to do" (p. 54). The idea is that developing valid knowledge about how society *is* organized, or how we live our lives, does not tell us how society *should* be organized or how we *should* live our lives. The determination of empirical facts should be a separate process from the evaluation of these facts as satisfactory or unsatisfactory (p. 11).

Qualitative research is often guided by a philosophy of .
Interpretive social scientists believe that reality is socially constructed and that the goal of social scientists is to understand what meanings people give to reality, not to determine how reality works apart from these interpretations. This philosophy

Interpretivism The belief that reality is socially constructed and that the goal of social scientists is to understand what meanings people give to that reality. Max Weber termed the goal of interpretivist research ***verstehen*** *(understanding)*

rejects the positivist belief that there is a concrete, objective reality that scientific methods help us to understand (Lynch & Bogen, 1997); instead, interpretivists believe that scientists construct an image of reality based on their own preferences and prejudices and their interactions with others.

Here is the basic argument: The empirical data we collect all come to us through our own senses and must be interpreted with our own minds. This suggests that we can never be sure that we have understood reality properly, or that we ever can, or that our own understandings can really be judged more valid than someone else's.

> Searching for universally applicable social laws can distract from learning what people know and how they understand their lives. The interpretive social researcher examines meanings that have been socially constructed. . . . There is not one reality out there to be measured; objects and events are understood by different people differently, and those perceptions are the reality—or realities—that social science should focus on. (Rubin & Rubin, 1995, p. 35)

The paradigm of extends interpretivist philosophy by emphasizing the importance of exploring how different stakeholders in a social setting construct their beliefs (Guba & Lincoln, 1989). It gives particular attention to the different goals of researchers and other participants in a research setting and seeks to develop a consensus among participants about how to understand the focus of inquiry. The constructivist research report will highlight different views of the social program or other issues and explain how a consensus can be reached among participants.

Constructivist inquiry uses an interactive research process in which a researcher begins an evaluation in some social settings by identifying the different interest groups in those settings. The researcher goes on to learn what each group thinks and then gradually tries to develop a shared perspective on the problem being evaluated (Guba & Lincoln, 1989).

is a term used to refer to research done by feminists (Reinharz, 1992, pp. 6–7) and to a perspective on research that can involve many different methods (Reinharz, 1992, p. 240). The feminist perspective on research includes the interpretivist and constructivist elements of concern with personal experience and subjective feelings and with the researcher's position and standpoint. Feminist researchers Sharlene Hesse-Biber and Patricia Lina Leavy (2007) emphasize the importance of viewing the social world as complex and multilayered, of sensitivity to the impact of social differences, of being an "insider" or an "outsider," and of being concerned with the researcher's position. African American feminist researcher Patricia Hill Collins (1991) suggests that researchers who are sensitive to their "outside" role within a social situation may have unique advantages: "Outsiders within occupy a special place—they become different people and their difference sensitizes them to patterns that may be more difficult for established sociological insiders to see" (p. 53).

Researchers guided by an interpretivist philosophy reject some of the guidelines to which positivist researchers seek to adhere. In fact, there is a wide variety of specific approaches that can be termed *interpretivist*, and each has some guidelines that it highlights. For those working within the constructivist perspective, Guba and Lincoln (1989) suggest four key steps for researchers, each of which may be repeated many times in a given study:

Constructivism A perspective that emphasizes how different stakeholders in social settings construct their beliefs

Feminist research Research with a focus on women's lives that often includes an orientation to personal experience, subjective orientations, the researcher's standpoint, and emotions

Identify stakeholders and solicit their "claims, concerns, and issues."

Introduce the claims, concerns, and issues of each stakeholder group to the other stakeholder groups and ask for their reactions.

> Focus further information collection on claims, concerns, and issues about which there is disagreement among stakeholder groups.
>
> Negotiate with stakeholder groups about the information collected, and attempt to reach consensus on the issues about which there is disagreement (p. 42).

Some social researchers with an interpretivist or constructivist orientation often reject explicitly the traditional positivist distinction between facts and values (Sjoberg & Nett, 1968). Bellah et al. (1985) have instead proposed a model of "social science as public philosophy." In this model, social scientists focus explicit attention on achieving a more just society:

> Social science makes assumptions about the nature of persons, the nature of society, and the relation between persons and society. It also, whether it admits it or not, makes assumptions about good persons and a good society and considers how far these conceptions are embodied in our actual society.
>
> Social science as public philosophy, by breaking through the iron curtain between the social sciences and the humanities, becomes a form of social self-understanding or self-interpretation. . . . By probing the past as well as the present, by looking at "values" as much as at "facts," such a social science is able to make connections that are not obvious and to ask difficult questions. (p. 301)

Whyte (1991) proposed a more activist approach to research called As the name implies, this approach encourages social researchers to get "out of the academic rut" and bring values into the research process (p. 285). In PAR, the researcher involves as active participants some members of the setting studied. Both the organizational members and the researcher are assumed to want to develop valid conclusions, to bring unique insights, and to desire change, but Whyte (1991) believed these objectives were more likely to be obtained if the researcher collaborated actively with the persons he or she studied. We will talk about PAR in Chapter 12.

It is tempting to think of positivism and postpositivism as representing an opposing research philosophy to interpretivism and constructivism. Then it seems that we should choose the one philosophy that seems closest to our own preferences and condemn the other as "unscientific," "uncaring," or perhaps just "unrealistic." But there are good reasons to prefer a research philosophy that integrates some of the differences between these philosophies (Smith, 1991).

And what about the important positivist distinction between facts and values in social research? Here, too, there is evidence that neither the "value-free" presumption of positivists nor the constructivist critique of this position is entirely correct. For example, Savelsberg, King, and Cleveland (2002) examined influences on the focus and findings of published criminal justice scholarship. They found that criminal justice research was more likely to be oriented to topics and theories suggested by the state when it was funded by government agencies. This reflects a political influence on scholarship. However, government funding did not have any bearing on the researchers' conclusions about the criminal justice processes they examined. This suggests that scientific procedures can insulate the research.

Participatory action research (PAR)
Research in which the researcher involves some organizational members as active participants throughout the process of studying an organization; the goal is making changes in the organization

Which philosophy makes the most sense to you? Do you agree with positivists and postpositivists that scientific methods can help us understand the social world as it is, not just as we would like to think it is, or does the interpretivist focus on meanings make more sense to you? Many scholars are beginning to advance mixed-methods approaches to research that rely on both philosophies. We highlight mixed-methods approaches throughout this book, and Chapter 11 focuses

exclusively on the relative strengths of single-method approaches versus a mixed-methods approach. We argue that there is value to both positivist and interpretivist philosophies and that there are good reasons to prefer an integrated philosophy. Researchers influenced by a positivist philosophy should be careful to consider how their own social backgrounds shape their research approaches and interpretations, just as interpretivist researchers caution us to do. Researchers influenced more by an interpretivist philosophy should be careful to ensure that they use rigorous procedures to check the trustworthiness of their interpretations of data (Riessman, 2008). If we are not willing to ask hard questions about our research and the evidence we collect, we are not ready to investigate the social world.

As you might expect, different research philosophies often are related to the selection of different research methods. Importantly, however, we want to make clear that the research question or purpose should always dictate the research method. This will become more obvious when you read each specific methodology chapter. However, in general, research methods can be divided into two somewhat different domains called quantitative research methods and qualitative research methods. Did you notice the difference between the types of data the case studies discussed at the beginning of the chapter used? The data collected in the YRBS were counts of the responses students gave on the survey. These data were numerical, so we say that this study used . In contrast, Madfis's (2014) exploratory study used in-depth interviews with school administrators who had helped prevent an attempted school shooting. This methodology was designed to capture the social reality of the participants as they experienced it, in their own words, rather than in predetermined categories. This inquiry is clearly consistent with the constructivist philosophy. Because the researchers focused on the participants' words rather than counts and numbers, we say that this study used .

The distinction between quantitative and qualitative methods involves more than just the type of data collected. Quantitative methods are most often used when the motives for research are explanation, description, or evaluation. Exploration is the most common motive for using qualitative methods, although researchers also use these methods for descriptive and evaluative purposes. The goals of quantitative and qualitative researchers also may differ. Whereas quantitative researchers generally accept the goal of developing an understanding that correctly reflects what is actually happening in the real world, some qualitative researchers instead emphasize the goal of developing an "authentic" understanding of a social process or social setting (Gubrium & Holstein, 1997). An authentic understanding is one that reflects *fairly* the various perspectives of participants in that setting.

Quantitative methods Methods such as surveys and experiments that record variation in social life in terms of categories that vary in amount. Data that are treated as quantitative are either numbers or attributes that can be ordered in terms of magnitude

Qualitative methods Methods such as participant observation, intensive interviewing, and focus groups that are designed to capture social life as participants experience it rather than in categories predetermined by the researcher. Data that are treated as qualitative are mostly written or spoken words or observations that do not have a direct numerical interpretation

Mixed methods Combining both qualitative and quantitative methods to study one research question

As important as it is, we do not want to place too much emphasis on the distinction between qualitative and quantitative methods because social scientists often combine these methods to enrich their research. For example, "qualitative knowing" about social settings can be essential for understanding patterns in quantitative data (Campbell & Russo, 1999, p. 141). Qualitative data can be converted to quantitative data, for example, when we count the frequency of particular words or phrases in a text or measure the time elapsed between different behaviors that we have observed. Surveys that collect primarily quantitative data also may include questions asking for written responses, and these responses may be used in a qualitative, textual analysis. Researchers using quantitative methods may engage in some exploration to find unexpected patterns in their data. Qualitative researchers may test explicit explanations of social phenomena using textual or observational data.

As noted, many researchers are electing to garner the strengths of both quantitative and qualitative research philosophies and rely on

to study one research question. This is sometimes called . The latter term suggests that a researcher can get a clearer picture of the social reality being studied by viewing it from several different perspectives. Each will have some liabilities in a specific research application, and all can benefit from a combination of one or more other methods (Brewer & Hunter, 1989; Sechrest & Sidani, 1995).

As you will see in the chapters that follow, the distinction between quantitative and qualitative data is not always sharp. We'll examine such "mixed method" possibilities in each of the chapters that review specific methods of data collection.

As you will see in this book, the data we utilize in criminological research are derived from many different sources, and the research methods we employ in criminology and criminal justice are very diverse. In this section, we are going to highlight a few of the methods that will be covered later in the book.

An is used in criminological research, particularly when the efficacy of a program or policy is being evaluated. As we will see in Chapter 6, true experiments must have three things: two groups (one receiving the treatment or intervention and the other receiving no treatment or another form thereof), random assignment to these two groups, and an assessment of change in the outcome variable after the treatment or policy has been received. Quasi-experimental designs, experiments that lack one of these three ingredients, also are used in our discipline. Chapter 11 focuses exclusively on research designs used in evaluation research.

Asking people questions on or , as we have highlighted, is another popular method used by criminological researchers and is probably the most versatile. Most concepts about individuals can be defined in such a way that measurement with one or more questions becomes an option. These surveys can be self-administered by respondents (e.g., through the mail) or can be read by an interviewer (e.g., through a telephone survey).

Although in principle survey questions can be a straightforward and efficient means to measure individual characteristics, facts about events, levels of knowledge, and opinions of any sort in practice survey questions can result in misleading or inappropriate answers. All questions proposed for a survey must be screened carefully for their adherence to basic guidelines and then tested and revised until the researcher feels some confidence that they will be clear to the intended respondents (Fowler, 1995). Some variables may prove to be inappropriate for measurement with any type of question. We have to recognize that memories and perceptions of the events about which we might like to ask can be limited. Specific guidelines for writing questions and developing surveys are presented in Chapter 7.

In other cases, a researcher may want to make his or her presence known and directly participate in the activity being observed. Included in this type of research design is , which involves developing a sustained relationship with people while they go about their normal activities. In other instances, the subject matter of interest may not be amenable to a survey, or perhaps we want more detailed and in-depth information than questions with fixed formats can answer. In these cases, we turn to research techniques such as participant observation and . These methods are preferred when we seek in-depth information on an individual's feelings, experiences, and perceptions. Chapter 8 shows how these methods and other field research techniques can uncover aspects of the social world that we are likely to miss in experiments and surveys.

Triangulation The use of multiple methods to study one research question; also used to mean the use of two or more different measures of the same variable

Experimental approach An approach in which the researcher assigns individuals to two or more groups in a way that equates the characteristics of individuals in the groups (with a certain chance of error), except for variation in the groups' exposure to the independent variable

Surveys Popular and versatile research instruments using a question format; surveys can either be self-administered or read by an interviewer

Questionnaire The instrument containing the questions on a self-administered survey

Participant observation Field research in which a researcher develops a sustained and intensive relationship with people while they go about their normal activities

Intensive interviewing Open-ended, relatively unstructured questioning in which the interviewer seeks in-depth information on the interviewee's feelings, experiences, and/or perceptions

(Riedel, 2000), which is the reanalysis of already existing data, is another method used by researchers. These data usually come from one of two places: from official sources such as local or federal agencies (e.g., rates of crime reported to police, information on incarcerated offenders from state correctional authorities, or adjudication data from the courts) or from surveys sponsored by government agencies or conducted by other researchers. Virtually all the data collected by government agencies and a great deal of survey data collected by independent researchers are made available to the public through the Inter-University Consortium for Political and Social Research (ICPSR), which is located at the University of Michigan. When documents from the past, such as correspondence, newspaper accounts, and trial transcripts, are analyzed, the research is generally termed . Another type of indirect measurement is called . In this type of study, a researcher studies representations of the research topic in media forms such as news articles, TV shows, and radio talk shows. An investigation of the drinking climate on campuses might examine the amount of space devoted to ads for alcoholic beverages in a sample of issues of the student newspaper. Campus publications also might be coded to indicate the number of times that statements discouraging substance abuse appear. Content analysis techniques also can be applied to legal opinions, historical documents, novels, songs, or other cultural productions. With the advent of computer technology, also has become a popular method for examining the relationship between criminal behavior and other social indicators. Chapter 9 covers each of these methodologies and illustrates the importance of these unobtrusive research techniques in criminology and criminal justice. Increasingly, researchers are combining methods to more reliably answer a single research question. Although examples of mixed-methods research are highlighted in several chapters, Chapter 11 provides an overview of the philosophy and motivation for combining methods, along with the various techniques for doing so.

All research begins with a research question and then a formal process of inquiry. Chapter 2 provides an overview of the research circle from both a deductive and inductive perspective using the empirical literature on arrest and intimate partner assault as a case study. All research must also grapple with conceptualization and measuring constructs, including the extent to which these measures are valid and reliable. Chapter 4 examines these issues, followed by a discussion of sampling in Chapter 5. Of course, all research, regardless of the methodology selected, requires that it be carried out ethically with special protections afforded the participants under study. Although every chapter that details a specific type of research method concludes with a section on ethics related to that method, Chapter 3 is devoted exclusively to the steps required to ensure research is conducted ethically.

Secondary data analysis Analysis of data collected by someone other than the researcher or the researcher's assistant

Historical events research Research in which social events of only one time period in the past are studied

Content analysis A research method for systematically analyzing and making inferences from text

Crime mapping Geographical mapping strategies used to visualize a number of things including location, distance, and patterns of crime and their correlates

These case studies are only four of the hundreds of studies investigating youth violence, but they illustrate some of the questions criminological research can address, several different methods social scientists studying these issues can use, and ways criminological research can inform public policy. Notice how each of the four studies was designed to reduce the errors common in everyday reasoning:

The clear definition of the population of interest in each study and the selection of a broad, representative sample of that population in two studies increased the researchers' ability to draw conclusions without overgeneralizing findings to groups to which they did not apply.

The use of surveys in which each respondent was asked the same set of questions reduced the risk of selective or inaccurate observation.

The risk of illogical reasoning was reduced by carefully describing each stage of the research, clearly presenting the findings, and carefully testing the basis for cause-and-effect conclusions.

Resistance to change was reduced by using an experimental design that randomly assigned classes to an experimental treatment (the G.R.E.A.T program) and a control group to fairly evaluate the efficacy of the program.

Nevertheless, it would be misleading to suggest that simply engaging in criminological research will result in the unveiling of absolute truths! Research always has its flaws and limitations (as does any human endeavor), and findings are always subject to differing interpretations. Social research allows us to consider and reveal more, to observe with fewer distortions, and to describe more clearly to others the basis for our opinions, but it will not settle all arguments. Other people will always have differing opinions, and some opposition will come from other social scientists who have conducted their own studies and drawn different conclusions. For example, we must ask ourselves if programs similar to G.R.E.A.T. would reduce levels of violence for younger students. Until more scientific research is conducted to evaluate these programs, it is difficult to determine whether these programs should be more widely implemented.

Courtesy of Grant A. Bacon

Grant Bacon graduated with degrees in history, education, and political science from the University of Delaware in 1998. He initially aspired to give back to the community, especially by helping young people as a teacher. Although he started out teaching, he found his calling by working more directly with at-risk youth as a court liaison and eventually program coordinator for a juvenile drug court/drug diversion program. It was during his time working with these drug court programs that Grant first came into contact with the University of Delaware's Center for Drug and Health Studies (CDHS), which was beginning an evaluation of the drug court programs in New Castle County, Delaware. In 2001, he accepted an offer to become a research associate with CDHS, where he has continued to work on many different research projects. Two of his most recent projects include research that investigated the factors affecting the reentry experience for inmates returning to the community and another evaluating the parole program called "Decide Your Time."

Grant is happy to be working in the field on both qualitative and quantitative research. He loves working with people who share a vision of using research findings to help people in a number of ways, and to give back to the world in a meaningful manner. Every day is different. Some days, Grant and other associates are on the road visiting criminal justice or health related facilities or are trying to locate specific individual respondents or study participants. Other days, he may be gathering data, doing intensive interviewing, or administering surveys. He thinks the most rewarding part of his job is helping people who have been part of the criminal justice system and giving them a voice.

Grant's advice to students interested in research is the following:

If doing research interests you, ask your teachers how you can gain experience through internships or volunteering. Be sure to network with as many people from as many human services organizations as possible. Being familiar with systems like GIS (geographic information systems) and data analyses is becoming important as well. If you did not receive this training during your undergraduate studies, many community colleges offer introductory and advanced classes in GIS, Microsoft Excel, Access, and SPSS. Take them!

But even in areas of research that are fraught with controversy, where social scientists differ in their interpretations of the evidence, the quest for new and more sophisticated research has value. What is most important for improving understanding of the social world and issues in criminology is not the results of any one particular study but the accumulation of evidence from different studies of related issues. By designing new studies that focus on the weak points or controversial conclusions of prior research, social scientists contribute to a body of findings that gradually expands our knowledge about the social world and resolves some of the disagreements about it.

Whether you plan to conduct your own research projects, read others' research reports, or even just listen to or read claims about social reality in the media, knowing about research methods has many benefits. This knowledge will give you greater confidence in your own opinions, improve your ability to evaluate others' opinions, and encourage you to refine your questions, answers, and methods of inquiry about the social world.

Of course, the methods of social science, as careful as they may be, cannot answer all questions of interest to criminologists. Should we do unto others as we would have them do unto us? Does anyone deserve the fate he or she receives? Are humans inherently good or evil? These are all very important questions that have been asked throughout history, but we must turn to religion or philosophy to answer questions about values. Social research on the consequences of forgiveness or the sources of interpersonal conflict may help us understand and implement our values, but even the best research cannot tell us which values should guide our lives.

We hope this first chapter has given you an idea of what to expect in the rest of this book. Our aim is to introduce you to social research methods by describing what social scientists have learned about issues in criminology and criminal justice as well as how they tackled systematic challenges in conducting their research. For many students, the substance of social science inevitably is more interesting than the research methods used to bring those findings to light. However, in this volume, you will see that the research methods not only demand interest and merit but are also fundamental to our understanding of criminology and criminal justice. We have focused attention on research on youth violence and delinquency in this chapter; in subsequent chapters, we will introduce research examples from other areas.

Chapter 2 continues to build the foundation for our study of social research by reviewing the types of problems that criminologists study, the role of theory, the major steps in the research process, and other sources of information that may be used in social research. We stress the importance of considering scientific standards in social research and reviewing generally accepted ethical guidelines. Throughout the chapter, we use several studies of domestic violence to illustrate the research process.

Criminological research cannot resolve value questions or provide answers that will convince everyone and remain settled for all time.

All empirically based methods of investigation are based on either direct experience or others' statements.

Four common errors in reasoning are overgeneralization, selective or inaccurate observation, illogical reasoning, and resistance to change. Illogical reasoning is due to the complexity of the social world, self-interest, and human subjectivity. Resistance to change may be due to unquestioning acceptance of tradition or of those in positions of authority or to self-interested resistance to admitting the need to change one's beliefs.

Social science is the use of logical, systematic, documented methods to investigate individuals, societies, and social processes as well as the knowledge produced by these investigations.

Pseudoscience involves claims based on beliefs and/or public testimonials, not on the scientific method.

Criminological research can be motivated by policy guidance and program management needs, academic concerns, and charitable impulses.

Criminological research can be descriptive, exploratory, explanatory, or evaluative or some combination of these.

Positivism is the belief that there is a reality that exists quite apart from one's own perception of it that is amenable to observation.

Intersubjective agreement is an agreement by different observers on what is happening in the natural or social world.

Postpositivism is the belief that there is an empirical reality but that our understanding of it is limited by its complexity and by the biases and other limitations of researchers.

Interpretivism is the belief that reality is socially constructed and the goal of social science should be to understand what meanings people give to that reality.

The constructivist paradigm emphasizes the importance of exploring and representing the ways in which different stakeholders in a social setting construct their beliefs. Constructivists interact with research subjects to gradually develop a shared perspective on the issue being studied.

Quantitative methods record variation in social life in terms of categories that vary in amount. Qualitative methods are designed to capture social life as participants experience it rather than in categories predetermined by the researcher.

Mixed methods research is the use of multiple methods to study a single research question.

What criminological topic or issue would you focus on if you could design a research project without any concern for costs? What are your motives for studying this topic? List at least four of your beliefs about this phenomenon. Try to identify the sources of each belief—for example, television, newspaper, or parental influence.

Develop four research questions related to a topic or issue, one for each of the four types of research (descriptive, exploratory, explanatory, and evaluative). Be specific.

Find a report of social science research in an article in a daily newspaper. What are the motives for the research? How much information is provided about the research design? What were the major findings? What additional evidence would you like to see in the article to increase your understanding of the findings in the research conclusions?

Find a CNN blog discussing some topic about crime. How do your opinions on the subject differ?

Outline your own research philosophy. You can base your outline primarily on your reactions to the points you have read in this chapter, but try also to think seriously about which perspective seems more reasonable to you.

You have been asked to prepare a brief presentation on a criminological topic or issue of interest to you. Go to the BJS website (http://www.ojp.usdoj.gov/bjs). Browse the BJS publications for a topic that interests you. Write a short outline for a 5- to 10-minute presentation regarding your topic, including statistics and other relevant information.

Go to the FBI website (http://www.fbi.gov). Explore the types of programs and initiatives sponsored by the FBI. Discuss at least three of these programs or initiatives in terms of their purposes and goals. For each program or initiative examined, do you believe the program or initiative is effective? What are the major weaknesses? What changes would you propose the FBI make to more effectively meet the goals of the program or initiative?

Go to the website of a major newspaper and find an article discussing the causes of violence. What conclusions does the article draw, and what research methods does the author discuss to back up his or her claims?

There are many interesting websites that discuss philosophy of science issues. Read the summaries of positivism and interpretivism at www.misq.org/misq/downloads/download/editorial/25/. What do these summaries add to your understanding of these philosophical alternatives?

Find a story about a criminological issue in the popular press (e.g., a newspaper or periodical such as *Time* magazine). Does the article provide a scientific basis for claims made in the story? If rates of crime are reported, does the article discuss how these rates were actually obtained?

Read an article in a recent issue of a major criminological journal or on the study site for this book (https://study.sagepub.com/bachmanfrccjsr). Identify the type of research conducted for each study. Are the research questions clearly stated? Can you identify the purpose of the research (e.g., description, explanation, exploration, evaluation)?

Continue the debate between positivism and interpretivism with an in-class discussion. Be sure to review the guidelines for these research philosophies and the associated goals. You might also consider whether an integrated philosophy is preferable.

Throughout the book, we will be discussing the ethical challenges that arise in research on crime and criminal justice. At the end of each chapter, we will ask you to consider some questions about ethical issues related to that chapter's focus. Chapter 3 is devoted to issues of ethics in research, but we will begin here with some questions for you to ponder.

You have now learned about the qualitative study by Madfis (2014) about schools that averted a shooting incident. We think it provided important information for policy makers about the social dynamics in these tragedies. But what would *you* do if you were conducting a similar study in a high school and you learned that another student was planning to bring a gun to school to kill some other students? What if he was only thinking about it? Or just talking with his friends about how "neat" it would be? Can you suggest some guidelines for researchers?

If you were part of Esbensen's research team that evaluated the G.R.E.A.T. violence reduction program in schools, would you announce your findings in a press conference and encourage schools to adopt this program? If you were a school principal who heard about this research, would you agree to let another researcher replicate (repeat) the Esbensen study in your school, with some classrooms assigned to receive the program randomly (on the basis of the toss of a coin) and others not allowed to receive the program for the duration of the study?

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?

Develop four questions that you might investigate about the topic you just selected. Each question should reflect a different research motive: description, exploration, explanation, or evaluation. Be specific.

Which question most interests you? Would you prefer to attempt to answer that question using quantitative or qualitative methods? Why?

Dataset	Description
2013 YRBS.sav	The 2013 YRBS is a national study of high school students. It focuses on gauging various behaviors and experiences of the adolescent population, including substance use and some victimization.
Monitoring the Future 2013 grade 10.sav	This dataset contains variables from the 2013 Monitoring the Future (MTF) study. These data cover a national sample of tenth graders, with a focus on monitoring substance use and abuse.

Variable Name	Description
Q44 (YRBS)	A seven-category ordinal measure that asked how many times the respondent drank five or more beverages in one sitting in the past 30 days
V7108 (MTF)	A six-category ordinal measure that asked how many times the respondent drank five or more drinks in a row in the past two weeks

First, load the "2013 YRBS.sav" file and look at the following:

Create a bar chart of variable "q44" by following the menu options "graphs->legacy dialogues->bar." Select the "simple bar chart" option and click the arrow to add "q44" to the category axis text box. At a glance, what does this bar graph tell us about binge drinking among high school students?

Are the data on the YRBS qualitative or quantitative? How do you know?

Write at least four research questions based on the bar graph you've created. Try to make one for each type of social research (descriptive, exploratory, explanatory, and evaluative). Think about the following: What sticks out to you in this graph? Where do you need more information? Who should the research focus on?

Explain the possible reasons (policy, academic, or personal) for why we might want to research binge drinking or the lack thereof. What organizations might be interested in this kind of research?

Triangulation refers to using multiple methods or measures to study a single research question. Let's see if we can triangulate the results from Question 1 using a different measure in the "Monitoring the Future 2013 grade 10.sav" dataset.

Create a bar chart of variable "v7108." How do the estimates of binge drinking in the YRBS compare to these results?

If there are any major differences, what do you think could explain them?

The companion Student Study Site for *Fundamentals of Research in Criminology and Criminal Justice* can be found at .

Visit the Student Study Site to enhance your understanding of the chapter content and to discover additional resources that will take your learning one step further. You can enhance your understanding of the chapters by using the comprehensive study material, which includes SAGE journal and reference articles, e-flashcards, quizzes, multimedia links, and more.

CHAPTER 2

LEARNING OBJECTIVES

Describe the importance of theory to research.

Understand the difference between deductive and inductive reasoning.

Describe the difference between a research question and a research hypothesis.

Explain how the research circle is really a research spiral.

Know the difference between an independent and dependent variable.

Define the different types of validity and generalizability.

When video of NFL player Ray Rice knocking his then-fiancée unconscious in an elevator hit the media, society got a first-hand image of intimate partner violence (IPV), which more often occurs behind closed doors than in public. Many celebrities have come forward with their stories and/or called the police for help after they have been assaulted by their partners, including Madonna, Halle Berry, Rihanna, and Evan Peters. While this media attention has increased society's awareness of IPV, it has always been a frequent crime and extremely costly, not only in terms of the physical and emotional injuries suffered by the parties involved but also in terms of shattered families. What to do about this major social problem, then, is an important policy question. For over 30 years, the criminal justice system has attempted to effectively respond to IPV and other domestic assaults in a way that best protects victims and punishes offenders.

In 1981, the Police Foundation and the Minneapolis Police Department began an experiment to determine whether immediately arresting accused spouse abusers on the spot would deter future offending incidents. For misdemeanor cases, the experimental course of action involved the random assignment of police to respond by either arresting the suspect or giving the suspect a simple warning. The experimental treatment, then, was whether the suspect was arrested, and the researchers wanted to know whether arrest was better than not arresting the suspect in reducing recidivism. The study's results, which were widely publicized, indicated that arrest did have a deterrent effect. Partly as a result of the reported results of this experiment, the percentage of urban police departments that made arrest the preferred response to complaints of domestic violence rose from 10% in 1984 to 90% in 1988 (Sherman, 1992, p. 14). Six other cities later carried out studies similar to the Minneapolis Domestic Violence Experiment (collectively, this was called the Spouse Assault Replication Program [SARP]), but from city to city, the results were mixed (Buzawa & Buzawa, 1996; Hirschel, Hutchison, & Dean, 1992; Pate & Hamilton, 1992; Sherman, 1992; Sherman & Berk, 1984). In some cities (and for some people), arrest did seem to prevent future incidents of domestic assault; in other cities, it seemed only to make matters worse, contributing to additional assault; and in still other cities, arrest seemed to have no discernible effect. After these replications of the original Minneapolis experiment, people still wondered, "Just what is the effect of arrest in reducing domestic violence cases, and how should the police respond to such cases?" The answer simply was not clear. The Minneapolis experiment, the studies modeled after it, and the related controversies provide many examples for a systematic overview of the social research process.

The first concern in criminological research—indeed, in any research—is deciding what to study. That is, how does one go about selecting an issue, problem, or question to address? A criminological is a question about some aspect of crime or deviance that the researcher seeks to answer through the collection and analysis of firsthand, verifiable, empirical data. The types of questions that can be asked are virtually limitless. For example, "Are children who are violent more likely than nonviolent children to use violence as adults?" "Does the race of a victim who is killed influence whether someone is sentenced to death rather than life imprisonment?" "Why do some kinds of neighborhoods have more crime than others? Is it due to the kinds of people who live there or characteristics of the neighborhood itself?" "Does community policing reduce the crime rate?" "Has the U.S. government's war on drugs done anything to reduce the use of illegal drugs?" So many research questions are possible in criminology that it is more of a challenge to specify what does *not* qualify as a research question than to specify what does.

That being said, specifying which research question to ask as well as pursuing its answer are no easy tasks. In fact, formulating a good research question can be surprisingly difficult. We can break the process into three stages: identifying one or more questions for study, refining the questions, and then evaluating the questions.

How does a researcher interested in criminology and criminal justice–related issues decide what to study and research?

Formulating a research question is often an intensely personal process in addition to being a scientific or professional one. Curiosity about the social world may emerge from your "personal troubles," as Mills (1959) put it, or personal experiences. Examples of these troubles or experiences could range from how you feel about injustices raised against you in your past or present to an awareness you may have that crime is not randomly distributed within a city but that there seem to be "good" or safe parts of town and "bad" or unsafe areas. Can you think of other possible research questions that flow from your own experience in the world?

Research question A question that is answered through the collection and analysis of firsthand, verifiable, empirical data

The experience of others is another fruitful source of research questions. Knowing a relative who was abused by a partner, seeing a TV special about violence, or reading a gang member's autobiography can stimulate questions about general criminological processes. Can you draft a research question based on a relative's experiences, a TV show, or a book?

The primary source of research questions for many researchers is theory. Many theoretical domains are used to inform research questions in our discipline, including sociological, psychological, and criminological theories. Some researchers spend much of their careers conducting research intended to refine an answer to one central question. For example, you may find rational choice theory to be a useful approach to understanding diverse forms of social behavior, such as crime, because you think people seem to make decisions on the basis of personal cost-benefit calculations. So you may ask whether rational choice theory can explain why some people commit crimes and others do not or why some people decide to quit committing crimes while others continue their criminal ways.

Finally, some research questions adopt a very pragmatic rationale concerning their research design. You may focus on a research question posed by someone else because doing so seems to be to your professional or financial advantage. For instance, some researchers conduct research on specific questions posed by a funding source in what is termed a *request for proposals* (RFP). (Sometimes the acronym *RFA* is used, meaning *request for applications*.) Or you may learn that the public defenders in your city are curious as to whether they are more successful in getting their clients acquitted of a criminal charge than private lawyers.

As you have no doubt guessed, coming up with interesting criminological questions for research is less problematic than focusing on a problem of manageable size. We are often interested in much more than we can reasonably investigate with our limited time and resources (or the limited resources of a funding agency). Researchers may worry about staking a research project (and thereby a grant) on a narrowly defined problem, so they commit to addressing several research questions at once and often in a jumbled fashion. It may also seem risky to focus on a research question that may lead to results discrepant with our own cherished assumptions about the social world.

The best way to avoid these problems is to develop the research question one bit at a time with a step-by-step strategy. Do not keep hoping that the perfect research question will just spring forth from your pen. Instead, develop a list of possible research questions as you go along. Narrow your list to the most interesting, most workable candidates. Repeat this process as long as it helps to improve your research questions. Keep in mind that the research on which you are currently working will likely generate additional research questions for you to answer.

In the third stage of selecting a criminological research question, you evaluate the best candidate against the criteria for good social research questions: feasibility given the time and resources available, social importance, and scientific relevance (King, Keohane, & Verba, 1994).

The research question in the Minneapolis Domestic Violence Experiment—"Does the formal sanction of police arrest versus nonarrest inhibit domestic violence?"—certainly meets the criteria of social importance and scientific relevance, but it would not be a feasible question for a student project because it would require you to try to get the cooperation of a police department.

You must be able to conduct any study within the time frame and with the resources you have. If time is limited, questions that involve long-term change—for example, "If a state has recently changed its law so that it now permits capital punishment for those convicted of murder, does it eventually see a reduction in the homicide rate over time?"—may not be feasible. This is an interesting and important question, but it is also one that requires years of data collection and research. Another issue is the people, groups, or files that you can expect to gain access to. Although experienced

researchers may be granted access to police or correctional department files to do their research, less seasoned and less well-known researchers or students may not be granted such access.

Criminological research is not a simple undertaking, so you must focus on a substantive area that you feel is important and that is important either to the discipline or for public policy. You also need to feel personally motivated to carry out the study; there is little point in trying to answer a question that does not interest you.

In addition, you should consider whether the research question is important to other people. Will an answer to the research question make a difference for society? Again, the Minneapolis Domestic Violence Experiment is an exemplary case. If that study showed that a certain type of police response to domestic violence reduced the risk of subsequent victimization, a great deal of future violence could be prevented. But clearly, criminology and criminal justice researchers are far from lacking important research questions.

Every research question in criminology should be grounded in the existing empirical literature. By *grounded,* we mean the research we do must be informed by what others before us have done on the topic. Whether you formulate a research question because you have been stimulated by an academic article, because you want to investigate a current public policy problem, or because you are motivated by questions regarding your own personal experiences, you must turn to existing criminological literature to find out what has already been learned about this question. (Appendix A explains how to find information about previous research using both printed and computer-based resources.)

For example, the Minneapolis experiment was built on a substantial body of contradictory theories about the impact of punishment on criminality (Sherman & Berk, 1984). Deterrence theory predicted that because it was a more severe penalty, arresting people would better deter them from repeat offenses than not arresting them. Labeling theory, on the other hand, predicted that arrest would make repeat offenses more likely because it would stigmatize offenders. Studies among adults and nonexperimental research had not yielded consistent findings about the effects of arrest on recidivism in domestic violence cases. Clearly, the Minneapolis researchers had good reason to perform another study. Prior research and theory also helped them develop the most effective research design.

We have already pointed out that criminological theory can be a rich source of research questions. What deserves more attention at this point is the larger role of in research. We have also noted that research investigating criminal justice and criminology-related questions relies on many theories, including criminological, sociological, and psychological theories. These theories do many things:

They help us explain or understand things, such as why some people commit crimes or commit more crimes than others, why some people quit committing crimes and others continue, and what the expected effect of good families, harsh punishment, or other factors might be on crime.

They help us make predictions about the criminological world: "What would be the expected effect on the homicide rate if we employed capital punishment rather than life imprisonment?" "What would be the effect on the rate of property crimes if unemployment were to substantially increase?"

They help us organize and make sense of empirical findings in a discipline.

They help guide future research.

They help guide public policy: "What should we do to reduce the level of domestic violence?"

Theory A logically interrelated set of propositions about empirical reality; examples of criminological theories include social learning, routine activities, labeling, general strain, and social disorganization theory

Social scientists such as criminologists, who connect their work to theories in their discipline, can generate better ideas about what to look for in a study and develop conclusions with more implications for other research. Building and evaluating theory are therefore among the most important objectives of a social science such as criminology.

For centuries, scholars have been interested in developing theories about crime and criminals. Sometimes these theories involve very fanciful ideas that are not well developed or organized, whereas at other times, they strike us as being very compelling and well organized. Theories usually contain what are called . In criminology, these theoretical constructs describe what is important to look at to understand, explain, and predict crime. Some criminological theories reflect a substantial body of research and the thinking of many social scientists; others are formulated in the course of one investigation. A few have been widely accepted, at least for a time; others are the subject of vigorous controversy, with frequent changes and refinements in response to criticism and new research.

We can use the studies of the police response to domestic assault to illustrate the value of theory for social research. Even in this very concrete and practical matter, we must draw on social theories to understand how people act and what should be done about those actions. Consider three action options that police officers have when they confront a domestic assault suspect (Sherman & Berk, 1984, p. 263). Fellow officers might encourage separation to achieve short-term peace, police trainers might prefer mediation to resolve the underlying dispute, and some groups may advocate arrest to protect the victim from further harm. None of these recommendations is really a theory, but each suggests a different perspective on crime and legal sanctions. Remember that social theories do not provide the answers to research questions. Instead, social theories suggest the areas on which we should focus and the propositions that we should consider for a test. That is, theories suggest testable hypotheses about phenomena, and research verifies whether those hypotheses are true. In fact, one of the most important requirements of theory is that it be *testable*, or what philosophers of science call ; theoretical statements must be capable of being proven wrong. If a body of thought cannot be empirically tested, it is more likely philosophy than theory.

The original Minneapolis experiment (Sherman & Berk, 1984) was actually a test of predictions derived from two alternative theories concerning the impact of punishment on crime: deterrence theory and labeling theory.

Deterrence theory presumes that human beings are at least marginally rational beings who are responsive to the expected costs and benefits of their actions. Committing a crime nets certain benefits for offenders; therefore, if we want to inhibit crime, there must be a compensating cost that outweighs the potential benefits associated with the offense. One cost is the criminal sanction (arrest, conviction, punishment). Deterrence theory expects punishment to inhibit crime in two ways: (1) General deterrence is operating when people believe that they are likely to be caught and punished for criminal acts. Those who are punished serve as examples for those who have not yet committed an offense but who might be thinking of what awaits them should they engage in similarly punishable acts. (2) Specific deterrence occurs when persons who are punished decide not to commit another offense so they can avoid further punishment (Lempert & Sanders, 1986, pp. 86–87). Deterrence theory leads to the prediction that arresting spouse abusers will reduce the likelihood of their reoffending compared with a less serious sanction (not being arrested but being warned or counseled).

Labeling theory distinguishes between primary deviance (the acts of individuals that lead to public sanctions) and secondary deviance (the deviance that occurs in response to public sanction) (Hagan, 1994, p. 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 he or she 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 (Tannenbaum, 1938). This theory suggests that persons arrested for IPV are more likely to reoffend than those who are caught but not punished, because the formal sanction of arrest is more stigmatizing than being warned or counseled. This prediction about the effect of formal legal sanctions is the reverse of the deterrence theory prediction.

Theoretical constructs Parts of a theory that describe what is important to look at to understand, explain, predict, and "do something about" the subject

Falsifiable Being capable of being proven wrong; that is, having the capacity to be empirically tested and falsified

Two Social Theories and Their Predictions About the Effect of Arrest for Intimate Partner Violence

	Rational Choice Theory	*Symbolic Interactionism*
Theoretical assumption	People's behavior is shaped by calculations of the costs and benefits of their actions.	People give symbolic meanings to objects, behaviors, and other people.
Criminological component	Deterrence theory: People break the law if the benefits of doing so outweigh the costs.	Labeling theory: People label offenders as deviant, promoting further deviance.
Prediction (effect of arrest for domestic assault)	Abusing spouse, having seen the costs of abuse (namely, arrest), decides not to abuse again.	Abusing spouse, having been labeled as "an abuser," abuses more often.

Exhibit 2.1 summarizes how these general theories relate to the question of whether or not to arrest spouse abusers.

Does either deterrence theory or labeling theory make sense to you as an explanation for the impact of punishment? Do they seem consistent with your observations of social life? More than a decade after Sherman and Berk's (1984) study, Paternoster, Brame, Bachman, and Sherman (1997) decided to study punishment of domestic violence from a different perspective. They turned to a social psychological theory called *procedural justice theory,* which explains law-abiding behavior as resulting from a sense of duty or morality (Tyler, 1990). People obey the law from a sense of obligation that flows from seeing legal authorities as moral and legitimate. From this perspective, individuals who are arrested seem less likely to reoffend if they are treated fairly, irrespective of the outcome of their case, because fair treatment will enhance their view of legal authorities as moral and legitimate. Procedural justice theory expands our view of the punishment process by focusing attention on how police act and how authorities treat subjects rather than only on the legal decisions they make. Thus, it gives us a sense of the larger importance of the research question.

Are you now less certain about the likely effect of arrest for IPV? Will arrest decrease recidivism because abusers do not wish to suffer from legal sanctions again? Will it increase recidivism because abusers feel stigmatized by being arrested and thus are more likely to act as criminals? Or will arrest reduce abuse only if the abusers feel they have been treated fairly by the legal authorities? By posing such questions, social theory makes us much more sensitive to the possibilities and so helps us to design better research. Before, during, and after a research investigation, we need to keep thinking theoretically.

All social research, including criminological research, is the effort to connect theory and empirical data. As Exhibit 2.2 shows, theory and data have a two-way, mutually reinforcing relationship.

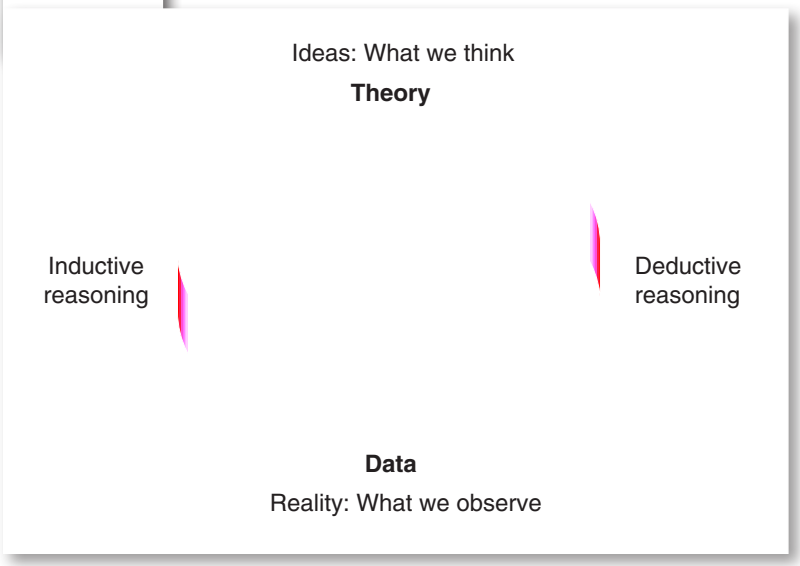
Researchers may make this connection by starting with a social theory and then testing some of its implications with data. This is the process of ; it is most often the strategy used in quantitative methods. Alternatively, researchers may develop a connection between social theory and data by first collecting the data and then developing a theory that explains the patterns in the data. This is and is more often the strategy used in qualitative methods. As you'll see, a research project can draw on both deductive and inductive strategies.

Deductive reasoning The type of reasoning that moves from the general to the specific

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

Both deductive reasoning and inductive reasoning are essential to criminologists. We cannot test an idea fairly unless we use deductive reasoning, stating our expectations in advance and then designing a way to test the validity of our claims. A theory that has not survived these kinds of tests can be regarded only as very tentative.

The Links Between Theory and Data



Yet theories, no matter how cherished, cannot always make useful predictions for every social situation or research problem that we seek to investigate. We may find unexpected patterns in the data we collect, called
or . In either situation, we should reason inductively, making whatever theoretical sense we can of our unanticipated findings. Then, if the new findings seem sufficiently important, we can return to deductive reasoning and plan a new study to formally test our new ideas.

This process of conducting research, moving from theory to data and back again or from data to theory and back again, can be characterized as a . Exhibit 2.3 depicts this circle. Note that it mirrors the relationship between theory and data shown in Exhibit 2.2 and comprises three main research strategies: deductive research, inductive research, and descriptive research.

Serendipitous findings (anomalous findings) Unexpected patterns in data that stimulate new ideas or theoretical approaches

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

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

Hypothesis A tentative statement about empirical reality involving the relationship between two or more variables

Example of a hypothesis The higher the level of poverty in a community, the higher its rate of crime

Variable A characteristic or property that can vary (take on different values or attributes)

Constant A number that has a fixed value in a given situation; a characteristic or value that does not change

Independent variable A variable that is hypothesized to cause, or lead to, variation in another variable

As Exhibit 2.3 shows, proceeds from theorizing to data collection and then back to theorizing. In essence, a specific expectation is deduced from a general premise and then tested.

Notice that a theory leads first to a , which is a specific implication deduced from the more general theory. Researchers actually test a hypothesis, not the complete theory itself, because theories usually contain many hypotheses. A hypothesis proposes a relationship between two or more theoretical constructs or variables. A is a characteristic or property that can vary. A is a characteristic or a property that cannot vary. For example, if we were to conduct some research in a male adult penitentiary, the theoretical construct "type of crime committed" would be a variable because persons will have been incarcerated for different offenses (one person for armed robbery, another for rape, etc.). However, the theoretical construct "gender" would be a constant because every inmate in the penitentiary would be male.

Variables are of critical importance in research because, in a hypothesis, variation in one variable is proposed to predict, influence, or cause variation in the other variable. The proposed influence is the ; its effect or consequence is the . Another way to think about this distinction is to say "the dependent variable 'depends' on the independent variable." After the researchers formulate one or more hypotheses and develop research procedures, they collect data with which to test the hypothesis.

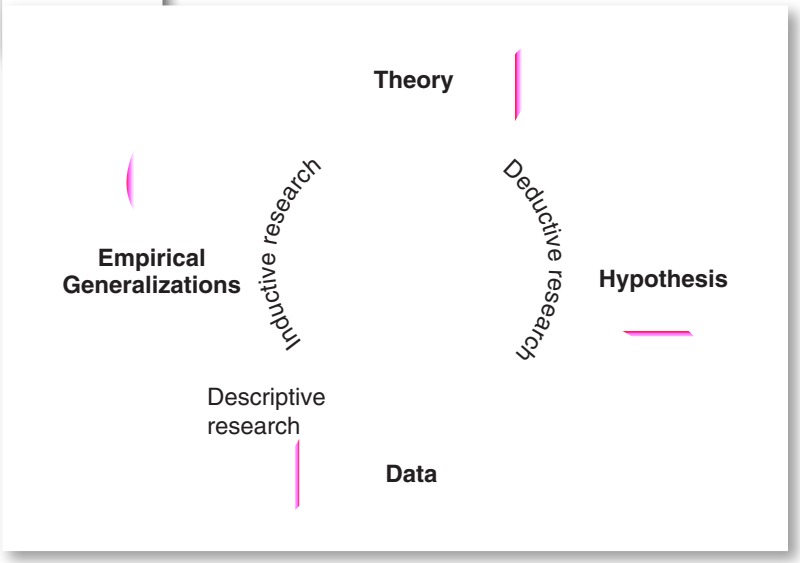
Hypotheses can be worded in several different ways, and identifying the independent and dependent variables is sometimes difficult. When in doubt, try to rephrase the hypothesis as an if-then statement: "If the independent variable increases (or decreases), then the dependent variable increases (or decreases)."

Exhibit 2.4 presents several hypotheses with their independent and dependent variables and their if-then equivalents.

In contrast to deductive research, begins at the bottom of the research circle and then works upward (see Exhibit 2.3). The inductive researcher begins with specific data, which are then used to develop (induce) a general explanation (a theory) to account for the data. The patterns in the data are then summarized in one or more .

The motive for inductive research is exploration. For example, in the last chapter, you read about an exploratory study of how schools averted mass shootings. In strictly inductive research, researchers already know what they have found when they start theorizing. The result can be new insights and provocative questions. But the adequacy of an explanation formulated after the fact is necessarily less certain than that of an explanation presented prior to the collection of data. Every phenomenon can always be explained in some way. Inductive explanations are thus more trustworthy if they are tested subsequently with deductive research.

The Research Circle



Example of an independent variable Poverty level in a community (percent of population living below the poverty level)

Examples of Hypotheses

Original Hypothesis	*Independent Variable*	*Dependent Variable*	*If-Then Hypothesis*
1. The greater the social disorganization in a community, the higher the rate of crime.	Social disorganization	Crime rate	If social disorganization is higher, then the crime rate is higher.
2. As one's self-control gets stronger, the fewer delinquent acts one commits.	Self-control	Self-reported delinquency	If self-control is higher, then the number of delinquent acts is lower.
3. As the unemployment rate in a community decreases, the community rate of property crime decreases.	Unemployment rate	Rate of property crime	If the unemployment rate is lower, then the rate of property crime is lower.
4. As the level of discrepancy between one's aspirations and expectations increases, one's level of strain increases.	Discrepancy level between one's aspirations and expectations	Level of strain	If the level of discrepancy between one's aspirations and expectations is high, then the level of strain is high.
5. Crime is lower in those communities where the police patrol on foot.	Presence of foot patrols	Level of crime	If a community has police foot patrols, then the level of crime is lower.

The Sherman and Berk (1984) study of domestic violence is a classic example of how the research circle works. In an attempt to determine ways to prevent the recurrence of IPV, the researchers repeatedly linked theory and data, developing both hypotheses and empirical generalizations.

The first phase of Sherman and Berk's (1984) study was designed to test a hypothesis. According to deterrence theory, punishment will reduce *recidivism*, or repeated offending. From this theory, Sherman and Berk deduced a specific hypothesis that arrest for spouse abuse would reduce the risk of repeat offenses. In this hypothesis, arrest 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 tested their hypothesis by setting up an experiment in which the police responded to the complaints of spouse abuse in one of three ways: (1) arresting the offender, (2) separating the spouses without making an arrest, or (3) simply warning 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 without any arrest. 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 (see Exhibit 2.5).

Because of their doubts about the generalizability of their results, Sherman, Berk, and other researchers began to journey around the research circle again with funding from the National Institute of Justice for (repetitions) of the experiment in six more cities. These replications used the same basic research approach but with some improvements. The random assignment process was tightened in most of the cities so that police officers would be less likely to replace the assigned treatment with a treatment of their own choice. In addition, data were collected about repeat violence against other victims as well as against the original complainant. Some of the replications also examined different aspects of the arrest process to see whether professional counseling helped and whether the length of time spent in jail after the arrest mattered at all.

Dependent variable A variable that is hypothesized to change or vary depending on the variation in another variable

Example of a dependent variable The rate of crime in a community per 1,000 residents

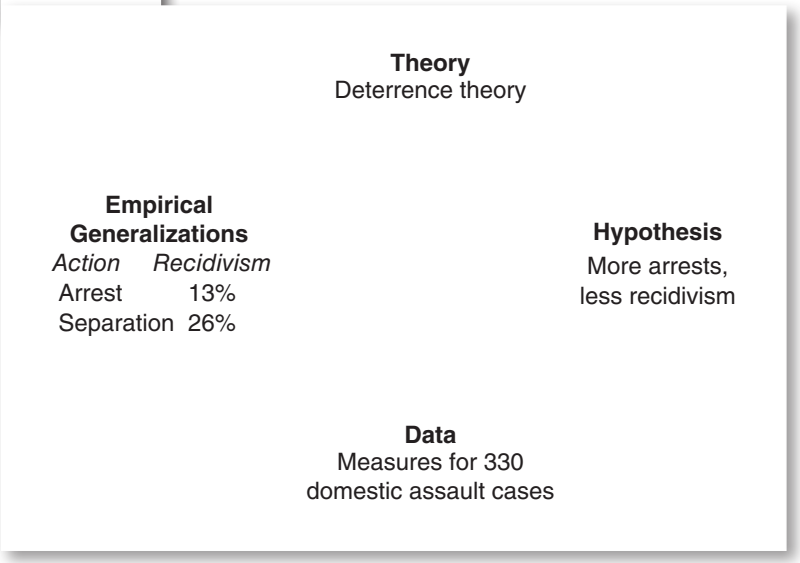
Inductive research The type of research in which specific data are used to develop (induce) a general explanation

Empirical generalizations Statements that describe patterns found in data

Replications When a research study is conducted again using the same research methods to answer the same research question to determine if the original findings occur again

By the time results were reported from five of the cities in the new study, a problem was apparent. In three of the cities—Omaha, Nebraska; Charlotte, North Carolina; and Milwaukee, Wisconsin—researchers were finding long-term increases in domestic violence incidents among arrestees. But in two—Colorado Springs, Colorado, and Dade County, Florida—the predicted deterrent effects seemed to be occurring (Sherman, Smith, Schmidt, & Rogan, 1992). Sherman and his colleagues had now traversed the research circle twice in an attempt to answer the original research question, first in Minneapolis and then in six other cities. But rather than leading to more confidence in deterrence theory, the research results were questioning it. Deterrence theory now seemed inadequate to explain empirical reality, at least as the researchers had measured this reality. So the researchers began to reanalyze the follow-up data from several cities in an attempt to explain the discrepant results, thereby starting around the research circle once again (Berk, Campbell, Klap, & Western, 1992; Pate & Hamilton, 1992; Sherman, Smith, Schmidt, & Rogan, 1992).

The Research Circle: Minneapolis Domestic Violence Experiment



As we noted above, inductive research begins with specific data, which are then used to develop (induce) a general explanation (a theory) to account for the data. Another way to think of this process is represented in Exhibit 2.6. In deductive research, reasoning from specific premises results in a conclusion that a theory is supported, but in inductive research, the identification of similar empirical patterns results in a generalization about some social process.

As we noted, inductive reasoning often enters into deductive research when we find unexpected patterns, called or , in the data we have collected for testing a hypothesis.

The domestic violence research took an inductive turn when Sherman and the other researchers began trying to make sense of the differing patterns in the data collected in the different cities. Could systematic differences in the samples or in the implementation of arrest policies explain the differing outcomes? Or was the problem an inadequacy in the theoretical basis of their research? Was deterrence theory really the best way to explain the patterns in the data they were collecting?

Deductive and Inductive Reasoning

Deductive

Premise 1: *All unemployed spouse abusers recidivate.*
Premise 2: *Joe is an unemployed spouse abuser.*
Conclusion: **Joe will recidivate.**

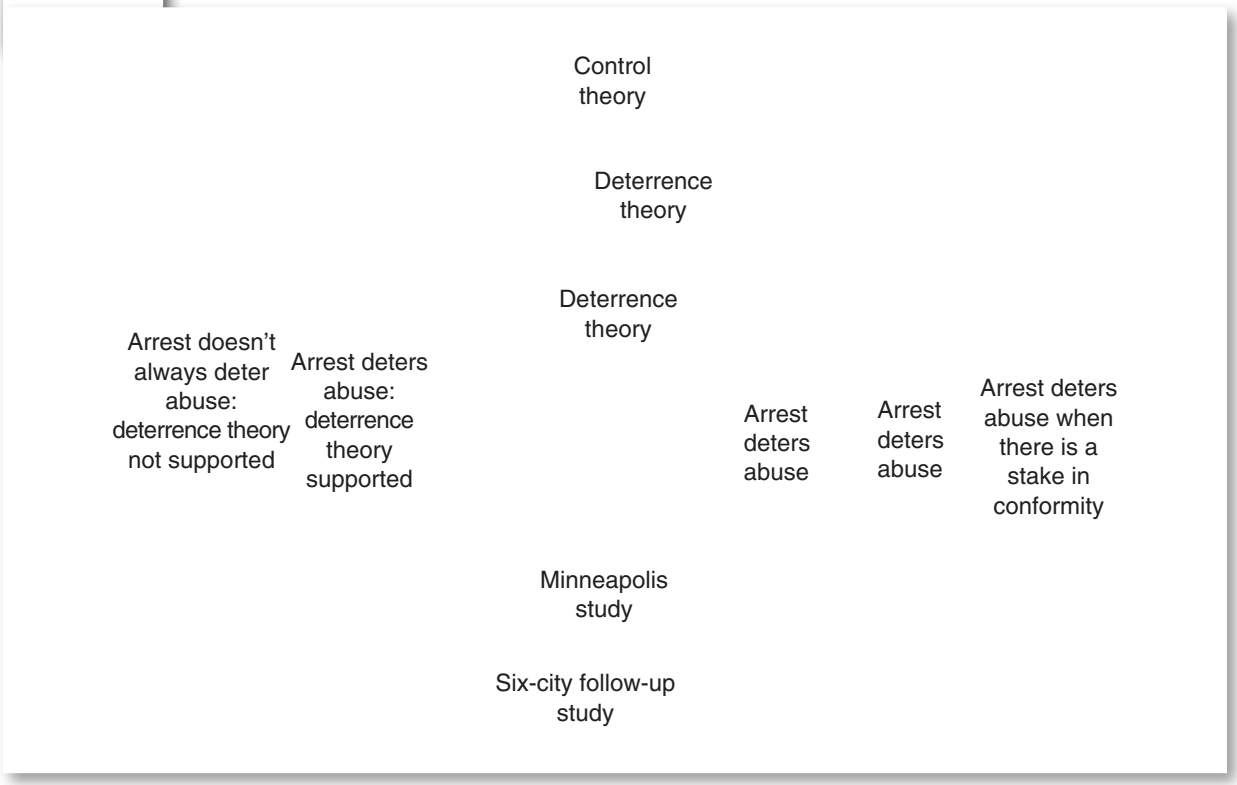
Inductive

Evidence 1: *Joe, an unemployed spouse abuser, recidivated.*
Evidence 2: *Harold, an unemployed spouse abuser, recidivated.*
Evidence 3: *George, an employed spouse abuser, didn't recidivate.*
Conclusion: **All unemployed spouse abusers recidivate.**

Pate and Hamilton (1992) found that individuals who were married and employed were deterred from repeat offenses by arrest, but individuals who were unmarried and unemployed were actually more likely to commit repeat offenses if they were arrested. What could explain this empirical pattern? The researchers turned to *control theory*, which predicts that having a "stake in conformity" (resulting from inclusion in social networks at work or in the community) decreases a person's likelihood of committing crimes (Toby, 1957). The implication is that people who are employed and married are more likely to be deterred by the threat of arrest than are those without such stakes in conformity. And this is indeed what the data revealed.

Now the researchers had traversed the research circle almost three times, a process perhaps better described as a spiral (see Exhibit 2.7). The first two times, the researchers had traversed the research circle in a deductive, hypothesis-testing way. They started with theory and then deduced and tested hypotheses. The third time, they were more inductive: They started with empirical generalizations from the data they had already obtained and then turned to a new theory to account for the unexpected patterns in the data. At this point, they believed that deterrence theory made correct predictions, given certain conditions, and that another theory, *control theory*, might specify what these conditions were.

The Research Spiral: Domestic Violence Experiment



This inductive step in their research made for a more complex, but also conceptually richer, picture of the impact of arrest on domestic violence. The researchers seemed to have come closer to understanding how to inhibit domestic violence. But they cautioned us that their initial question—the research problem—was still not completely answered. Employment status and marital status do not solely measure the strength of social attachments; they are also related to how much people earn and the social standing of victims in court. So maybe social ties are not really what make arrest an effective deterrent to domestic violence. The real deterrent may be cost-benefit calculations ("If I have a higher income, jail is more costly for me") or perceptions about the actions of authorities ("If I am a married woman, judges will treat my complaint more seriously"). Additional research was needed (Berk et al., 1992).

What other factors may explain the discrepancy in the findings? In 1997, Paternoster et al. reexamined data from one of the replication sites in Milwaukee to test hypotheses derived from yet another theory, procedural justice theory. As explained earlier in this chapter, procedural justice theory predicts that people will comply with the law out of a sense of duty and obligation if they are treated fairly by legal authorities. In the Milwaukee sample, arrest had a criminogenic effect: Those who were arrested were subsequently more likely to abuse their spouses than those who were simply warned. Paternoster et al. thought that this effect might have been due to the way subjects were treated when they were arrested rather than simply to the fact that they were arrested. One of their hypotheses spells out the reasoning: