

Pearson New International Edition

Social Research Methods:
Qualitative and Quantitative Approaches
W. Lawrence Neuman
Seventh Edition



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Why Do Research?

Alternatives to Social Science Research
What Research Involves—A Scientific Approach
Varieties of Social Research

Steps in the Research Process
Why Learn How to Conduct Social Research?
Conclusion

The sociologist, then, is someone concerned with understanding society in a disciplined way. The nature of this discipline is scientific. This means that what the sociologist finds and says about the social phenomena he studies occurs within a certain rather strictly defined frame of reference.

—Peter Berger, *An Invitation to Sociology*, p. 16

I wrote this text to help you learn about how social scientists do research and so you can conduct your own studies. I consider two main issues in this chapter: why you should learn about doing social research and the basics of what social science research is all about.

Social science research is pervasive, and it affects your daily life as well as that of your family, friends, neighbors, and co-workers. Findings from social science studies appear on broadcast news programs, in magazines and newspapers, and on many Web sites and blogs. They cover dozens of topics and fields: law and public safety, schooling, health care, personal and family relations, political issues, and business activities as well as international and social trends. We use the knowledge and principles of social science research, directly or indirectly, as we engage in relationships with family, friends, and co-workers, participate in community life or public policy, and make daily decisions in business, professional life, and health care. Social research is not just for college classrooms and professors; high school teachers, parents, business owners, advertis-

ers, managers, administrators, officials, service providers, health care professionals, and others use its findings and principles. They use them to raise children, reduce crime, manage health concerns, sell products or services, digest news events, and so forth. There is little doubt about the importance and centrality of social science research. Despite scattered criticism to the contrary, research is highly relevant for understanding social life generally and to the decisions you make each day.

To see the practical relevance of social research, let us consider a couple raising a three-year-old child. One study (Wrigley and Derby, 2005) found that paid child care is quite safe but also discovered striking differences in fatality rates across various types of care. Center-based care is far safer than care provided in private homes. Another study (Bridges et al., 2007) showed that center-based care significantly raises a child's reading and math scores, but it has a negative effect on socio-behavioral measures (e.g., the child exhibits less cooperation, more aggression). Children who start at ages two to three get the largest benefit rather

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than younger or older children. Active parental involvement with a child lessens any negative behavioral consequences from child care. Another study (Love et al., 2003) showed that child care centers vary widely in quality. Quality of care makes a bigger difference than amount of time in care or whether parents or a care center is providing the care. Another study (Sosinsky, Lord, and Zigler, 2007) learned that care center quality was generally higher in nonprofit, nonreligiously affiliated centers than other types. Based on these findings, a couple may decide to look for a specific type of child care center, devote time to checking into the quality of care it offers, and make special efforts to encourage their child's social skill development. The studies are not only relevant for specific parents but also have implications for public policy and how a community addresses child care issues.

Social science research yields valuable information and expands our understanding, but it is not 100 percent foolproof. It does not guarantee perfect results every time or offer "absolute truth." This may be why some people distrust research-based knowledge or why some people, including a few media commentators, even ridicule professional researchers and study results. Despite some derision, in a head-to-head comparison with the alternative ways we can learn about the world and make decisions, research readily wins hands-down. This is why professionals, educated people, and responsible leaders consistently turn to the methods, principles, and findings of social research when they want to learn more or make important decisions.

This text considers both the methodology and methods of social science research. The terms may seem to be synonyms, but methodology is broader and envelops methods. *Methodology* means understanding the entire research process—including its social-organizational context, philosophical assumptions, ethical principles, and the political impact of new knowledge from the research enterprise. *Methods* refer to the collection of specific techniques we use in a study to select cases, measure and observe social life, gather and refine data, analyze data, and report on results. The two are closely linked and interdependent.

Reading and doing social research can be exciting: It is a process of discovery in which we learn many new things. Doing social science research requires persistence, personal integrity, tolerance for ambiguity, interaction with others, and pride in doing top-quality work. It also requires logical thinking, carefully following rules, and repeating steps over and over again. In the research process, we join theories or ideas with facts in a systematic way. We also use our creativity. To conduct a study, we must organize and plan. We need to select research methods appropriate to a specific question. We must always treat the study participants in an ethical or moral way. In addition, we need to communicate to others how we conducted a study and what we learned from it.

In this chapter, we consider some alternatives to social science research and why research is preferred. We next examine how the enterprise of scientific research works, including the steps in doing a research study and types of social science studies.

ALTERNATIVES TO SOCIAL SCIENCE RESEARCH

In this section, we look at four commonly used alternatives to social science research that many people rely on to acquire knowledge and make decisions:

- Personal experience and common sense
- Experts and authorities
- Popular and media messages
- Ideological beliefs and values

Knowledge from Personal Experience and Common Sense

If something happens to us, if we personally see it or experience it, we probably accept it as true. Personal experience or "seeing is believing" is a powerful type of knowledge. Unfortunately, it can also lead us astray. Something similar to an optical illusion or mirage can occur. What appears to be true actually is due to an illusion, yet the power of immediacy and direct personal contact is so strong that we easily fall for illusions without even realizing it.

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This is why many people insist on believing what they personally experience rather than what they learn by reading a carefully conducted research study that was designed to avoid the errors of personal experience. This is especially true when research studies contradict what personal experience or common sense tell us. Moreover, errors of personal experience reinforce each other. A few people even purposely use the distortions of personal experience to mislead others through propaganda, cons or fraud, magic tricks, political manipulation, and advertising gimmicks.

Entire subfields of research are devoted to uncovering the ways we misjudge, over- or underestimate, and make mistakes. Here is an example: Women tend to stick with skin creams that do not work. Moreover, the less effective a beauty product or treatment, the more likely they will keep using it. These are the findings of a study of 300 women, ages 27 to 65, who were trying to achieve a more youthful appearance by using creams, vitamins, and other beauty treatments. The findings were not what we might expect: The women were most loyal to products and treatments when they didn't work! Among women who felt that the treatments were not working, 27 percent stopped using them. Among women who felt the treatments were successful, 55 percent stopped using them. The researchers think the women keep doing something that did not work because when people don't feel good about themselves, fear is a more powerful motivator than success. Fear about looking older spurred the women to keep trying even when products don't work.¹

While studies that uncover our tendency to misjudge are fun to read, they point to a general principle: Everyday reasoning and perceptions are imperfect and subject to error. More significantly, we rarely notice or catch such errors right away if at all.

Knowledge from personal experience, common sense “facts,” and reasoning might be correct, but they can lead us astray (see Expansion Box 1, What We Think We Will Do and What We Actually Do). For example, common sense says that distributing free condoms in high schools will encourage teens to engage in sexual activity or that imposing harsh punishment, such as the death penalty,

EXPANSION BOX 1

What We Think We Will Do and What We Actually Do

Social scientists note a paradox: Most people strongly condemn overt racism, yet acts of blatant racism still occur. To examine this, Kawakami and associates (2009) conducted an experiment. They thought perhaps people inaccurately estimate what they would feel and do if they were to witness racism. To examine this, they asked non-Black students how they would feel and what they thought they would do if a racist act occurred. Most predicted that they would be very upset. However, when the researchers staged a racist act in front of them, most of the students showed little distress. Most said they would avoid a person who made a crude racist comment, but again what people said did not match their actual behavior. Study results suggest that one reason racism continues is that many people who believe they would feel upset or take action actually respond with indifference when an act of racism actually occurs. Apparently, we are not good at predicting how we will act in real situations when they happen.

decreases violent crimes—yet numerous studies suggest that both of these beliefs are false. Most people think an eyewitness account of a crime is ideal, but studies show they are highly inaccurate. Many of us worry about tragic accidents and horrific events, such as a plane crash or a school shooting. However, we tend to worry about the “wrong” things because our estimates of something happening are far from actual probabilities based on careful studies. Likewise, we can be misled by surface appearances. Many people purchased a large, powerful-looking SUV for its safety at a time when crash tests and accident records showed SUVs to be less safe than many meeker looking cars.²

Erroneous “common sense” misperceptions have real consequences. Moreover, the media often repeat and spread the misperceptions, schools or businesses make decisions based on them, and lawmakers and politicians advance new laws or policies founded on them. We often make the following

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five errors in our everyday decisions, but the research process tries to reduce such errors.

- Overgeneralization
- Selective observation
- Premature closure
- Halo effect
- False consensus

1. Overgeneralization occurs when we have some believable evidence and then assume that it applies to many other situations as well. Note the word “over.” Generalization can be appropriate but it is limited. We can generalize a small amount of evidence to a broader situation but only if we do so with great care. Unfortunately, many of us tend to generalize far beyond what is acceptable with limited evidence. We often generalize from what we know to unknown areas. For example, over the years, I have personally known five people who are blind. All of them were very outgoing and friendly. Can I conclude that all people who are blind are friendly? Do the five people with whom I had personal experience fully represent all people on the planet who are blind?

2. Selective observation is slightly different than overgeneralization. It occurs when we take special notice of certain people or events and then generalize from them. Most often we focus on particular cases or situations, especially when they fit preconceived ideas. We also tend to seek out

evidence that confirms what we already believe. At the same time, most of us tend to overlook the entire range of cases. We often dismiss contradictory information as being an exception we can ignore. For example, I believe people who are overweight are more outgoing and friendly than thin people. My belief comes from stereotypes learned from my parents and media sources. I observe people who are overweight and, without being aware, pay more attention to their smiling, laughing, and so on. I notice thin people more when they are looking serious, distracted, or angry. Without realizing it, I notice people and situations that reinforce my preconceived way of thinking. Studies also document our tendency to “seek out” and distort memories to make them more consistent with what we already think.

3. Premature closure operates with and reinforces the first two errors. It occurs when we feel we have the answer and no longer need to listen, seek information, or raise questions. For practical purposes, at some point, we need to stop gathering information and come to a decision. Unfortunately, most of us are a little lazy or get a little sloppy. We gather a small amount of evidence or look at events for a short time and then think we have it figured out. We look for evidence to confirm or reject an idea and stop after getting a small amount of evidence and jump to conclusions.

4. The halo effect occurs when we overgeneralize from what we believe to be highly positive or prestigious. We give a halo to, or a positive reputation to, things or people we respect. This halo “rubs off” on other things or people about which we know little. Thus, I pick up a report by a person from a prestigious university, say, Harvard or Cambridge University. I assume that the author is smart and talented, and I expect the report to be excellent. I do not make the same assumption about a report written by someone from Unknown University. I form an opinion in advance, and I do not approach each report on its own merits alone. Perhaps a celebrity or person I trust endorses a product or political candidate about which I know little. I use my positive feelings as a substitute for doing the work of finding out for myself or as a shortcut when making decisions.

Overgeneralization Statement that goes far beyond what can be justified based on the data or empirical observations that one has.

Selective observation Process of examination in a way that reinforces preexisting thinking rather than in a neutral and balanced manner.

Premature closure Act of making a judgment or reaching a decision and ending an investigation before gathering the amount or depth of evidence required by scientific standards.

Halo effect Occurrence that allows the prior reputation of persons, places, or things to color one’s evaluations rather than evaluating all in a neutral, equal manner.

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5. **False consensus** is a psychological effect documented by dozens of studies (Marks and Miller, 1987). It suggests that we are not good at distinguishing between what we personally think and what we think most other people believe. In short, we tend to see the views of most other people as being similar to our own views. This is not a matter of purposely conforming to and copying a crowd perspective. Rather, most of us feel that our own views are “normal” or “ordinary” in comparison with others. While this might be true, we greatly overestimate how much our views match those of other people. In terms of social events and issues, studies suggest that most of us are not very good at judging the thoughts of people around us.

Social research helps address the errors of personal experience. Research standards, rules, and principles are designed to reduce the misjudgment, bias, and distorted thinking that frequently occurs with personal experience.

Knowledge from Experts and Authorities

Most of what we know probably comes from our parents, teachers, and experts as well as from books, film, television, the Internet, and other media. Often we accept something as being true because someone with expertise or in a position of authority says it is so or because it appears in an authoritative, trusted source. This is using authority as a basis of knowledge. In many ways, relying on the wisdom of experts and authorities is a quick, simple, and inexpensive way to learn something. An expert may spend a great amount of time to learn something, and we can benefit from that person’s experience and efforts.

Relying on experts has limitations, and it is easy to overestimate someone’s expertise. Authorities may speak on fields they know little about; they can be plain wrong. Someone with expertise in one area may extend his or her real authority to an unrelated area. Using the halo effect, an expert on one area may illegitimately act as an authority in a different area. Have you ever seen commercials in which a movie star or football hero tries to convince you to buy a product?

Who decides who is or is not a genuine expert or authority? A person might become a “senior fellow” or “adjunct scholar” in a private “think tank”

False consensus A tendency to project one’s way of thinking onto other people. In other words, the person assumes that everyone else thinks like he or she does.

with an impressive name, such as the Center for the Scientific Study of X. Some think tanks are legitimate research centers, but many are fronts for wealthy special-interest groups who want to engage in advocacy politics. No regulations control the titles of think tanks, and anyone can become a “scholar” in the group. Think tanks enable an “expert” to make authoritative statements to the mass media, giving the impression of being neutral and knowledgeable. Such people may lack real expertise and make statements based on opinion or ideology, not on research.³ Later in this chapter, you will read about how the scientific community operates and how it determines who is a genuine expert.

Even if we locate legitimate experts in a specific field, they may disagree. Perhaps you have heard the dozens of contradictory and confusing research-based recommendations about health and diet. You might ask what is so great about research if there is so much disagreement. This situation happens because much of what fills the mass media using the words “research” or “scientific” does not involve scientific research. Unfortunately, the media often use “research” when technically no real research backs a statement. Nonetheless, scientists or experts do not agree 100 percent of the time. In many areas—the best diet, health practice, public policy, or climate change—there is some disagreement. Later in this chapter, you will read about the principles of science and the operation of the scientific community and see how disagreement arises and is resolved as part of the process of scientific research.

More than finding an expert, it is important for us to learn how to think independently and evaluate research on our own. Always relying on experts and authorities is not consistent with the principles of a free, democratic society. Experts might promote ideas that strengthen their power and position. We lose the ability to decide for ourselves if we follow only the authorities. This is a reason to learn about research and acquire the skills so we can evaluate strong from weak studies.

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Knowledge Based on Popular and Media Messages

Beyond relying on common sense, personal experience, and experts, we may try to extend our knowledge by talking to others and picking up what we can from the media. This is a good idea, but it has serious limitations. Talking to others may be helpful, but studies have found that most people are weak with regard to scientific literacy, geographic knowledge, and clear, logical thinking. This is true even in a rich, advanced, and educated country like the United States in the twenty-first century. (See Expansion 2, Scientific Literacy Discussion later in this chapter.) Our ability to use advanced technology (an iPhone, geographic positioning system, or car with advanced equipment) does not mean we generally think in a rational, scientific way. A 2006 survey of young men and women ages 18–24 found about half could not locate the states of New York or Ohio on a U.S. map (50% and 43%, respectively) and a majority (63%) could not find Iraq on a map of the Middle East despite nearly constant news coverage since the U.S. invasion in March 2003. Large proportions of the U.S. population believe in phenomena that science rejects, such as UFOs (34%), horoscopes and astrology (31%), ghosts and goblins (51%), witches (34%), or a devil (61%).⁴

Average levels of formal schooling have risen, but many people lack factual knowledge, rely on inaccurate information, or cling to nonlogical thinking. Some people go through schooling but learned little or do not continue to apply the knowledge, skills, or thinking they acquired in their school years later in their daily life or in job decisions. Also, many people “follow the herd,” or rely on mass opinion. The mass media often echoes mass opinion without serious evaluation. As you know well, just because most people believe something is true does not make it true. However, many of us just follow “what most other people think” even though it might be wrong.

Many of us rely on the mass media (i.e., film, television, newspapers, magazines, and Internet sources) for information. Unfortunately, the media tend to jumble together different types of statements—ones that are based on sound research and ones without real backing. In addition, the

media can distort social issues. The media tend to perpetuate the cultural myths or create “hype” that a serious social problem exists when it may not. We may hear of a terrible problem in the mass media, but with closer inspection and a little research, we may learn that it was seriously overstated.

Road Rage Example

Americans hear a lot about road rage. *Newsweek* magazine, *Time* magazine, and newspapers in most major cities have carried headlines about it. Leading national political officials have held public hearings on it, and the federal government gives millions of dollars in grants to law enforcement and transportation departments to reduce it. A California psychologist now specializes in this disorder and has appeared on several major television programs to discuss it.

The term “road rage” first appeared in 1988, and by 1997, the print media were carrying more than 4,000 articles per year on it. Despite media attention about “aggressive driving” and “anger behind the wheel,” there is no scientific evidence concerning road rage. The term is not precisely defined and can refer to anything from gunshots from cars, use of hand gestures, running bicyclists off the road, tailgating, and even anger over auto repair bills! All of the data on crashes and accidents show declines during the period when road rage reached an epidemic.

What instead happened was that media reports fueled perceptions of road rage. After hearing or reading about road rage and having a label for the behavior, people started to notice rude driving behavior and engaged in selective observation. We will not know for sure until it is properly studied, but the amount of such behavior appears not to have changed. It may turn out that the national epidemic of road rage is a widely held myth stimulated by reports in the mass media.

Holiday Havoc Example

Newspapers and television reports are filled with dire warnings about the many traffic accidents that occur on holidays. Thus, the Fourth of July weekend

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holiday in the United States is presented as very deadly with an average of 161 people killed each year, yet the holiday period may be no more dangerous than other times and may even be a bit safer! How can this be? After a careful comparison with other weekends and accounting for the extra amount of driving, the holiday's accident rate is not very different. Safety advocates publicize and distort statistical information in the media to encourage people to drive more safely.

Lesson

Road rage and holiday havoc are hardly unique situations; misrepresentation happens with many social issues. "Problem promoters," especially in the broadcast media, highlight dramatic cases or selectively use statistical information to generate attention and agitate the public about a social problem. The media reports are not so much wrong as they are misleading. They are more effective for public persuasion than is giving a carefully documented presentation of the entire picture. If we rely on mass media reports to learn about the social world, major trends, or serious problems, we can easily be misled (Best, 2001; Fumento, 1998; and Wald, 2004).

Studies have documented poverty, crime, and many other concerns shown in film, on television, and in magazines do not accurately represent social reality. The writers who create or "adapt" real life for television shows and movie scripts often distort reality. This is rarely done intentionally; rather, they repeat misinformation they have picked up, and their primary goal is to entertain. For example, about only 5 of 400 films that portray psychiatric treatment do so accurately. Likewise, media reports on the size of the Muslim population in the United States are two to three times more than scientifically based estimates suggest. African Americans were 62 percent of all poor people shown in news-magazine photos and 65 percent on television news, yet in the true racial mix of poor people, only 29 percent are African Americans. What we see on television or visually in photos strongly shapes our views on social issues. Media distortions mean that if we rely on the media for knowledge of the social world, we will often have inaccurate knowledge.⁵

In addition to informing and entertaining us, the media provide a forum in which competing interests try to win over public support. Those for or against a cause will mount public relations campaigns and use the media to shape public thinking. As mentioned earlier, advocacy think tanks sometimes have false "experts" to discuss topics in the media. Also, in recent years, the number of video news releases (VNR), also called "fake TV news," has grown dramatically. A VNR is the result of a major company or advocacy group that pays to create sophisticated video that looks just like an independently produced news report. In a VNR, an actor or actress plays an independent reporter. The "reporter" presents what appears to be neutral information or news. In reality, it is a public relations or a promotional statement. Most TV stations show the VNRs without informing viewers about the source. A news report on television might be a type of sophisticated propaganda designed to influence our views on a topic or product. We need to be careful before accepting the mass media as an authority.⁶

Many earnest science writers and serious journalists try to deliver accurate research-based information. However, they can be overshadowed by the volume and prominence of other media messages. As you will see later in this chapter, the mass media are not the best sources to learn about research studies. Instead, rely on the scientific community's communication system that is available at no cost to anyone with some knowledge of research and who devotes the time to explore it.

Knowledge Subordinated to Ideological Beliefs and Values

Despite the strength and availability of social science research, some managers and decision makers consciously reject it and instead promote and defend actions based on their political, religious, or ideological beliefs. For example, in 2001, the U.S. federal government began to fund "faith-based" social programs. Studies questioned the effectiveness of such programs, yet they replaced programs that were supported by research. At the same time, knowledgeable scientists serving in government

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TABLE 1 Alternative Explanations to Social Research

EXAMPLE ISSUE: WOMEN ARE MORE LIKELY THAN MEN TO DO LAUNDRY.

Personal experience and common sense: In my experience, men just are not as concerned about clothing or appearance as much as women are, so it makes sense that women do the laundry. When my friends and I were growing up, my mother and their mothers did the laundry, and female friends did it for their boyfriends but never did the men do it.

Experts and authority: Experts say that as children, females are taught to make, select, mend, and clean clothing as part of a female focus on physical appearance and on caring for children or others in a family. Women do the laundry based on their childhood preparation.

Popular and media messages: Movies and television commercials show women often doing laundry and enjoying it, but men hate it and mess it up. So, women must be doing laundry because they enjoy it and are skilled at it. It is what we see everywhere and what everyone says.

Ideological beliefs: The proper, natural place division of labor is for women to take charge of the home, caring for children and overseeing household duties, including cooking, cleaning, and doing the laundry.

agencies were replaced by political appointees, persons committed to certain ideologies. Respected research findings that contradicted ideological views were removed from official health or environmental public information.⁷

At one time, leading U.S. government officials promoted antiscience beliefs. One top aide to President George W. Bush claimed to reject “the reality-based community,” defined as people who “believe that solutions emerge from your judicious study of discernible reality” (Suskind, 2004).

For an example of how the alternatives would explain an aspect of social life, see Table 1.

WHAT RESEARCH INVOLVES: A SCIENTIFIC APPROACH

Social science research is central in a “reality-based community.” It relies on people carefully studying experiences, events, and facts in social reality. While social research helps us answer questions about the social world, it also raises new questions and may change how we look at the world as well. It relies on the process and evidence of science as such, and it can differ from casual observation, common sense reasoning, and other ways to evaluate evidence, including pure logical-rational reasoning (mathematical or philosophical proof) or legal-judicial procedure. We

next examine *science* in the context of doing social science research.

Science

When most people hear the word “science,” the first image that comes to mind is likely to be a lab with test tubes, electronic equipment and microscopes, exotic space ships, and people in white lab coats. These outward trappings are a part of science. The physical and biological sciences—biology, chemistry, physics, and zoology—deal with the physical and material world (e.g., rocks, plants, chemical compounds, stars, muscles, blood, electricity). These natural sciences are at the forefront of new technology and receive a great deal of publicity. Most people first think of them when they hear the word “science.”

The social-cultural sciences (such as anthropology, economics, human geography, psychology, political science, and sociology) involve the study of human social-cultural life: beliefs, behaviors, relationships, interactions, institutions, and so forth. Just as we apply knowledge from the physical and biological sciences in related, more pragmatic fields (such as agriculture, aviation, engineering, medicine, and pharmacology), we apply social science knowledge to practical concerns in related

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applied areas (such as counseling, criminal justice, education, management, marketing, public administration, public health, social work, and urban planning).

Some people call social sciences “soft sciences.” This is not because the fields lack rigor but because their subject matter—human social life—is highly fluid, formidable to observe, and difficult to measure precisely. The subject matter of a science (e.g., human attitudes, protoplasm, or galaxies) shapes the techniques and instruments (e.g., surveys, microscopes, or telescopes) it uses.

Science is a human invention. Today’s science emerged out of a major shift in thinking nearly 400 years ago. It began with the Age of Reason or Enlightenment period in western European history (1600s–1700s). The Enlightenment Era ushered in new thinking that included logical reasoning, careful observations of the material world, a belief in human progress, and a questioning of traditional religious and political doctrines. It built on past knowledge and started by studying the natural world. Later it spread to the study of the social world. A dramatic societal transformation, the Industrial Revolution, spread scientific thinking. The advancement of science and related applied fields did not just happen on its own—it was punctuated by the triumphs and struggles of individual researchers. It was also influenced by significant social events, such as war, economic depression, government policies, and shifts in public support.

Before scientific reasoning grew and became widespread, people relied on nonscientific methods. These included the alternatives discussed previously as well as other methods less accepted today (e.g., oracles, mysticism, magic, astrology, and spirits). Such systems continue to exist, but science is now generally accepted. We still use nonscientific methods to study topics defined as outside the scope of science (e.g., religion, art, literary forms, and philosophy).

Science refers to both a system for producing knowledge and the knowledge that results from that system. Science evolved over centuries and continues to slowly evolve. It combines assumptions about

the world; accumulated understandings; an orientation toward knowledge; and many specific procedures, techniques, and instruments. The system of science is most tangible and visible as a social institution, the scientific community (see discussion of it later in this section).

The knowledge that science yields is organized into theories and grounded in empirical data. Let us examine three key terms: *theory*, *data*, and *empirical*. Many people confuse theory with opinion, unfounded belief, or wild guess. “Whereas a scientist understands theory to be a well-grounded opinion . . . the general public understands it as ‘just a theory,’ no more valid than any other opinion on the matter” (Yankelovich, 2003:8). For now, we can define **social theory** as a coherent system of logically consistent and interconnected ideas used to condense and organize knowledge. You can think of theory as a map that helps us better visualize the complexity in the world, see connections, and explain why things happen. We use data to determine whether a theory is true and we should retain it or is false and needs adjustments or can be discarded. **Data** are the forms of empirical evidence or information carefully collected according to the rules or procedures of science. **Empirical** refers to evidence or observations grounded in human sensory experience: touch, sight, hearing, smell, and taste. Scientific researchers cannot use their senses to observe directly some aspects of the world (e.g., intelligence, attitudes, opinions, emotions, power, authority, quarks, black holes of space, force fields, gravity). However, they have

Social theory A system of interconnected ideas that condenses and organizes the knowledge about the social world and explains how it works.

Data Numerical (quantitative) and non-numerical (qualitative) information and evidence that have been carefully gathered according to rules or established procedures.

Empirical Description of what we can observe and experience directly through human senses (e.g., touch, sight, hearing, smell, taste) or indirectly using techniques that extend the senses.

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created specialized instruments and techniques to observe and measure such aspects indirectly.

Data or empirical observations can be *quantitative* (i.e., expressed precisely as numbers) or *qualitative* (i.e., expressed as words, images, or objects). Later, you will see how we can measure aspects of the social world to produce quantitative or qualitative data.

Pseudoscience, Junk Science, and “Real” Science

Across the centuries, science achieved broad respect and acceptance around the globe; however, many people still lack scientific literacy (See Expansion Box 2, Scientific Literacy) or confuse real science with **pseudoscience**. The prefix *pseudo* is Greek for false or counterfeit. We face a barrage of pseudoscience through television, magazines, film, newspapers, highly advertised special seminars or workshops, and the like. Some individuals weave the outward trappings of science (e.g., technical jargon, fancy-looking machines, complex formulas and statistics, and white lab coats) with a few scientific facts and myths, fantasy, or hopes to claim a “miracle cure,” “new wonder treatment,” “revolutionary learning program,” “evidence of alien visitors,” or “new age spiritual energy.” Experts in pseudoscience might hold an advanced academic degree, but often it is in unrelated academic fields or from a very weak, marginal school.

In addition to experts, magazines or books offer popularized or “pop” social science. Some of these are accurate popularizations written by legitimate social researchers to communicate to a wide public audience. Others look like legitimate social science

to a nonspecialist but actually present a distorted picture or a misuse of social science. These authors write the books to promote a particular political or social position in the guise of social science, but they do not meet the standards of scientific community. For example, the famous Hite Report on female sexuality was a seriously flawed study conducted by a nonscientist who seriously distorted actual social relations. Despite its weaknesses, the book became a best seller that was widely discussed on television talk shows and in newspapers. The same is true of the book *The Bell Curve* that made claims of African American intellectual inferiority.⁸ Unfortunately, books advertised on television or radio, cited in newspaper articles, or sold at a local bookstore can be filled with opinion, personal beliefs, or seriously flawed research. It is easy for an unwary consumer to be misled and confuse such inaccurate or highly opinionated books with legitimate social science.

Perhaps you have heard the term **junk science**. Public relations firms created this term in the 1980s as a strategy to denigrate actual scientific evidence. They used the term to attack research findings that were presented in courts to document injury or abuses caused by powerful, large corporations. In press releases and public statements, such firms manipulated language to contrast *junk* with *sound* science (i.e., studies that supported their own position). *Sound* and *junk* are rhetorical and imprecise terms. More important, the quality, methodology, or precision of the research for each may not differ in quality. Publicists applied the term “junk science” to any research study, no matter how accurate or rigorous, that they opposed and “sound science” to any research study, no matter how flawed, that they used to challenge opponents. For example, the tobacco industry used junk science as a tactic to criticize research on secondhand smoke and spent millions of dollars to deny the harmful health effects of smoking.⁹ The goal was to confuse juries and the public and to create an impression that the scientists lacked consistent research evidence. In contrast to pseudo- or junk science, authentic science comes from the outlook, operations, and products of the scientific community (see the next section).

Pseudoscience A body of ideas or information clothed in the jargon and outward appearance of science that seeks to win acceptance but that was not created with the systematic rigor or standards required of the scientific method.

Junk science A public relations term used to criticize scientific research even if it is conducted properly that produces findings that an advocacy group opposes.

EXPANSION BOX 2**Scientific Literacy**

For more than 50 years, leading educators, business leaders, and policy makers stressed the need for quantitative and scientific literacy to perform professional work and make good everyday decisions in a complex world. *Quantitative literacy*, or *numeracy*, is the ability to reason with numbers and other mathematical concepts. A person with quantitative literacy can think in quantitative-spatial terms and apply such thinking to solve problems. They understand how data are gathered by counting and measuring and presented in graphs, diagrams, charts, and tables. A lack of quantitative literacy is called **innumeracy** (Paulson, 1990). **Scientific literacy** is the capacity to understand scientific knowledge; apply scientific concepts, principles, and theories; use scientific processes to solve problems and make decisions; and interact in a way that reflects core scientific values (Laugksch, 2000:76). The Programme for International Student Assessment (PISA) of the Organisation for Economic Co-operation and Development (OECD) carries out international studies of how much students know about science and defines scientific literacy as the following (PISA, 2006:23):

- Scientific knowledge and use of that knowledge to identify questions, acquire new knowledge, explain scientific phenomena, and draw evidence-based conclusions about science-related issues
- Understanding of the characteristic features of science as a form of human knowledge and enquiry
- Awareness of how science and technology shape our material, intellectual, and cultural environments
- Willingness as a reflective citizen to engage in science-related issues and with the ideas of science

People who lack quantitative and scientific literacy easily accept pseudoscience and make judgment errors. Innumeracy also leads journalists to report inaccurate news and to readers/viewers lacking sufficient skepticism to evaluate the reports. Innumerate people make poor financial investment decisions and often lose money on gambling and related activities because they do not understand basic math concepts. People who lack these types of literacy are poor at assessing risk. Their prospects for a career as a technical-managerial professional, the fast growing, high-income part of the labor market, are poor.

You may think that those people are not like you, in a technologically advanced, ultra-modern society.

However, people can use modern technology (computers, cell phones, iPods, airplanes, and the like) and retain prescientific thinking or rely on magic or supernatural beliefs to explain events make decisions. An ability to use advanced technology does not mean a person thinks in a rational, scientific way.

Only 25–28 percent of American adults qualify as scientifically literate. Overall, adults in other advanced countries are at about the same general scientific literacy. However, international math and science tests for high school students regularly show that United States ranks about twentieth among other nations. A cross-national study of the United States and nine European nations in 2002–2003 confirmed that American adults are near the bottom in endorsing the theory of evolution compared to other all other advanced nations: only 32 percent in 2009. A June 2007 *USA Today*/Gallup Poll found that 37 percent of Americans rejected the scientific theory of evolution and 56 percent favored a religious explanation instead. A March 2007 poll found that 39 percent said something completely opposite from the opinion of the world scientific community: that scientific evidence does not support evolution. A Pew Research Center for the People poll in 2006 found more than one-half of Americans said schools should teach religious views on scientific issues in public schools and that it should be nationally mandated. A Gallup Poll in 2006 found that over one-half believed that humans did not evolve (Polling Report, 2007). Scientists generally agree on global warming, and 84 percent say the earth is getting warmer because of human activity such as burning fossil fuels, but only 49 percent of the public agrees. Well over 90 percent of scientists favor the use of animals in research and stem cell research compared with slightly

Innumeracy The lack of quantitative literacy; not having an ability to reason with numbers and other mathematical concepts.

Scientific literacy The capacity to understand and apply scientific knowledge, concepts, principles, and theories to solve problems and make decisions based on scientific reasoning and to interact in a way that reflects the core values of the scientific community.

(continued)

EXPANSION BOX 2**(continued)**

over half of the public (Pew Research Center for the People and the Press, 2009).

While evolution has been extremely politicized in the United States with some elected officials attempting to impose religious beliefs as science in public schools, Americans also do poorly in terms of general scientific-quantitative thinking and other scientific concepts. Despite getting X-rays, only about 10 percent of the U.S. public knows what radiation is and about 20 percent think the sun revolves around the earth—an idea science abandoned in the seventeenth

century (“Scientific Savvy? In U.S., Not Much,” Dean, *New York Times*, August 30, 2005). You may think college students know better. Studies found that many college students used illogical “magic” rather than science-based thinking. Large numbers of college students accepted voodoo magical power as a cause of someone becoming ill, and college sports fans believed their thoughts could influence the outcome of a basketball game as they watched it on television (Pronin, Wegner, McCarthy, and Rodriguez, 2006).

The Scientific Community

The scientific community brings science to life; it sustains the assumptions, attitudes, and techniques of science. The **scientific community** is a social institution of people, organizations, and roles as well as a set of norms, behaviors, and attitudes that all operate together. It is not a geographic community existing in one physical location nor does everyone know everyone else within it, although its members communicate and interact with one another frequently. Rather, it is a loose collection of professionals who share training, ethical principles, values, techniques, and career paths.¹⁰

The community is organized like a series of concentric circles. Its rings or layers are based on the productivity and engagement of researchers. At the core are a small number of highly productive, very creative, and intense scientific leaders. They slowly move into and out of the core over time based on career stage and contributions to knowledge. At the fringe or outer ring are millions of practitioners, clinicians, and technicians. They regularly use and apply the knowledge, principles, and techniques first developed and refined by those within the core. Professionals who toil on the outer rings develop a level of expertise in and regularly use various scientific research principles and techniques; however,

their knowledge of science may not be as deep as those in the middle or core of the scientific community. Also, those on the outer rings are usually less engaged in advancing the overall enterprise of science (i.e., to generate significant new knowledge). Nonetheless, everyone who uses scientific methods and results of science, whether at the core, middle layer, or outer fringe, can benefit from an understanding of how the scientific community operates and its key principles.

The boundaries and membership of the scientific community are fuzzy and defined loosely. There is no membership card or master roster. In some respects, a doctorate of philosophy (Ph.D.) degree in a scientific field is an informal “membership ticket.” The Ph.D. is an advanced graduate degree beyond the master’s degree that prepares people to conduct independent research. A few members of the scientific community lack a Ph.D. and many people who earn Ph.D.s enter occupations in which they do not conduct research studies. They focus exclusively on teaching, administration, consulting, clinical practice, advising, or sharing knowledge with the wider public. In fact, about one-half of the people who receive scientific Ph.D.s do not follow careers as active researchers.

The core of the scientific community is made up of researchers who conduct studies on a full-time or regular basis, usually with the help of assistants, many of whom are graduate students. Working as a research assistant, more or less as an apprentice, is the best way to learn the details of scientific research. Most core members work at colleges, universities,

Scientific community A collection of people who share a system of attitudes, beliefs, and rules that sustains the production and advance of scientific knowledge.

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or research institutes. Some work for the government, nonprofit organizations, or private industry in organizations such as the Bureau of Labor Statistics, the National Opinion Research Center, and the Rand Corporation. The majority are at approximately 200 major research universities or institutes in about a dozen advanced industrialized countries. The scientific community is scattered geographically, but its members usually work together in small clusters and communicate with one another regularly. The community is widely accepting, and anyone in it can contribute to it. A key principle is to share one's research findings and techniques (i.e., new knowledge) with others in the community. Over time, the community develops a consensus about the significance or worth of the new knowledge based on an unbiased evaluation of it. The process of producing and evaluating new knowledge is highly dynamic with new knowledge being generated on nearly a daily basis.

We do not really know the exact size of the scientific community. As of 2006, roughly 3 percent of the total U.S. workforce was employed in a science or engineering field (U.S. Census, 2008: Table 790). The basic unit in the larger scientific community is an academic field or discipline (e.g., sociology, biology, psychology). Academic fields overlap somewhat, but this gives us a better idea of size. The United States has about 11,000 anthropologists, 16,000 sociologists, and 15,000 political scientists, most with doctoral degrees. These are small numbers compared to practitioners in related technical-professional areas: about 180,000 architects, 950,000 lawyers, and 820,000 medical doctors. Each year, about 600 people receive a Ph.D. in sociology, 15,000 receive medical degrees, and 38,000 receive law degrees.

Recall that only about one-half of people who earn an advanced degree in a scientific field become lifelong, active researchers. During a career, an active researcher may complete only two to ten studies. A small handful of researchers is highly productive and conducts numerous studies, particularly highly influential and widely read ones. At any one time, perhaps one hundred researchers are actively conducting studies on a specific topic within a discipline (e.g., study of divorce or of the death penalty) around the world.¹¹ New knowledge from their studies could influence the lives of

millions of people around the globe for generations to come. This knowledge creation process makes being an active participant in the scientific community or the consumer of new research findings both personally rewarding and exciting.

The Scientific Community's Norms and Values

Social norms regulate behavior in all human communities. During their many years of schooling and regular interactions with one another, researchers learn and internalize professional norms and values. The norms and values are mutually reinforcing and contribute to the unique role of a social scientist. Professional norms express ideals of proper conduct, yet ideals do not always work perfectly in practice. Researchers are real human beings with prejudices, egos, ambitions, and personal lives. Such factors may influence a few researchers to violate the community's norms.¹²

The scientific community does not operate in a vacuum isolated from the "real world." It is affected by social, political, and economic forces. Nonetheless, the norms and values teach us how the scientific community and the larger research enterprise operate. They also provide a guide for the proper way to conduct a research study and provide the principles of good research practice.

The five basic **norms of the scientific community** (see Summary Review Box 1, Norms of the Scientific Community) differ from those in other social institutions (e.g., business, government, law) and tend to set professional researchers apart. For example, consistent with the norm of *universalism*, scientists tend to admire a brilliant, creative researcher even if the person has strange personal habits or a disheveled appearance. Scientists may argue intensely with one another and "tear apart" a carefully prepared research report as part of the norm of *organized skepticism*. Scientists are usually very open and willing to listen

Norms of the scientific community Informal rules, principles, and values that govern the way scientists conduct their research.

SUMMARY REVIEW BOX 1

Norms of the Scientific Community

1. **Universalism.** Regardless of who conducts research (e.g., old or young, male or female) and of where it was conducted (e.g., United States, France, Harvard, or Unknown University), the research is to be judged only on the basis of scientific merit.
2. **Organized skepticism.** Scientists should not accept new ideas or evidence in a carefree, uncritical manner. They should challenge and question all evidence and subject each study to intense scrutiny. The purpose of their criticism is not to attack the individual but to ensure that the methods used in research can stand up to close, careful examination.
3. **Disinterestedness.** Scientists must be neutral, impartial, receptive, and open to unexpected observations and new ideas. They should not be rigidly wedded to a particular idea or point of view. They should accept, even look for, evidence that runs against their positions and should honestly accept all findings based on high-quality research.
4. **Communalism.** Scientific knowledge must be shared with others; it belongs to everyone. Creating scientific knowledge is a public act, and the findings are public property, available for all to use. The way in which the research is conducted must be described in detail. New knowledge is not formally accepted until other researchers have reviewed it and it has been made publicly available in a special form and style.
5. **Honesty.** This is a general cultural norm, but it is especially strong in scientific research. Scientists demand honesty in all research; dishonesty or cheating in scientific research is a major taboo.

to new ideas, no matter how odd they might appear at first. Following *disinterestedness*, scientists tend to be somewhat detached. They see study results, including those from their own research, as being tentative and subject to external evaluation and criticism. They want other social scientists to read and react to their research. A deep belief in openness has led many social scientists to oppose all forms of censorship. This is consistent with the norm of *communalism* or sharing new knowledge without personal ownership, which is like adding an ingredient into a shared soup that we all eat together. However, this does not always

work, especially when communalism conflicts with the profit motive. For example, the publication of research findings by scientists in the tobacco, pharmaceutical, and computer chip industries often were suppressed or seriously delayed by corporate officials for whom the profit motive overrode the scientific norm of communalism.¹³ Scientists expect strict *honesty* in the conduct and reporting of research. They become morally outraged if anyone cheats in research.

Scientific Method, Attitude, or Orientation

You have probably heard of the scientific method, and you may be wondering how it fits into this discussion. The scientific method is not one thing; it is a collection of ideas, rules, techniques, and approaches used by the scientific community. It grows out of a consensus formed within the community. It is important to grasp the orientation or attitude of science instead of a “scientific method.” The scientific community values craftsmanship, pride in creativity, high-quality standards, and plain hard work. As Grinnell (1987:125) stated:

Most people learn about the “scientific method” rather than about the scientific attitude. While the “scientific method” is an ideal construct, the scientific attitude is the way people have of looking at the world. Doing science includes many methods; what makes them scientific is their acceptance by the scientific collective.

The scientific orientation tends simultaneously to be precise and logical, adopt a long-term view, be flexible and open ended, and be willing to share information widely (see Yankelovich, 2003). By contrast, nonscientific thinking is impatient with pursuing great accuracy or rigor, wants definite immediate answers to particular issues that are current now, and tends to be rather possessive and apprehensive about freely sharing everything.

Journal Articles in Science

Perhaps you have seen an article from an academic or scholarly journal. When the scientific community creates new knowledge, the new information

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appears in scholarly journals or academic books (called *research monographs*). Most new research findings often first appear as **scholarly journal articles**. These articles are the way that scientists formally communicate with one another and disseminate the research results. The articles are also part of the much discussed “explosion of knowledge.” An academic discipline or field may have 50–300 such journals. Each may publish an issue every one or two months, with five to twenty-five articles in each issue. For example, a leader among the sociology journals, the *American Sociological Review*, publishes about 65 articles each year. The scholarly journal article is critical to the research process and the scientific community, but it is not always well understood.¹⁴

Let us consider what happens once a social scientist completes a research study. First, the scientist writes a description of the study and the results as a research report in a special format. Often he or she gives a 20-minute oral presentation of the report at the meeting of a professional association, such as the American Sociological Association or Society for the Study of Social Problems. He or she gives an oral summary of the research to dozens of social scientists and students and answers questions from the audience. He or she may send a copy of the report to a few other researchers for comments and suggestions. Finally, the researcher sends copies to the editor of a scholarly journal, such as the *Social Forces* or the *Social Science Quarterly*. Each editor, a respected researcher who has been chosen by other scientists to oversee the journal, removes the title page, which is the only place the author’s name appears and then sends the report to several referees for a **blind review**. The referees are social scientists who have conducted research in the same topic area. The review is called “blind” because the referees do not know who conducted the research and the author does not know who the referees are. This reinforces the norm of universalism because referees judge the study on its merits alone. They evaluate the research based on its clarity, adherence to high standards of research methodology, and original contribution to knowledge. The referees return their evaluations to the editor, who decides to reject the

Scholarly journal article An article in a specialized publication that has members of the scientific community as its primary audience; a means to disseminate new ideas and findings within the scientific community.

Blind review A process of judging the merits of a research report in which the peer researchers do not know the identity of the researcher, and the researcher does not know the identity of the evaluators in advance.

report, ask the author for revisions, or accept it for publication.

Almost all academic fields use peer referees for publication, but not all use a blind review process. Fields such as sociology, psychology, and political science use blind reviews for almost all scholarly journals, often having three or more referees. By contrast, fields such as biology, history, and economics use a mix of review processes; sometimes referees know the author’s identity and only one or two review the study. Blind reviews with many referees slow the process and lower acceptance rates.¹⁵ The blind review is a very cautious way to ensure quality control. Its purpose is to advance the norm of organized skepticism and universalism in the scientific community.

Some scholarly journals are widely read and highly respected and receive many more reports than they can publish. For example, major social science journals, such as *American Economic Review*, *American Sociological Review*, *American Political Science Review*, and *Social Problems*, accept only 10 to 15 percent of submitted manuscripts. Even less esteemed journals regularly reject half of their submissions. Publication represents tentative acceptance by the scientific community. Publishing a book involves a somewhat different review process that also includes cost and sales considerations, but the acceptance rate is often lower than for journals.¹⁶

Unlike popular magazines that you see at newsstands that pay authors for their writing, scholarly journals do not pay authors for publishing. In fact, to have their manuscript considered, an author often is required to pay a small fee to help defray administrative costs. Social scientists want to make their research available to informed peers (i.e., other

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scientists and researchers) through scholarly journals. Likewise, referees are not paid for reviewing papers. They accept the work as a responsibility of membership in the scientific community. Members of the scientific community impart great respect to researchers who are able to publish many articles in the foremost scholarly journals. The articles confirm that they are highly skilled and leaders in advancing the primary goal of the scientific community: to contribute to the accumulation of scientific knowledge.

Publication of research is the primary way a social scientist gains respect from peers, achieves honor within the scientific community, and builds a reputation as an accomplished researcher. More respect from peers (i.e., knowledgeable social scientists) enables a scientist to move toward the center of the scientific community. Publications and the resulting respect from peers also help a social scientist obtain grant money for further research, fellowships, a following of top students, improved working conditions, lucrative job offers, and salary increases.¹⁷

Even if you never publish a scholarly journal article, you will likely read some of them. They are a vital part of the system of scientific research. Most new scientific knowledge first appears in scholarly journals. Active social scientists and college teachers regularly read the journals to learn about new knowledge being produced and the research methods used.

Science as a Transformative Process

In the research process, social scientists apply various scientific methods to transform ideas, hunches, and questions, sometimes called *hypotheses*, into new knowledge. Thus, the social scientific research process essentially transforms our ideas, theories, guesses, or questions into a “finished product” with real value: new knowledge. The new knowledge can improve our understanding of the social world and its operation. It might be used to help solve problems or to expand future knowledge and understanding.

Many newcomers to social research feel overwhelmed and that doing a study is beyond them.

Doing so requires analytic reasoning, complex technical skills, intensive concentration, and a significant time commitment. Yet with time, practice, and education, most college students find they can master the fundamentals of doing a research study. Learning to do social research is no different from learning many other activities. You want to begin small and simple, practice over and over again, and learn from your experiences and missteps. Gradually, you will see improvements and be able to advance to bigger and more complex endeavors. In addition to assimilating a scientific attitude, you will need to learn how and when to apply specific research techniques. After studying this text, you should grasp both the method and methodology of social science research and be able to conduct research studies.

VARIETIES OF SOCIAL RESEARCH

You may think social scientific research means conducting a survey or an experiment and perhaps using advanced statistics with charts, tables, and graphs. Or you may think it involves carefully observing people as they carry out their everyday affairs in some natural setting such as a café, family reunion, or classroom. Both are partially true. Some social scientific research involves quantitative data, (i.e., data in the form of numbers), but other research uses qualitative data (i.e., non-numerical) without statistics.

You will see that we examine both quantitative and qualitative data and associated approaches to conducting social science research. Both approaches use multiple research techniques (e.g., survey, interview, ethnography) to gather and analyze empirical data. Despite some real differences between quantitative and qualitative research, they overlap a great deal. Unfortunately, advocates of one approach do not always understand or appreciate the other approach. Some social scientists treat the differences in the approaches as being at war with one another. Levine (1993:xii) called the quantitative approach “real social science” and claimed it “won the battle” against qualitative studies. On the other hand, Denzin and Lincoln (2005:ix)

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TABLE 2 Quantitative versus Qualitative Approaches

QUANTITATIVE APPROACH	QUALITATIVE APPROACH
Measure objective facts	Construct social reality, cultural meaning
Focus on variables	Focus on interactive processes, events
Reliability the key factor	Authenticity the key factor
Value free	Values present and explicit
Separate theory and data	Theory and data fused
Independent of context	Situationally constrained
Many cases, subjects	Few cases, subjects
Statistical analysis	Thematic analysis
Researcher detached	Researcher involved

Sources: Crewsell (1994), Denzin and Lincoln (2003a), Guba and Lincoln (1994), Marvasti (2004), Mostyn (1985), and Tashakkori and Teddlie (1998).

argued that “the extent to which a qualitative revolution is taking over the social sciences and related professional fields is nothing short of amazing.”

Both approaches share core scientific principles, but they also differ in significant ways (see Table 2). Each approach has its strengths and limitations. There are topics or issues where it excel, and classic studies that provide remarkable insights into social life. Social scientists who do quantitative or qualitative research try to avoid both the misjudgments and errors discussed earlier. All social scientists gather data systematically, make careful comparisons, and use critical thinking. By understanding both approaches, you can best understand the full range of social scientific research and use them in complementary ways.

Ragin (1994a:92) explained how the approaches complement each other as data condensers or enhancers:

The key features common to all qualitative methods can be seen when they are contrasted with quantitative methods. Most quantitative data techniques are data condensers. They condense data in order to see the big picture. . . . Qualitative methods, by contrast, are best understood as data enhancers. When data are enhanced, it is possible to see key aspects of cases more clearly.

The ideal is to conduct a multimethod study that draws on the strengths of both the quantitative

and qualitative approaches, but this rarely happens for several reasons. Mixing approaches is more time consuming. Few researchers have expertise in more than one approach. Also, each approach uses a distinct logic for guiding the research process, and blending the distinct logics in one study adds significant complexity.

STEPS IN THE RESEARCH PROCESS

The Steps

To conduct a study, we follow a sequence of steps; however, the exact sequence and specific steps vary according to whether we follow a quantitative or qualitative approach and the type of social research study we are conducting. Later you will see that the steps outlined here may be somewhat simplified and idealized from the actual process, but they are still a useful starting point.

Quantitative Approach to Social Research

1. *Select a topic.* This may be a general area of study or an issue of professional or personal interest. Topics are broad, such as the effects of divorce, reasons for delinquency, impact of homelessness, or how elites use the media.

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2. *Focus the question.* A topic is too broad for actually conducting a study. This makes the next step crucial: We must narrow the topic to focus on a specific research question that a study can address. Often this requires reviewing the research literature and developing hypotheses that often come from social theory. For example, a broad topic—reasons for delinquency—becomes the focused research question: Are teenage East Asian immigrant males with strong ties to their home culture and who have not assimilated into the new society more likely to engage in delinquent acts than those with weaker home culture ties and who have assimilated? Notice how the initial broad topic, reasons for delinquency, becomes focused. We focus on a specific reason for delinquency (i.e., degree of assimilation) and look at a specific group of people (i.e., teenaged immigrant males from East Asia).
3. *Design the study.* Once we settle on a research question, we need to design the study. Designing a study requires making many decisions about the type of case or sample to select, how to measure relevant factors, and what research technique (e.g., questionnaire, experiment) to employ. At this stage as well, decision making is informed by theory.
4. *Collect data.* After we design a study in detail, we must carefully record and verify information typically in the form of numbers. Next we must transfer numerical data into a computer-readable format if it is not already in that format.
5. *Analyze the data.* This step usually requires the use of computer software to manipulate the numerical data to create many charts, tables, graphs, and statistical measures. These computer-generated documents provide a condensed picture of the data.
6. *Interpret the data.* After we produce charts, tables, and statistics, we must determine what they mean. We examine the analyzed data, use knowledge of the research topic, and draw on theory to answer our research question. We

consider alternative interpretations of the data, compare our results with those of past studies, and draw out wider implications of what we have learned.

7. *Inform others.* At this stage, we write a report about the study in a specific format and present a description of both the study and its results (see Figure 1).

We next consider three examples of the quantitative approach to social research. Each is a type of quantitative research that will be the focus of a chapter later in this book: the experiment, sample survey, and existing statistics.

Authors and title of the study: Lowery and colleagues (2007) “Long-Term Effects of Subliminal Priming on Academic Performance”

1. *Select a topic.* Priming and academic performance
2. *Focus the question.* Do undergraduate college students who are “primed” subliminally with intelligence-related words improve their performance on a test? *Subliminally* means to present something in a way so that the receiver is not consciously aware of it. *Priming* occurs when a word, image, or information alerts, prepares or “sets up” a person for a subsequent behavior.

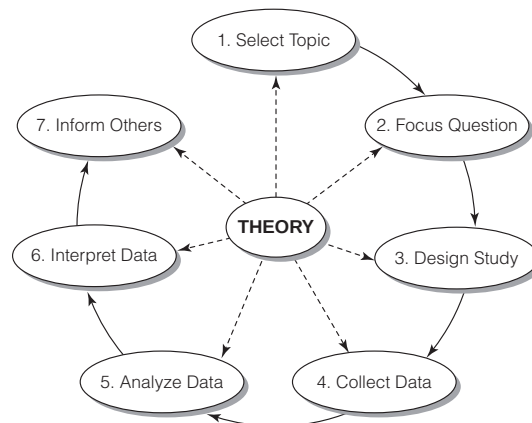


FIGURE 1 Steps in the Quantitative Research Process

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3. *Design the study.* The authors conducted two similar experiments. The first was with seventy students in a beginning undergraduate statistics class. The second was with seventy-eight students in an introduction to social psychology class. In both experiments, the authors showed students words on different sides of a computer screen. They told students that the study was about their ability to locate the words (this was not true). One random half of students saw words related to intelligence (e.g., sharp, bright, genius, educated). The other random half saw unrelated words. Students in both experiments took a practice exam. A few days later, they took the exam in their course.
 4. *Collect the data.* Data for this study were test results for both the practice and actual exam in both the statistics and introduction to social psychology classes.
 5. *Analyze the data.* The authors looked at various tables and conducted statistical tests.
 6. *Interpret the data.* The results showed that the students in both classes who had been exposed or “primed” with intelligence-related words scored much higher on both tests.
 7. *Inform others.* A description of the study with its results appeared in the scholarly journal *Basic and Applied Social Psychology*.
4. *Collect the data.* The randomly selected adults answered many questions on social backgrounds, religious practice and belief, explanations of racial inequality, and beliefs about African Americans in a 30-minute telephone interview.
 5. *Analyze the data.* The authors looked at numerous tables with percentages and statistical tests.
 6. *Interpret the data.* The authors found that survey respondents with strong conservative Protestant Christian beliefs and who were most involved in religious activities favored individualistic explanations of Black inequality (i.e., personal failings, lack of motivation) over structural explanations (i.e., racial discrimination). In addition, among conservative Christians, the views of women differed from men, and the educated from the less educated.
 7. *Inform others.* The authors prepared a description of the study with its results that they submitted to the scholarly journal *Social Problems*.

How does theory fit in? The authors retested a theory of subliminal priming. They looked at whether effects can continue for several days after a priming event.

Authors and title of the study: Penny Edgell and Eric Tranby (2007) “Religious Influences on Understandings of Racial Inequality in the United States”

1. *Select a topic.* Religion and racial attitudes
2. *Focus the question.* Does a white evangelical Christian subculture and belief system encourage or discourage an individualist, nonsupportive stance toward inequality and toward African Americans?
3. *Design the study.* The authors prepared a large-scale national survey in 2003 involving 2,081 randomly selected adults in the United States.

How does theory fit in? The authors examined a theory suggesting that a white evangelical subculture fosters particular attitudes about social and political issues; it deemphasizes structural explanations (discrimination, government help) and emphasizes individualist, self-help explanations.

Authors and title of the study: Rory McVeigh and Julian Sobolewski (2007) “Red Counties, Blue Counties, and Occupational Segregation by Sex and Race”

1. *Select a topic.* Social inequality and voting
2. *Focus the question.* Did occupational segregation by gender and race—a major source of social inequality—influence how people voted in the 2004 U.S. presidential election? *Occupational segregation* occurs when one group (e.g., one gender, one race) almost exclusively holds a type of job.
3. *Design the study.* The authors identified specific factors for which the government collects data at the county level: choice of presidential

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candidate and occupational segregation by race and gender. They also considered features of the labor market in a county (e.g., racial mix of the county, educational credentials of women and non-Whites, degree of mobility into a county) that might threaten or weaken the degree of occupational segregation.

4. *Collect the data.* Data came from the U.S. census on occupations, demographics, and voting.
5. *Analyze the data.* The authors examined numerous correlations, charts, and statistical tests.
6. *Interpret the data.* The authors found that both occupational and sex segregation in county-level labor markets to be related to election outcomes. In counties that had equal or integrated labor markets, the Democratic party candidate received more votes. In counties with highly segregated labor markets, especially with other conditions that threatened to undermine the segregation, the Republican party candidate received more votes.
7. *Inform others.* The authors submitted a description of the study with its results to the scholarly journal *American Journal of Sociology*.

How does theory fit in? The authors used ethnic competition theory and split labor market theory to explain how county-level inequality influence the local political climate and voting behavior.

Qualitative Approach to Social Research.

Many social scientists who adopt a qualitative approach follow a slightly different set of steps than they use in quantitative studies. These steps also vary according to the specific qualitative research methods used. In addition, this approach is more fluid and less linear, or step by step.

1. *Acknowledge self and context.* Social scientists also start with a topic as with quantitative research, but the start is simultaneous with performing a self-assessment and situating the topic in a socio-historical context. Many qual-

itative researchers rely on personal beliefs, biography, or specific current issues to identify a topic of interest or importance.

2. *Adopt a perspective.* Qualitative researchers may ponder the theoretical-philosophical *paradigm* or place their inquiry in the context of ongoing discussions with other researchers. Rather than narrowing down a topic, this means choosing a direction that may contain many potential questions.
- 3–6. *Design a study and collect, analyze, and interpret data.* As with quantitative research, a qualitative researcher will *design a study, collect data, analyze data, and interpret data*. More so than the quantitative researcher, a qualitative researcher is likely to collect, analyze, and interpret data simultaneously. This is a fluid process with much going back and forth among the steps multiple times. Often the researcher not only uses or tests a past theory, but also builds new theory. At the *interpret data* stage, the qualitative researcher creates new concepts and theoretical interpretations.
7. *Inform others.* This is similar for both approaches, but here again, the style of a report varies according to the approach used. (See Figure 2.)

Next we consider examples of two qualitative studies. Each illustrates a type of study that is the focus of a chapter, field research-ethnography, and historical-comparative research.

Author and title of the study: Sudhir Venkatesh (2008) “Gang Leader for a Day”

1. *Acknowledge self and context.* This author describes his personal interest and background and explains how an interest in inner-city poverty shifted to gangs in an urban housing project.
2. *Socio-cultural context.* The physical-social setting was an urban housing project in South Chicago located near the University of Chicago where the author was a graduate student. Drug-dealing gangs operated in the projects that had

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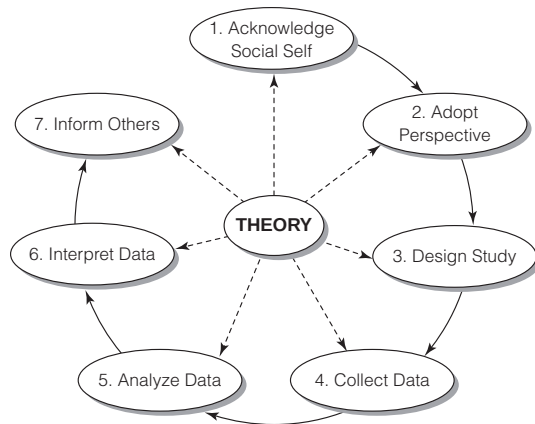


FIGURE 2 Steps in the Qualitative Research Process

very high rates of poverty and that were overwhelming occupied by African Americans.

- 3–6. *Design, collect, analyze, and interpret.* The author initially tried to conduct a quantitative survey but dropped this technique. Instead, he observed and talked with gang members and people in the housing project several days a week over eight years between 1990 and 1998 and took very detailed notes every day on what he saw, heard, participated in, and thought.
7. *Inform others.* Results appeared in a semiacademic book *Gang Leader for a Day* about 10 years after the original research study ended, although the author had written several studies and books related to the same general research in the meantime.

How does theory fit in: As with many ethnographies, the study is largely descriptive with little theory. The author provides a little theory on how a gang provides social organization and services to a local community, the economics of drug dealing, and how local poor people must negotiate with a range of others for their day-to-day survival.

Authors and title of the study: Holly McCammon and six colleagues (2008) “Becoming Full Citizens:

The U.S. Women’s Jury Rights Campaign, The Pace of Reform, and Strategic Adaptation”

1. *Select a topic.* Women gaining full citizenship rights
2. *Socio-cultural context.* U.S. women did not get the right to serve on juries after they won the national right to vote in 1920. The right was not upheld by the Supreme Court until 1975. Women gained the right at dramatically different times in different states (also sometimes losing and regaining the right). Advocated by women’s groups, the issue was hotly contested for many decades.
3. *Design, collect, analyze, and interpret.* The seven authors devoted the most part of two years to gathering data on jury-rights movements in fifteen states between the 1910s and the late 1960s. They visited twenty-two archives (specialized libraries with historical records) in the various states. They examined the records of movement organizations, consulted local newspapers and relevant magazines, and read all relevant legal and political documents (i.e., court decisions, legislative hearings, and statutes) in each of the fifteen states. In addition to analyzing details of each state and movement organization, they looked at the length of time required to enact jury rights for women in each state and classified specific features of each organization and its activities. The major finding was that in states where jury rights were won most quickly, organizations had engaged in strategic actions. They had continuously adjusted their demands, sought a range of political allies, and changed the way they phrased their arguments. In states where progress was very slow, movement groups were sporadic, inconsistent, or inflexible and failed to take advantage of changing conditions.
4. *Inform others.* A description of the study and the results were published in a scholarly journal, *American Journal of Sociology*

How does theory fit in: The authors wanted to explain why some social-political movements

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achieve their political goals rapidly while others do so slowly. They built on past social movement theory and advanced the new idea of “strategic adaptation” by a movement.

The seven-step process shown in Figures 1 and 2 are oversimplified. In practice, we rarely complete step 1, then leave it entirely to move to step 2, and so on. Research is more of an interactive process, and the steps blend into each other. A later step may stimulate the reconsideration of an earlier one. The process is not strictly linear; it may flow in several directions before reaching an end. Research does not abruptly end at step 7. This is an ongoing process, and the end of one study often stimulates new thinking and fresh research questions.

The seven-step cycle is for a single research study. Each study builds on prior research and contributes to a larger body of knowledge. The broader process of conducting scientific research and accumulating new knowledge requires many researchers conducting numerous studies. A single researcher may work on multiple studies at once, or several researchers may collaborate on one study. Likewise, one study may result in one or several scholarly articles, and sometimes one article will report on several smaller studies.

WHY LEARN HOW TO CONDUCT SOCIAL RESEARCH?

Professional social scientists working in universities, research centers, and government agencies, often with assistants and technicians, conduct research. Results of their studies typically appear in specialized scholarly journals or college textbooks. Their studies expand our understanding of the social world and have an indirect impact on broad public knowledge. One reason you may want to learn how to conduct social science research is to advance knowledge of the social world in ways that avoid the many failings of alternative, nonscientific ways that people create knowledge.

People who work for newspapers, television networks, market research firms, schools, hospitals, social service agencies, political parties, consulting

firms, government agencies, personnel departments, public interest organizations, insurance companies, and law firms also conduct social research. They do so as part of their jobs and use the same social science research techniques. They use the results of their studies internally and do not widely share or publish them, yet research-based findings yield better informed, less biased decisions than the guessing, hunches, intuition, and personal experience that were previously used (see Summary Review Box 2, *The Practitioner and Social Science*). Beyond expanding knowledge, a second reason you may want to learn how to conduct social research is for a practical reason: to improve decision making.

Unfortunately, a few people and organizations misuse or abuse social research: use sloppy research techniques, misinterpret findings, manipulate stud-

SUMMARY REVIEW BOX 2

The Practitioner and Social Science

Science does not and cannot provide people with fixed, absolute “Truth.” This is so because science is a slow, incomplete process of reducing untruth. It is a quest for the best possible answers carried out by a collection of devoted people who labor strenuously in a careful, systematic, and open-minded manner. Many people are uneasy with the painstaking pace, hesitating progress, and uncertainty of science. They demand immediate, absolute answers. Many turn to religious fanatics or political demagogues who offer final, conclusive truths in abundance. What does this mean for diligent practitioners (e.g., human service workers, health care professionals, criminal justice officers, journalists, or policy analysts) who have to make prompt decisions in their daily work? Must they abandon scientific thinking and rely only on common sense, personal conviction, or political doctrine? No, they, too, can use social scientific thinking. Their task is difficult but possible. They must conscientiously try to locate the best knowledge currently available; use careful, independent reasoning; avoid known errors or fallacies; and be wary of any doctrine offering complete, final answers. Practitioners must always be open to new ideas, use multiple information sources, and constantly question the evidence offered to support a course of action.

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ies to find previously decided results, and so on. In addition, some people believe that they are being overly studied or overloaded by research studies. For example, people have refused exit poll studies during elections, and rates of answering surveys have declined. Negative reactions against the misuse of social research can produce negative views toward research in general. A third reason you may want to learn how to conduct research studies is to distinguish legitimate, valuable research from bogus or poorly conducted studies, pseudoscience, and misused research.

CONCLUSION

This chapter presented what social science research is, how the research process operates, and who conducts research. It also described alternatives to social research: ways to get fast, easy, and practical knowledge that often contains error, misinformation, and false reasoning. It showed you how the scientific community works, how social research fits into the scientific enterprise, and how the norms of science and journal articles are crucial to the

scientific community. The chapter also outlined the steps of research.

Social science research is for, about, and conducted by *people*. Despite the attention to the principles, rules, or procedures, social research is a human activity. Social researchers are people not unlike you. They developed a desire to create and discover knowledge and now find doing social research to be fun and exciting. They conduct research to discover new knowledge and to understand the social world. Whether you become a professional social researcher, someone who applies a research technique as part of a job, or just someone who uses the results of research, you will benefit from learning about the research process. You will be enriched if you can begin to create a personal link between yourself and the research process.

Mills (1959:196) offered the valuable advice in his *Sociological Imagination*:

You must learn to use your life experiences in your intellectual work: continually to examine and interpret it. In this sense craftsmanship is the center of yourself and you are personally involved in every intellectual product upon which you may work.

KEY TERMS

blind review
data
empirical
false consensus
halo effect
innumeracy

junk science
norms of the scientific
community
overgeneralization
premature closure
pseudoscience

scholarly journal article
scientific community
scientific literacy
selective observation
social theory

REVIEW QUESTIONS

1. What sources of knowledge are alternatives to social research?
2. Why is social research usually better than the alternatives?
3. Is social research always right? Can it answer any question? Explain.
4. How did science and oracles serve similar purposes in different eras?
5. What is the scientific community? What is its role?
6. What are the norms of the scientific community? What are their effects?

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7. What is the process to have a study published in a scholarly social science journal?
8. What steps are involved in conducting a research project?
9. What does it mean to say that research steps are not rigidly fixed?
10. What types of people do social research? For what reasons?

NOTES

1. See Parker-Pope (2007) on the face cream study and related research.
2. On the limits to self-knowledge, see Wilson and Dunn (2004); on inaccurate eyewitness accounts, Wells and Olson (2003); on inaccurate risk evaluation, Gowda and Fox (2002) and Paulos (2001); on condoms in schools (Kirby et al., 1999); on SUVs, Bradsher (2002).
3. From Rampton and Stauber (2001:274–277, 305–306).
4. Results on geographic information are from *National Geographic* (2006). Results on UFOs, devils, and so forth is from Harris Poll (2003, 2005).
5. On media inaccuracy on psychiatric treatment, see Goode (2002), on the Muslim population, see Smith (2002), and on African Americans in poverty, see Gilens (1996).
6. Video News Reports are described by the Center for Media and Democracy <http://www.prwatch.org/fakenews3/summary> and Consumer Product Safety Commission <http://www.cpsc.gov/businfo/vnrprod.html>. Also see Barstow and Stein (2005, March 13), “Under Bush, a New Age of Prepackaged TV News,” *New York Times*; Aiello and Profitt (2008).
7. On “faith-based” programs, see Goodstein, “Church-Based Projects Lack Data on Results,” *New York Times* (April 24, 2001); Crary, “Faith Based Prisons Multiply,” *USA Today* (October 14, 2007); Ferguson et al. (2007); and Reingold et al. (2007). On restrictions of science in government, see Mooney (2005) and Union of Concerned Scientists (2004).
8. See Herrnstein and Murray (1994) and a critique in Fischer et al. (1996).
9. “Junk science” is discussed in Rampton and Stauber (2001:223).
10. For more on the scientific community, see Cole (1983), Cole, Cole, and Simon (1981), Collins (1983), Collins and Restivo (1983), Hagstrom (1965), Merton (1973), Stoner (1966), and Ziman (1968).
11. See Cappell and Guterbock (1992) and Ennis (1992) for studies of sociological specialties.
12. For more on the social role of the scientist, see Ben-David (1971), Camic (1980), and Tuma and Grimes (1981). Hagstrom (1965), Merton (1973), and Stoner (1966) discuss norms of science, and Blume (1974) and Mitroff (1974) talk about norm violation.
13. See Altman, “Drug Firm, Relenting, Allows Unflattering Study to Appear,” *New York Times* (April 16, 1997); Markoff, “Dispute over Unauthorized Reviews Leaves Intel Embarrassed,” *New York Times* (March 12, 1997); and Barry Meier, “Philip Morris Censored Data about Addiction,” *New York Times* (May 7, 1998).
14. Science’s communication and publication system is described in Bakanic and colleagues (1987), Blau (1978), Cole (1983), Crane (1967), Gusfield (1976), Hargens (1988), Mullins (1973), Singer (1989), and Ziman (1968).
15. See Clemens and Powell (1995:446).
16. See Clemens and Powell (1995:444).
17. For more on the system of reward and stratification in science, see Cole and Cole (1973), Cole (1978), Fuchs and Turner (1986), Gaston (1978), Gustin (1973), Long (1978), Meadows (1974), and Reskin (1977).

What Are the Major Types of Social Research?

Use and Audience of Research
Purpose of Research
Within or across Cases

Single or Multiple Points in Time
Data Collection Techniques
Conclusion

The objective of academic research, whether by sociologists, political scientists, or anthropologists, is to try to find answers to theoretical questions within their respective fields. In contrast, the objective of applied social research is to use data so that decisions can be made.
—Herbert J. Rubin, *Applied Social Research*, pp. 6–7

Three years after they graduated from college, Tim and Sharon met for lunch. Tim asked Sharon, “So, how is your new job as a researcher for Social Data, Inc.? What are you doing?” Sharon answered, “Right now I’m working on a cross-sectional survey of teachers as part of an applied research project on six day care centers to provide descriptive data that we can use in an evaluation study being prepared for a nonprofit foundation.” Sharon’s description of her research project on the topic of day care touches on dimensions of social science research. In this chapter, you will learn about the dimensions and get a “road map” of the types of social research.

Social research comes in many shapes and sizes. We can organize research in several ways: experimental versus nonexperimental, case study versus cross-case research, or qualitative versus quantitative.¹ We can organize the many kinds of studies along five dimensions (see Chart 1). The dimensions include how we use a study’s findings and its primary audience; why we conduct a study; the number of cases and how we examine them;

how we incorporate time; and decide which techniques we deploy to gather data. You can position a single research study on each of the dimensions of social research.

You will find learning the dimensions and their interrelationships to one another useful. First, they make it easier to understand research reports that you hear about or read in scholarly journals. After you recognize a study’s dimensions, you can quickly grasp what a study says and how it was conducted. Second, when you conduct your own study, you must make many decisions. You can think of the dimensions as decision points you will encounter as you develop a specific research plan. To make good decisions, you should be aware of trade-offs and the strengths and weaknesses at each decision point. Additionally, the dimensions are interrelated. Some dimensions tend to go together (e.g., study goal and a data collection technique). As you learn about the dimensions, you can begin to see how best to combine dimensions to address specific research questions of interest.

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WHAT ARE THE MAJOR TYPES OF SOCIAL RESEARCH?

CHART 1 Dimensions and Major Types of Social Research

USE AND AUDIENCE OF RESEARCH

- Basic
- Applied
 - Evaluation
 - Action
 - Social Impact

PURPOSE OF RESEARCH

- Explore
- Describe
- Explain

WITHIN OR ACROSS CASES

- Case Study Research
- Across Case Research

SINGLE OR MULTIPLE POINTS IN TIME

- Cross-Sectional
- Longitudinal
 - Time series
 - Panel
 - Cohort
- Case Study

DATA COLLECTION TECHNIQUES

- Quantitative Data
 - Experiment
 - Survey
 - Nonreactive (content analysis, secondary analysis, existing statistics)
- Qualitative Data
 - Field (ethnography, participant observation)
 - Historical-comparative

USE AND AUDIENCE OF RESEARCH

Social research has two wings or orientations. There is a somewhat detached “scientific” or “academic” orientation and a more activist, practical, and action-

oriented orientation. This is not a rigid separation. Many researchers work in both, or they move from one to the other at different career stages. The orientations differ in how to use findings and who the primary audience is.

Basic Research

Also called *academic research* or *pure research*, **basic research** advances fundamental knowledge about the social world. It is the source of most new scientific ideas and ways to think about social events. The scientific community is its primary audience. Researchers use basic research to support or refute theories about how the social world operates and changes, what makes things happen, and why social relations or events are a certain way.

Some people criticize the basic research orientation and ask, “What good is it?” They consider basic research to be a waste of time and money because they cannot see an immediate use for it or resolve a pressing issue with it. While many practitioners want answers to questions that they can implement within the next week, month, or year, a basic researcher might devote years to painstakingly seeking answers to questions that could reshape thinking for many decades to come. Much basic research lacks practical applications in the short term, but it builds a foundation for knowledge and broad understanding that has an impact on many issues, policy areas, or areas of study. Basic research is also the main source of the tools—methods, theories, and ideas—that all researchers use. Almost all of the major breakthroughs and significant advances in knowledge originated in basic research. It lays a foundation for core understandings and may have implications for issues that do not even exist when a study is conducted.

Basic researchers may examine issues that appear impractical because applications for the resulting knowledge may not appear for many years or decades. Often we can see only the practical applications after diverse basic knowledge advances have accumulated over a long time. For example, in 1984 Alec Jeffreys, a geneticist at the University of Leicester in the United Kingdom, was engaged in basic research studying the evolution of genes. As

Basic research Research designed to advance fundamental knowledge about how the world works and build/test theoretical explanations by focusing on the “why” question. The scientific community is its primary audience.

WHAT ARE THE MAJOR TYPES OF SOCIAL RESEARCH?

an indirect accidental side effect of a new technique he developed, he learned how to produce human DNA “fingerprints” or unique markings of the DNA of individuals. This was not his intent. Jeffreys even said he would never have thought of the technique if creating DNA fingerprints had been his goal. By the mid-1990s, applied uses of the technique had been developed. Today, DNA analysis is widely used in criminal investigations and other areas. Dozens of major practical breakthroughs and innovations had similar origins in initially unrelated basic research.

Few practitioners (e.g., police officers, counselors of youthful offenders) see relevance to a basic research question such as “Why does deviant behavior occur?” Nevertheless, answering such foundational questions stimulates new ways of thinking. The answers might revolutionize and dramatically improve what practitioners do. Public policies and social services can be ineffective and misguided without an understanding of core causes of events or behaviors. Applied research, too, builds new knowledge. Nonetheless, basic research is essential to expand knowledge. Researchers working close to the center of the scientific community conduct most basic research.

Applied Research

When we do **applied research** we address a specific concern. We may offer solutions to a question raised by an employer, a local community, or a social cause.² Only rarely in applied research do we try to build, test, or make connections to theory. Most applied research studies are short term and small scale. They offer practical results that we can use within a year or less. For example, the student government of University X wants to reduce alcohol abuse. It wants, therefore, to find out whether the number of University X students arrested for driving while intoxicated would decline if the student government were to sponsor alcohol-free parties next year. An applied research study would be most applicable for this situation.

Businesses, government offices, health care facilities, social service agencies, political organizations, and educational institutions conduct applied studies and make decisions based on findings.

Applied research findings shape many decisions. They might trigger the decision to begin a program that will reduce the wait time before a client receives benefits. Findings may help police decide whether to adopt a new police response to reduce spousal abuse. Applied research findings may help a firm decide to market product A to mature adults instead of teenagers.

Active practitioners (e.g., teachers, doctors and nurses, sales representatives, counselors and case-workers, judges, managers, supervisors, and city managers) are the audience for applied findings. Many in this large diverse audience lack a background in research or a strong scientific perspective. This can create complications. For example, a court proceeding obtains the results from a research study such as a survey. However, nonscientists (judges, jurors, lawyers) evaluate the survey’s methodology and findings on a nonscientific basis.³ As a result, they can misinterpret the results and use evaluation standards that diverge from those of the scientific community. They may accept findings from a study that does not meet basic scientific criteria but reject findings from a study with the highest standards of scientific rigor. Applied researchers must translate scientific-technical findings into the language of lay decision makers. The researchers need to highlight strengths and limitations of a study’s design or findings.

A researcher might conduct an applied research study for a decision maker who is uninterested in details of how it was conducted and who wants only a brief summary of key findings. Nonetheless, the researcher should also prepare a complete, detailed research report. Others who have the time and ability to evaluate the quality of the research may be interested, or disputes might arise later. One constraint regarding applied research is that it is less likely to appear in a peer-reviewed publication, if at all. Many times, findings have only limited distribution and are available only to a few decision makers or the practitioners in one organization.

Because we put applied research into practice, it can generate controversy. This is not new. For

Applied research Research designed to offer practical solutions to a concrete problem or address the immediate and specific needs of clinicians or practitioners.

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example, in 1903, Ellwood conducted an applied study of the jails and poorhouses and documented serious deficiencies. His research report generated great public indignation. However, he was accused of slandering the state government that had given him employment.⁴ William Whyte (1984) encountered conflict over applied studies of a factory in Oklahoma and of restaurants in Chicago. In the first case, the management was more interested in defeating a union than in learning about employment relations. In the other case, the restaurant owners wanted to make the industry look good rather than let anyone learn about the practical details of its operations. Some business organizations have a mind-set that differs from a research-oriented inquiry. Learning to negotiate and communicate across mind-sets is an important skill to develop (Reingold, 1999). A related issue is that sometimes officials call for an applied study on a policy controversy as a delaying tactic. They want only to deflect criticism or postpone a decision until after the political heat dies down and have no real interest in the study or its results.

Applied and basic research orientations weigh research methodology differently (see Table 1). In applied research, researchers must make more trade-offs or compromise scientific rigor to obtain fast, usable results. Compromise is no excuse for sloppy research, however. Applied researchers learn to how to squeeze research into the constraints of an applied setting and balance rigor against practical needs. Such balancing requires an in-depth knowledge of research and an awareness of the consequences of compromising standards.

Three Types of Applied Research. Applied social research comes in about a dozen forms. Here you will learn about three major types: evaluation, action oriented, and social impact assessment.

1. Evaluation research is the most widely used type of applied research.⁵ Large bureaucratic

Evaluation research Applied research in which one tries to determine how well a program or policy is working or reaching its goals and objectives.

TABLE 1 Basic and Applied Research Compared

ASPECT	BASIC	APPLIED
Primary audiences	Scientific community (other researchers)	Practitioners, participants, or supervisors (nonresearchers)
Evaluators	Research peers	Practitioners, supervisors
Autonomy of researcher	High	Low-moderate
Research rigor	Very high	Varies, moderate
Highest priority	Verified truth	Relevance
Purpose	Create new knowledge	Resolve a practical problem
Success indicated by	Publication and impact on knowledge/scientists	Direct application to address a specific concern/problem

organizations (e.g., businesses, schools, hospitals, governments, large nonprofit agencies) frequently use it to learn whether a program, a new way of doing something, a marketing campaign, a policy, and so forth is effective—in other words, “Does it work?” There is even a scholarly journal devoted to advancing the field of evaluation research, *Evaluation Review*.

Evaluation research greatly expanded in the 1960s in the United States when the federal government created many new social programs. Most researchers adopted a positivist approach and used cost-benefit analysis (we will examine this later in this chapter). By the 1970s, most government social programs required evaluation research studies to determine their effectiveness.

Evaluation research questions could include these: Does a law enforcement program of mandatory arrest reduce spousal abuse? Will a rape awareness program reduce college men’s coercive sex with women? Will a flextime program increase

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employee productivity? In an evaluation research study, we measure the effectiveness of a program, policy, or way of doing something. In evaluation research, we can use several techniques (e.g., survey and ethnographic field research), but if the experiment can be used, the result is most effective.

Some practitioners conduct their own evaluation research studies. More often, however, outside managers or decision makers request a study. Outsiders sometimes place boundaries on what a study can include. They might specify one specific outcome of interest. For example, education officials may request a study on improvements in math skills between the second and fifth grades but tell the researcher to ignore other subjects, other aspects of learning, and changes in cognitive-social development in the children.

Ethical and political tensions often arise in evaluation research. This happens because people develop strong interests in specific findings. The findings can affect who is hired, who builds political popularity, or which program is advanced. If someone is displeased with the study findings, they may criticize the researcher or call the study sloppy, biased, or inadequate. Some evaluation researchers have experienced pressures to rig a study, especially one about controversial issues or programs. The possibility of controversy makes it especially important for the applied researcher to be honest and open, and to carefully adhere to proper research procedures.

Despite their value, evaluation research studies have limitations. Few go through a rigorous peer review process, and their raw data are rarely publicly available for scrutiny or replication. In addition, policy makers can selectively use or ignore evaluation reports (See Example Box 1, Evaluation Research). Many studies adopt a very narrow focus, looking at select inputs and outputs more than the entire process or ramifications of a program. For example, in 1996, U.S. social welfare programs were dramatically changed or “reformed.” Evaluation research studies of the new welfare programs focused on whether they reduced welfare caseloads and the costs of administering new programs. Few studies considered the impact of new programs on unfulfilled family obligations or rising distress among children. To justify the new programs, policy

EXAMPLE BOX 1

Evaluation Research

Wysong, Aniskiewicz, and Wright (1994) evaluated the effectiveness of the Drug Abuse Resistance Education (D.A.R.E.) program found in 10,000 schools in the United States and 42 other countries. The program is widely used, well funded, and very popular with police departments, school officials, parent groups, and others. By having police officers deliver talks in early grades, D.A.R.E. tries to reduce illicit drug use among teens by increasing their knowledge of drugs, developing antidrug coping skills, and raising self-esteem. The authors examined two groups of students who were seniors in a high school in Indiana. One group had participated in the D.A.R.E. program in seventh grade and the other group had not. Consistent with many past studies, the authors found no lasting differences among the groups regarding age of first drug use, frequency of drug use, or self-esteem. The authors suggest that the program’s popularity may be due to its political symbolic impact. The program may be effective for latent goals (i.e., helping politicians, school officials, and others feel morally good and involved in antidrug actions) but ineffective for official goals (i.e., reducing illegal drug use by teenagers).

makers and politicians used the evidence selectively and boasted of its positive benefits.⁶

Two types of evaluation research are formative and summative. *Formative evaluation* has built-in monitoring or continuous feedback on a program used for program management. *Summative evaluation* reviews final program outcomes. Both are usually necessary.

Many organizations (e.g., schools, government agencies, businesses) have made evaluation research part of their ongoing operations. One example is the *Planning, Programming, and Budgeting System (PPBS)*, first used by the U.S. Department of Defense in the 1960s. The PPBS rests on the idea that researchers can evaluate a program by measuring its accomplishments against stated goals and objectives. The evaluator divides a program into components and analyzes each component with regard to its costs (staff, supplies, etc.)

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and accomplishments relative to explicit program objectives. For example, a women's health center offers pregnancy education. It has four program components: outreach, education, counseling, and referrals. The program has four main objectives: reach out to and offer emotional support to women who believe they are pregnant, provide current information about pregnancy, counsel women about their health risks and concerns, and refer pregnant women to health care providers or family planning agencies. An evaluation researcher might examine the cost of each component and measure how well the program has met each of its four objectives. For example, the researcher asks (1) how much staff time and how many supplies have been devoted to outreach activities in the last year, (2) how many calls or inquiries can be traced to such efforts, and (3) how many of women from targeted groups contacted or came to the center for counseling.⁷

2. Action research treats knowledge as a form of power. It blends acquiring new knowledge with using the knowledge to achieve a specific purpose. In action research, we do not remain detached. We close the gap between studying an issue and engaging in social-political action to influence the issue. Various types of action research are inspired

by different philosophical stances, in the main driven by varying core assumptions about epistemology and ontology, which normatively inform their practitioners in terms of aims and requirements. Yet the impact of such philosophical variation usually remains unnoticed in published accounts thereby fuelling ambiguity and controversy . . . (Cassell and Johnson 2006:785–786)

Action research Applied research in which the primary goal is to facilitate social change or bring about a value-oriented political-social goal.

Participatory action research Action research in which the research participants actively help design and conduct the research study. It emphasizes democratizing knowledge-creation and engaging in collective action, and it assumes that political knowledge emerges from participating in research.

Most action research shares five characteristics:

- The people who are studied are active participants in the research process.
- The study incorporates the popular knowledge and concerns of ordinary people.
- The study examines power relations and documents social inequality or injustice.
- Study findings are shared to raise the awareness and empower ordinary people.
- The research is tied directly to social-political action and achieving social goals.

Action research tries to equalize the power relations between research participants and researchers. We avoid having control, status, and authority over the people we study. Instead, we encourage equality and direct involvement by research participants. We want to raise awareness among participants and the public, so published articles are secondary goals. Instead, the emphasis is on sharing the findings with research participants and the public. This takes the form of general reports and pamphlets, press releases for the mass media, or public meetings.

Action research often attracts researchers with impassioned views on an issue (e.g., environmental, egalitarian, feminist). A deeply committed feminist action researcher may see a study as both advancing knowledge and creating social change to transform gender relations.⁸ If the researcher studies sexual harassment, the outcome might be making policy changes to reduce its occurrences and working with potential victims so they can better defend their rights. Action researchers worked to preserve a town that was about to be destroyed by a dam project. They collaborated with union officials and management to redesign work to prevent layoffs. In developing nations, action researchers often work among illiterate, impoverished peasants to teach literacy, spread an awareness of problems, and improve living conditions.⁹

Participatory action research, a subtype of action research, emphasizes democratizing the knowledge-creation process, revealing injustices, highlighting social inequality and conflict, and engaging in collective action to improve conditions.

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A key belief in participatory action research is that knowledge grows out of directly experiencing social-political activism. As the research participants engage in direct action, they become more informed and empowered. They learn and are more likely to succeed.

In a participatory action study, research participants take an active role in formulating, designing, and carrying out the research. They cogenerate findings with professional researchers in a collaborative process. Research participants are involved in problem definition and study implementation. Because most participants are unfamiliar with professional social research, the trained researcher acts as a consultant or collaborator who assists and provides expertise in study design, data gathering, and data analysis/interpretation.

An action researcher balances professional standards with the practical limits of adapting to local conditions and specific participant concerns. Involvement and control by local participants means joint ownership of the findings. The researcher who wants to publish study results in a professional outlet might find that the participants feel the researcher is only trying to advance his or her career. This makes getting the permission and cooperation of participants critical before releasing findings in a professional setting or outlet.¹⁰

Organizations or people with value/advocacy views who are opposed to the interests of study participants may challenge visible and successful action-research. For this reason, an action researcher needs to have an in-depth knowledge of proper research procedures and very carefully document study methods (see Example Box 2, Action Research).

3. Social impact assessment research estimates the likely social consequences in advance of a planned change.¹¹ Often social impact assessment (SIA) research is part of a larger environmental impact statement required by government agencies. In the United States, the 1969 National Environmental Policy Act (NEPA) requires an Environmental Impact Statement (EIS) before a federal government agency may take “actions significantly affecting the quality of the human environment” (NEPA, section 102). Preparing SIA for an EIS requires social science research, and it assesses both positive and negative impacts.

Social impact assessment Applied research that documents the likely consequences for various areas of social life if a major new change is introduced into a community.

An EIS is required for locating and building schools, hospitals, prisons, housing developments, shopping centers, factories, landfills, highways, airports, reservoirs, parks, recreation areas, and power plants. If SIA is part of the EIS, it evaluates the consequences of such action including the availability and quality of housing, population characteristics (such as age structure, racial-ethnic diversity, income and education levels), and the distribution of power-authority. It may examine attitudes or perceptions, family bonds, and friendship networks. The SIA part of the EIS can consider impacts on community resources such as health, police, fire, and sanitation services, employment, school and recreational opportunities, and the vitality of non-profit organizations. The SIA also considers impacts on the survival or continuity of distinct communities of people who have established local historical and cultural roots.¹²

Researchers conducting social impact assessments often work in an interdisciplinary research team to measure areas of impact (see Example Box 3, Social Impact Research). Social impact researchers have a professional organization, the International Association for Impact Assessment, with a scholarly journal, *Impact Assessment and Project Appraisal*.

After decades of development, the tools and effectiveness of social impact assessment research are well established; however, this type of applied research is seriously underutilized. This is due to several factors. First, most EISs do not require a SIA. Legislators, policy officials, or decision makers rarely ask for a SIA before they approve a major project. Except for a very few large-scale programs, most decision makers choose to change zoning regulations, develop a new business park, create a housing development, alter transportation routes, and so forth without systematically considering the social impact. These issues are decided based on

EXAMPLE BOX 2

Action Research

Williams and associates (2007) used a participatory action approach to study quality of life in Saskatoon, Canada. They gathered quantitative and qualitative data from three areas of the city (low, middle, and high income) in 2001 and again in 2004. They focused on three themes: (1) a growing income gap, (2) social knowledge translation strategies that would include low socioeconomic populations, and (3) how to bring about a positive change in local quality of life. The researchers developed a “hybrid” research organization. It was both university based and local community based and had coleaders (one from the university and one from the community). Community leaders concerned about quality of life issues in Saskatoon were active throughout the study. They incorporated four knowledge-translation strategies: regularly engage the local media (newspaper and television), conduct several community forums, create a Saskatoon Quality of Life Steering Committee with several community organizations, and employ an action researcher who would be a policy entrepreneur (advocate for starting new policies). Community members participated in research design, data collection, and data analysis-interpretation. The authors treated research findings as learning tool for the community that could raise awareness and stimulate action. They used several methods to communicate results: published short briefing papers, created posters, and distributed research summaries at community forums for discussion. Discussing findings was not an endpoint; rather, it was a stage toward creating new policies, programs, or actions based on community reactions to the findings.

Another action research study, this one by Quach and associates (2008), involved an applied action research study of Vietnamese nail salon workers in one county in California “to collect preliminary descriptive information” (p. 340). The authors noted that California has 35,000 nail salons with 300,000

nail technicians who work for long periods with nail products that have toxic and hazardous ingredients. In California, 59–80 percent of licensed manicurists are of Vietnamese descent, and 95 percent are female. Between 1987 and 2002, the proportion of Vietnamese nail workers grew tenfold, but almost nothing was known about their health situation. Researchers designed the study to raise awareness of health issues and encourage participation by workers by creating a Community Advisory Committee to oversee the study. An important feature was that targeted population were immigrants, many with limited English language ability (99 percent had been born in Vietnam and over one-half had lived in the United States ten years or longer). Led by the outreach staff of a local health center, the committee was comprised of ten Vietnamese community members (including nail salon workers), patients at the health center, cosmetology instructors, breast cancer survivors, and mental health counselors from Alameda County (San Francisco Bay area). The study included 201 nail salon workers at 74 salons in the county. Researchers used a 10-minute Vietnamese language questionnaire, focus groups, and observations of salon conditions (e.g., number of doors and windows, ventilators). The study documented numerous health issues. More than one-half of salon workers reported acute health problems (e.g., eye irritation, headaches, breathing difficulties) that started after they began working in the industry. A large majority of nail salon workers reported concerns over exposure to workplace chemicals, but less than one-half of the salons had exhaust ventilation to reduce chemical exposure. Local community members were actively involved at several research stages. Study authors used the findings to educate a range of people in the local community and developed strategies to help reduce exposure to hazardous occupational conditions.

political and economic interests. Second, a social impact assessment study requires time and money. Officials resist spending funds and object to slowing the decision-making process. Because they work in a short time frame, they do not require

studies, even if one could produce a more informed decision that saves money and anguish in the long-term. Third, in many places, the political-cultural climate is wary of planning and distrustful of “expert” advice. Such distrust combines with

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EXAMPLE BOX 3

Social Impact Research

Many forms of gambling, or “gaming,” have expanded in the United States over the past 30 years. In 1980, gambling was legal in only a few states and yielded less than \$10 billion in profits. Today, it is legal in 48 states, and profits exceed \$50 billion a year. Lawmakers sought new sources of revenue without raising taxes and wanted to promote economic development. The gambling industry promised new jobs, economic revitalization, and a “cut” of the flow of money from gambling. This allowed lawmakers to create jobs, strengthen the local economy, and obtain more revenue—all without raising taxes. Legal rulings have recognized the treaty rights of AmerIndian people, meaning that gaming laws did not apply to AmerIndian lands. When a new casino was proposed for downtown Rochester, New York, Kent (2004) was commissioned to conduct a social impact study. Like most reports of social impact studies, it was not published in a scholarly journal. The report estimated that the proposed casino would add 1,300 new jobs to the city. New York state could earn an additional \$23 million per year, and the city of Rochester about \$11 million in tax revenues from casino operations. To estimate the impact, one part of the study compared data from several gambling versus nongambling cities and considered past studies on gambling addiction behavior. This part considered both the economic benefits and added social costs (e.g., crime rates, prostitution, illegal drug use, compulsive gamblers) that appeared in cities with casinos. The report stated that pathological gambling increases with proximity to casino gambling and has costs for individuals and families (with increased divorce and child abuse). The report estimated the dollar value of social costs could reach \$10 million annually.

limited knowledge of social science research. As a result, people cling to traditional decision-making methods. They use guesswork rather than research-based knowledge about social impacts of decisions. Fourth, the promoters or investors in new projects often oppose conducting a social impact assessment study. They fear that its findings will create delays, force costly alterations, or derail their plans by

identifying social concerns. Lastly, in cases of social impact studies, officials often ignore their results because of overriding political concerns and the influence of entrenched political-economic interests.

Two Tools in Applied Research. Many applied researchers use two tools as part of their research studies: needs assessment and cost-benefit analysis.

A **needs assessment** involves collecting data to determine major social needs and their severity. It is often a preliminary step before a government agency or charity decides on a strategy to help people or conduct further study. Needs assessments often become tangled in complex community relations, and when doing one, we may encounter several issues (see Summary Review Box 1, Dilemmas in Needs Assessment).

A first issue is to prioritize serious needs or problems. Perhaps a community has a dozen issues or concerns, such as women subject to violent domestic abuse, preteens abusing drugs, people who are homeless sleeping in a park, working people losing large amounts of money betting at a racetrack, or executives drinking too much at the country club and then driving. Which issue receives the needs assessment? The most visible need may not be the most serious one or one that mobilizes a great public outcry.

A second issue is to identify information sources for the needs assessment. For example, when deciding to conduct a needs assessment for a program to aid people who are homeless, who is in a best position to provide information? Should we talk about the needs of people who are homeless with the business owners who complain about homeless people living on their street? Should we ask the current service providers to the homeless population (e.g., social workers, health care centers, schools, homeless shelters, food pantries, and soup kitchens)? Should we rely on law enforcement (e.g., police, jailers, court officials)? Should we ask friends, family members, and nonprofessional

Needs assessment An applied research tool that gathers descriptive information about a need, issue, or concern, including its magnitude, scope, and severity.

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advocates of people living on the street? Should we ask the people themselves? Ideally, we would include all sources, but identifying the full range may not be easy or make take too much time.

A third issue is that explicit, immediate needs may not include the full range of less visible issues or link them to long-term solutions. For example, we learn that people who are homeless say they need housing. After examining the situation, however, we determine that housing would be available if these people had jobs. The housing problem is caused by a need for jobs, which, in turn, may be caused by a need for skills, a “living wage,” and certain types of businesses. Thus, to address the housing need, it is necessary to attract specific types of businesses, enact a new minimum wage, and provide job training. Often the surface, apparent needs are rooted in deeper conditions and causes about which many people are unaware. For example, drinking polluted water, having a poor diet, and lacking exercise may cause an increased need for health care. Does this indicate a need for more health care or for better water treatment and a public health education program?

A fourth issue is that the needs assessment may generate political controversy. It may suggest solutions beyond local control or without a realistic chance of implementation. Powerful groups may not want some of the social needs documented or publicized. We may learn that a city has much unreported crime; however, publicizing the situation may tarnish the image of a safe, well-run city that the Chamber of Commerce and the city government are promoting. Often one group’s needs, such as the people who bet too much money at the racetrack, are linked to the actions of others who benefit by creating that need, such as the racetrack’s owners and employees. By documenting needs and offering

Cost-benefit analysis An applied research tool economists developed in which a monetary value is assigned to the inputs and outcomes of a process and then the researcher examines the balance between them.

SUMMARY REVIEW BOX 1

Dilemmas in Needs Assessment

1. Who defines what is the most serious issue for which needs should be assessed?
2. Whom should you ask to learn about the needs of a group of people?
3. Should you consider both conscious, visible needs and unspoken, hidden needs?
4. When many areas of needs coexist, which ones should you include in an assessment?
5. Should you limit remedies/solutions for needs to what can be realistically accomplished within the limits set by established powerholders or consider all possibilities even if they may be disruptive?

a resolution, we may be caught between opposing groups.

Economists developed the second tool, **cost-benefit analysis**. It involves estimating the future costs and benefits of a proposed action and assigning them monetary values. We start by identifying all consequences including tangibles, such as job creation, business formation, or graduation rates and intangibles, such as clean air, political freedom, scenic beauty, or low stress levels of a program or action. Next, we assign each consequence a monetary value; some (such as costs) may be negative, some (e.g., benefits) positive, and some neutral. We then calculate a probability or likelihood for each consequence. Lastly, we compare all costs to benefits and decide whether they balance.

Cost-benefit analysis appears to be a nonpolitical, rational, and technical decision-making strategy; however, it is often controversial. As with needs assessment, people disagree about the activities considered relevant or important. Thus, some people will say that the top concerns are business stability and profitability, lower taxes, and new job creation. Others say the top priorities are a healthy and clean environment, open green space, and increased artistic expression and free speech. People may disagree on whether a given consequence is positive or negative. For example, I see widening a road as a benefit. It will allow me to

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travel to work much more rapidly and reduce congestion. However, a homeowner who lives along the road sees it as a cost. Building the road will require removing some of his or her front yard, increase noise and pollution, and lower the house's market value. In the social impact study on opening a new casino in Rochester, New York (Example Box 3), the report weighed economic benefits (profits, jobs, tax revenues) against social costs (crime, gambling addiction, family breakup, illegal drug use). It stated that benefits outweighed costs, yet the people receiving the economic benefits (i.e., local business owners and taxpayers, people who get casino jobs) were not the same ones who pay the social costs associated with the casino (i.e., families that break up because of compulsive gambling, people with worse health due to increased drug use, or women who become prostitutes).

We assign monetary values to costs and benefits in two ways. *Contingency evaluation* asks people how much something is worth to them: for example, a town considering whether to allow a polluting factory to locate there. We would want to estimate the cost of air pollution on the average person's health. We might ask people "How much is it worth to you not to cough a lot and miss work 10 days a year because you are sick with asthma?" If the average value people assign is \$150 in a town of 20,000, we estimate the contingency evaluation or subjective benefit of health to be $\$150 \times 20,000$ people per year, or \$3 million. We balance this cost against higher profits for a company and new jobs created by allowing pollution. One problem with estimates is that few people give accurate ones. In addition, different people often assign very different cost values. To an impoverished person, coughing and missing work may be worth \$150. For a wealthy person, it may be \$150,000. Broader consequences exist as well. In this example, polluting companies will move to towns with many low-income people who assign lower costs. This will worsen living conditions in lower income areas and increase the gap in life quality between rich and poor.

Using the same example, *actual cost evaluation* estimates the actual medical and job loss costs. We estimate the health impact and then add up likely medical bills and costs for employers to

replace sick or disabled workers. Let us say that medical treatment averages \$150 per person and a replacement worker costs an extra \$300 per lost day of work. The cost of treating 10,000 people each year would be $\$150 \times 10,000$ people = \$1,500,000. The cost of hiring 1,000 replacement workers for 2 days would be $\$600 \times 1,000$ workers = \$600,000, for a total estimate of \$2.1 million. This method ignores pain and suffering, inconvenience, and indirect costs (e.g., a parent stays home with a sick child or a child cannot play sports because of asthma). To balance the costs with benefits by this method, the polluting factory would need to earn an extra \$2.1 million in profits.

Cost-benefit analysis rests on the assumption that we can attach a monetary value to everything (e.g., a child's learning, health, love, happiness, human dignity, chastity) and that people assign similar valuations. We might question these assumptions. Cost-benefit analysis can also raise moral and political concerns. The people paying the cost may not be the ones getting the benefits. In addition, cost-benefit calculations tend to favor wealthy, high-income people over poor, low-income people. A high-income person's time is worth more, so she or he places a higher value on saving 15 minutes in a commute to work than a low-income person would. A high-income person thinks saving 15 minutes is worth \$50, but to a low-income person, it is worth \$5. Cost-benefit analysis often finds inconveniencing or disrupting the lives of low-income people is more "cost effective."

Cost-benefit analysis tends to conceal the moral-political dimension of decisions. For instance, should we "pull the plug" on a life-support machine for a seriously ill elderly person or keep the person alive for another 6 months. We compare the benefits to the costs. Maybe it costs \$200,000 in medical expenses to extend the person's life by 6 months. Is the benefit of 6 months of life for a nonproductive member of society worth \$200,000 in costs? In addition to its economic aspect, the cost-benefit balance decision has a moral dimension, yet that dimension in decisions is most visible when it involves a single identifiable person (your grandmother) with whom you have a personal, emotional attachment. The moral dimension is less visible

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when make it for someone identified as an individual, (i.e., lost among a group of 1,000 hospital patients) and for whom decision makers (e.g., health insurance officials in a distant city) lack direct, personal contact. Although obscured, the moral dimension of the decision remains.

Moving Beyond the Basic–Applied Dichotomy.

The basic versus applied research dichotomy is overly simplistic. Three related issues elaborate on this distinction to build additional types of research beyond the dichotomy:

1. The form of knowledge a study creates
2. The range of audiences that can use research findings
3. Who initiates, designs, and controls a study—an independent researcher or others

Forms of Knowledge. Social researchers produce two forms of knowledge, instrumental and reflexive. Although they overlap, the forms mirror a distinction between neutral, impartial, and task-oriented actions and principled, value-based, engaged behavior. Most studies published in scholarly journals and applied studies by practitioners build and expand **instrumental knowledge**. It is a means–ends or task-oriented knowledge. We use it to accomplish something: a practical task or advancement of what we know about how the world works. We create such knowledge as we extend old or invent new research techniques and gather, verify, connect, and accumulate new information. Instrumental knowledge advances the frontiers of understanding. As we create instrumental

knowledge, we can avoid direct engagement in moral or value-directed concerns.

By contrast, **reflexive knowledge** is self-aware, value-oriented knowledge. It is principled and oriented toward an ultimate value or end in itself. We create reflexive knowledge to build on specific moral commitments, consciously reflect on the context and processes of knowledge creation, and emphasize the implications of knowledge. When we create reflexive knowledge, we ask questions such as: Why and how are we creating this knowledge? What is the relevance or importance of this knowledge, and for whom? What are its implications for other knowledge and for moral principles such as justice, truth, fairness, freedom, or equality?

Audiences for Research Findings. As noted earlier, the primary audience of basic research is other professional researchers in the scientific community. Practitioner nonresearchers are the primary audience for applied research. We can expand the practitioner audiences into four types: the public, activists, general practitioners, and narrow practitioners. Each has a different interest. Most of the *public* have only a general interest. They learn about research results in schooling or from the mass media outlets. *Activists*, community advocates, and research participants in action research have a direct, immediate interest in results that are very relevant to their immediate concerns. The *general practitioner*, a high-level decision maker or policy specialist in government or large organizations (e.g., businesses, hospitals, police departments), wants to integrate a broad range of practical knowledge to use to inform many current and future decisions. By contrast, the *narrow practitioner* wants targeted findings that will address a specific, pressing problem.

Researcher Autonomy and Commissioned Social Research. In the idealized and romantic image of research, there is complete freedom to pursue knowledge without restriction. The ideal researcher is independent, has sufficient funds, and has complete control over how to conduct a study. The opposite of this image is research with many restrictions. This describes hired researcher-employee

Instrumental knowledge Knowledge narrowly focused to answer a basic or applied research question, issue, or concern with an outcome or task-oriented orientation.

Reflexive knowledge Knowledge used to broadly examine the assumptions, context, and moral-value positions of basic or applied social research, including the research process itself and the implications of what is learned.

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TABLE 2 Expanded Set of Basic and Applied Research Types

AUDIENCE	FORM OF KNOWLEDGE		
	REFLEXIVE	INSTRUMENTAL	INSTRUMENTAL
	<i>Autonomous</i>	<i>Commissioned</i>	<i>Autonomous</i>
Basic Research Type			
Scientific community	Basic critical	Basic contract	Basic professional
Applied Research Types			
General public	Public intellectual	Dedicated policy	Democratic policy
Participants	Public educator	Consultant	Participatory researcher
Generalist practitioner	Democratic deliberation	Democratic contract	Democratic applied research
Narrow practitioner	Dedicated deliberation	Dedicated contract	Dedicated applied research

or **commissioned research**. Most commissioned studies put limitations on researcher autonomy. Someone else provides the funds, and specifies the scope of the research question and the dissemination of findings. Other “strings” may include restriction to examine certain issues but not others. Researchers may face strict limits on the time to complete a study. Alternatively, they may be told which research techniques to use or which people to contact in the study.

Expanded Set of Basic and Applied Research Types. We can now combine the form of knowledge, audience, and commissioned versus autonomous research to create an expanded set of basic and applied research and researcher roles (see Table 2). Basic research for the scientific community can produce reflexive or instrumental knowledge—critical and professional research, respectively.¹³ A large private foundation or government agency might commission a researcher to conduct basic research. This is basic contract research. At times, researchers assume a public intellectual role and produce reflexive knowledge to advance general discussion and public debate. At other times, they produce instrumental knowledge, sometimes from a commissioned or autonomous study. The knowledge might be dedicated to a specific policy and contribute to a policy debate.

A researcher who designs reflexive research for participants is in a public educator role. When the knowledge is instrumental, the researcher may act as a consultant to the participants or be a participatory researcher who is equal to the participants. On some occasions, generalist and targeted practitioners create and apply reflexive knowledge in debates and deliberations over issues or decision options. More often practitioners focus on instrumental knowledge. Sometimes a generalist practitioner creates and uses knowledge as a contributor to open, democratic decisions. At other times, a practitioner narrowly focuses on a particular targeted issue that has little application or distribution of findings.¹⁴ An outside group or employer could commission a study, or a researcher could create it autonomously.

PURPOSE OF RESEARCH

We conduct studies for many reasons: my boss told me to; it was a class assignment; I was curious; my roommate thought it would be a good idea. There

Commissioned research Research funded and conducted at the behest of someone other than the researcher; the person conducting the study often has limited control over the research question, methods of a study, and presentation of results.

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are nearly as many reasons to conduct a study as there are researchers. We can organize the purposes of research into three groups: explore a new topic, describe a social phenomenon, or explain why something occurs.¹⁵ Studies may have multiple purposes (e.g., both to explore and to describe), but one purpose is usually dominant (see Summary Review Box 2, Purposes of Research Types).

Exploration

We use **exploratory research** when the subject is very new, we know little or nothing about it, and no one has yet explored it (see Example Box 4, Exploratory Research). Our goal with it is to formulate more precise questions that we can address in future research. As a first stage of inquiry, we want to know enough after the exploratory study so we can design and execute a second, more systematic and extensive study. Exploratory research rarely yields definitive answers. It addresses the “what” question: What is this social activity really about? It is difficult to conduct because it has few guidelines, everything is potentially important, steps are not well defined, and the direction of inquiry changes frequently.

Researchers who conduct exploratory research must be creative, open minded, and flexible; adopt an investigative stance; and explore all sources of information. They ask creative questions and take advantage of serendipity (i.e., unexpected or chance factors that have large implications). For example, an expectation might be that the impact of immigration to a new nation would be more negative on younger children than on older ones. Instead, the unexpected finding was that children of a specific

Exploratory research Research whose primary purpose is to examine a little understood issue or phenomenon and to develop preliminary ideas about it and move toward refined research questions.

Descriptive research Research in which the primary purpose is to “paint a picture” using words or numbers and to present a profile, a classification of types, or an outline of steps to answer questions such as who, when, where, and how.

SUMMARY REVIEW BOX 2

Purposes of Research Types

EXPLORATORY

- Become familiar with the basic facts, setting, and concerns
- Create a general mental picture of conditions
- Formulate and focus questions for future research
- Generate new ideas, conjectures, or hypotheses
- Determine the feasibility of conducting research
- Develop techniques for measuring and locating future data

DESCRIPTIVE

- Provide a detailed, highly accurate picture
- Locate new data that contradict past data
- Create a set of categories or classify types
- Clarify a sequence of steps or stages
- Document a causal process or mechanism
- Report on the background or context of a situation

EXPLANATORY

- Test a theory’s predictions or principle
- Elaborate and enrich a theory’s explanation
- Extend a theory to new issues or topics
- Support or refute an explanation or prediction
- Link issues or topics to a general principle
- Determine which of several explanations is best

age group (between ages six and eleven) who immigrate are most vulnerable to its disruption—more so than either older or younger children.¹⁶

Description

You may have a well-developed idea about a social phenomenon and want to describe it. **Descriptive research** presents a picture of the specific details of a situation, social setting, or relationship. Much of the social research found in scholarly journals or used for making policy decisions is descriptive (see Example Box 5, Descriptive Research).

Descriptive and exploratory research blur together in practice. A descriptive research study starts with a well-defined issue or question and tries

EXAMPLE BOX 4**Exploratory Research**

Most exploratory research uses qualitative data. In general, qualitative research tends to be more open to using a wide range of evidence and discovering new issues. Troshynski and Blank (2008) conducted an exploratory study of men who engage in illegal sex trafficking. The study was unusual because the research participants had actively engaged in an illegal activity. The authors had a chance meeting with someone who knew people “in the business.” Over a 3-month period, the authors were able to meet and conduct open-ended interviews with five traffickers. Their goal was to explore how the traffickers saw their business and learn about their backgrounds.

Other exploratory qualitative studies are more complex. Gavlee (2005) conducted an exploratory ethnographic study of racial classification in Puerto Rico. The study was motivated by previous studies that had found that the way people dealt with race in Brazil and much of Latin American differed from ideas about race on the mainland United States. Brazilians emphasized phenotype (outward appearance) over descent, which produced numerous categories that are fluid and uncertain. The study’s research questions were these: What categories do people in Puerto Rico use? What are the organizing principles of the categories? Gavlee focused on one small city in Puerto Rico. He spent time in the city and conducted open-ended interviews with twenty-four people to learn terms and

categories they used to talk about others. Next, he asked forty-two people to organize a set of pictures of faces that he analyzed using computer software. He discovered that local people organize primarily in terms of appearance rather than race, using five shades of color as categories. Other physical appearance features (hair texture, nose shape) also had minor roles.

Some exploratory studies use quantitative techniques. Krysan (2008) analyzed survey data in an exploratory study of how people of different races in the United States search for housing. The study asked several hundred people in the Detroit area about their recent housing search including how long it took, how many possibilities they inspected during the search, and how many offers or applications they completed. Krysan compared renters and buyers as well as Whites and Blacks with regard to search strategies (e.g., talk to friends, family, or neighbors, look at yard signs, search newspapers or the Internet, use a real estate professional or search service). She looked at percentages and found many similarities but a few differences with regard to race pertaining to type of real estate agent used, Internet use, and length or difficulty of search. People tended to use an agent of their own race. Whites were more likely to use the Internet and more likely to restrict their searches to White majority neighborhoods. Blacks searched a wider range of locations, had longer searches, and filed more applications before they had success.

to describe it accurately. The study’s outcome is a detailed picture of the issue or answer to the research question. For example, the focused issue might be the relationship between parents who are heavy alcohol drinkers and child abuse. Results could show that 25 percent of heavy-drinking parents had physically or sexually abused their children compared to 5 percent of parents who never drink or drink very little.

A descriptive study presents a picture of types of people or of social activities and focuses on “how” and “who” questions (How often does it happen? Who is involved?). Exploring new issues

or explaining why something happens (e.g., why do heavy-drinking parents abuse their children) is less of a concern than describing how things are. A great deal of social research is descriptive. Descriptive researchers use most data-gathering techniques: surveys, field research, content analysis, and historical-comparative research.

Explanation

When encountering an issue that is known and with a description of it, we might wonder *why* things are the way they are. Addressing the “why” is the

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EXAMPLE BOX 5

Descriptive Research

The experimental study by Lowery and colleagues (2007) on priming and academic performance, the survey research study by Edgell and Tranby (2007) on religion and beliefs about racial inequality, and the ethnographic study of gangs by Venkatesh (2008) were all descriptive research. The primary focus of each study was to describe patterns rather than address the *why* question or to test an existing theory.

Another example of a descriptive study is the Unnever and Cullen (2007) study on support for the death penalty. The authors observed that many public opinion polls revealed a sharp racial divide in Americans' support for the death penalty. White racism is often cited as a reason for this difference, yet "there is no systematic theory of why white racism fosters support for capital punishment" (page 1283). The authors conducted a secondary data analysis (see later in this chapter) of survey data with a national sample of 1,500 people. In statistical analysis, they found that while many factors (authoritarian personality, conservative ideology, religious belief, and anti-egalitarian views) contribute to a person's support for death penalty, the strongest predictor of support among Whites was a high score on White racism. Among nonracist Whites, support for the death penalty is similar to levels found among African Americans. The authors briefly discussed theory, but they used theories for only general ideas and primarily described the characteristics of death penalty supporters. They did not directly test any theories or use them to create an explanation (see the next section).

purpose of **explanatory research**. It builds on exploratory and descriptive research and goes on to identify the reason something occurs (see Example Box 6, Explanatory Research). Going beyond providing a picture of the issue, an explanatory

Explanatory research Research whose primary purpose is to explain why events occur and to build, elaborate, extend, or test theory.

study looks for causes and reasons. For example, a descriptive study would document the numbers of heavy-drinking parents who abuse their children whereas an explanatory study would be interested in learning *why* these parents abuse their children. We focus on exactly what is it about heavy drinking that contributes to child abuse.

We use multiple strategies in explanatory research. In some explanatory studies, we develop a novel explanation and then provide empirical evidence to support it or refute it. In other studies, we outline two or more competing explanations and then present evidence for each in a type of a "head-to-head" comparison to see which is stronger. In still others, we start with an existing explanation derived from social theory or past research and then extend it to explain a new issue, setting, or group of people to see how well the explanation holds up or whether it needs modification or is limited to only certain conditions.

WITHIN OR ACROSS CASES

Studies vary according to the number of cases we examine and the depth-intensity of investigation into features of the cases. Sometimes we carefully select or sample a smaller number cases out of a much larger pool of cases or population. These studies may still involve hundreds or thousands of cases. In other studies (especially experiments), we analyze a few dozen people and manipulate conditions for those people. In still another type of study, we intensively examine one or a small handful of cases, perhaps fewer than ten. While the number of cases in a study is important, the more critical issue is whether a study primarily focuses on features within cases or across cases. As Ragin (1994:93) observed, "often there is a trade-off between the number of cases and the number of features of cases researchers typically can study."

The concept of "case" is central but can be complex. Gerring (2007:17) calls a case a "definitional morass." The complication arises because many possible things can be cases. They can be determined by a study's perspective and research

EXAMPLE BOX 6**Explanatory Research**

The historical-comparative study on the movement for jury rights by McCammon and colleagues (2008) was explanatory. The study focused on explaining why movements were more successful in some states than others. The existing-statistics study by McVeigh and Sobolewski (2007) was also explanatory because the authors tested ethnic competition theory and split labor market theory to explain county voting patterns.

Explanatory studies usually outline an existing theory and test it or extend the theory to a new area or group. A well-known social psychological theory for the past 50 years has been the contact hypothesis. It has primarily been used to study interracial relations. It explains the degree of prejudice and negative attitudes by saying that people tend to hold negative views toward an “out-group” because of ignorance and negative stereotypes. Once people have contact with and get to know out-group members, they replace their ignorance and negative stereotypes with more positive views. It answers the question why people hold negative feelings toward out-groups with the contact hypothesis: their lack of contact with the out-group. Many studies examined this hypothesis, by investigating specific conditions

of contact and the degree to which an out-group is perceived as threatening.

Lee, Farrel, and Link (2004) extended the contact hypothesis to explain a new topic, people in U.S. cities who are homeless. They looked at fourteen measures of exposure to these people. The measures ranged from having information (e.g., articles, television) about them, personal observation, and personal interaction, to having been homeless oneself or having a family member who was or is. They also developed comprehensive measures of a person’s view on people who are homeless. These included beliefs about why people become homeless, seeing them as dangerous, feeling empathy and having positive emotions, and supporting their rights. Using telephone survey data from a random sample of 1,388 adults in 200 U.S. metropolitan areas in 1990, they found clear evidence supporting the contact hypothesis. People who had more contact and more intimate types of contact with people who are homeless held the most favorable views of them and were more likely to support programs that helped people who are homeless compared to people who had little or no contact with them. They also found some variation in views about people who are homeless based on a person’s race, age, education level, and political ideology.

question. Formally, a case is bounded or delimited in time and space; it is often called a “unit” or “observation.” An individual person can be a case as can a family, company, or entire nation. What serves as a case in one study may not be a case in a different study. For example, the nation might be a case that can examine aspects of it or aspects of individuals as cases within one nation’s population.

A case is not simply any individual person, family, company, or nation; we select it as part of a “class of events” or because it belongs to a category of cases (see George and Bennett, 2005:17). We study a case because it is part of some grouping—type or kind—that we study to develop knowledge about causes of similarities and differences among

a type or kind of case. For example, I would not study my neighbor Alex as a case just because he lives next to me; however, I might include Alex as a case within a class of similar cases: middle-aged men with a physical disability that prevents them from working and who became full-time “househusbands” to a professional spouse. Likewise, I might study the 1962 Cuban missile crisis as a case, but it would be as one case within a category of cases: international crisis management and deterrence situations.

In any study, researchers should ask both how many cases are involved and whether the emphasis is more on a detailed examination within a few cases or across many cases.

WHAT ARE THE MAJOR TYPES OF SOCIAL RESEARCH?

Case-Study Research

Case-study research examines many features of a few cases. The cases can be individuals, groups, organizations, movements, events, or geographic units. The data on the case are detailed, varied, and extensive. It can focus on a single point in time or a duration of time. Most case-study research is qualitative, but it does not have to be. By contrast, almost all cross-case (or noncase research) is quantitative. Qualitative and case-study research are not identical, but “almost all qualitative research seeks to construct representations based on in-depth, detailed knowledge of cases” (Ragin, 1994a:92).¹⁷ The ethnography on urban gangs by Venkatesh (2008) was a case study. It described how specific events and relationships unfolded over the course of 8 years in and around one gang in a limited geographic area of South Chicago.

Case-study research intensively investigates one or a small set of cases, focusing on many details within each case and the context. In short, it examines both details of each case’s internal features as well as the surrounding situation. Case studies enable us to link micro level, or the actions of individuals, to the macro level, or large-scale structures and processes (Vaughan, 1992). As Walton (1992b:122) remarked, “The logic of the case study is to demonstrate a causal argument about how general social forces shape and produce results in particular settings.”

Case-study research has many strengths. It clarifies our thinking and allows us to link abstract ideas in specific ways with the concrete specifics of cases we observe in detail. It also enable us to calibrate or adjust the measures of our abstract concepts to actual lived experiences and widely accepted standards of evidence. Other case-study strengths involve theory. As Walton (1992b:129) noted, “Case studies are likely to produce the best theory.” This occurs for three reasons. First, as we become very familiar with the in-depth detail of

specific cases, we can create/build new theories as well as reshape current theories to complex cases or new situations. Second, when we examine specific cases, the intricate details of social processes and cause-effect relations become more visible. The increased visibility allows us to develop richer, more comprehensive explanations that can capture the complexity of social life. In addition, case studies provide evidence that more effectively depicts complex, multiple-factor events/situations and processes that occur over time and space. Case-study research also can incorporate an entire situation and multiple perspectives within it.

Case study research has the following six strengths:¹⁸

1. *Conceptual validity.* Case studies help to “flush out” and identify concepts/variables that are of greatest interest and move toward their core or essential meaning in abstract theory.
2. *Heuristic impact.* Case studies are highly heuristic (i.e., providing further learning, discovery, or problem solving). They help with constructing new theories, developing or extending concepts, and exploring the boundaries among related concepts.
3. *Causal mechanisms identification.* Case studies have the ability to make visible the details of social processes and mechanisms by which one factor affects others.
4. *Ability to capture complexity and trace processes.* Case studies can effectively depict highly complex, multiple-factor events/situations and trace processes over time and space.
5. *Calibration.* Case studies enable researchers to adjust measures of abstract concepts to dependable, lived experiences and concrete standards.
6. *Holistic elaboration.* Case studies can elaborate on an entire situation or process holistically and permit the incorporation of multiple perspectives or viewpoints.

Case studies have a detailed focus but tell a larger story (see Example Box 7, Case-Study Research). Walton remarked (1992a) in his case study of one community, Owens Valley, California, “I

Case-study research Research that is an in-depth examination of an extensive amount of information about very few units or cases for one period or across multiple periods of time.

EXAMPLE BOX 7**Case-Study Research**

Perhaps you have seen the prize-winning 2002 movie *The Pianist*, about Wladyslaw Szpilman and the 1943 Jewish uprising in Warsaw, Poland. Einwohner (2003) conducted a historical case study of a single event—the 1943 Jewish uprising—to examine widely accepted social movement theory. The theory builds on three ideas: political opportunity structure (POS), threat, and motivational frame. POS is the overall set of options and constraints in institutions and resource control. When new opportunities arise (e.g., the opposition is divided, stalled, distracted, or runs short of supplies), the POS “opens,” increasing the odds that a movement can grow or be successful. POS theory also recognizes threat. *Threat* is defined as increased costs to a movement for taking certain actions (e.g., new law restricting protest activity and many people being arrested) or not taking certain actions. A third concept is “motivational frame.” A *frame* refers to how people think about and perceive something. A *motivational frame* is what participants perceive to be acceptable reasons or moral justifications for taking an action. The theory says a social movement advances when all three conditions occur: an opening occurs in the POS, the level of threat is low, and people have a frame that motivates them to take action.

Einwohner (2003) studied diaries and historical reports in the specific case of the Warsaw Jewish ghetto in 1943. She found a tightly closed POS and a situation of great threat. The Jews of the ghetto faced highly effective and overwhelming military power, and the Nazis began a policy of systematic extermination. Thus, two of the three conditions required for a successful movement were missing, yet the Jews of the ghetto formed a new and radical motivational frame. They redefined death in struggle as their only acceptable, honorable option. Instead of seeing death as an event to fear and avoid, their view shifted to seeing death in an uprising as a highly courageous, dignified, and honorable action. They redefined being killed in an impossible fight as being honorable and necessary both for each individual and for the entire Jewish people. Thus, the case study found that although two essential factors predicted by the theory (an open opportunity and low threat) were absent, a mass movement emerged. In fact, there was a complete lack of opportunity and extreme threat. In this case, the mass movement depended on the massive and widespread redefinition of what action all of the people had to pursue in a completely hopeless situation. Thus, Einwohner’s detailed case study modified a widely accepted and well-documented existing theory.

have tried . . . to tell a big story through the lens of a small case” (p. xviii). The community engaged in social protest as it attempted to control its key resource (water) and destiny. The protest took different forms for more than 100 years. In the study, Walton examined diverse forms of data including direct observation, formal and informal interviews, census statistics, maps, old photos and newspapers, various historical documents, and official records.

Across-Case Research

Most quantitative research studies gather information from a large number of cases (30 to 3,000) and focus on a few of features of the cases. Rather than

carry out a detailed investigation of each case, across-case research compares select features across numerous cases. It treats each case as the carrier of the feature of interest.

While certain issues lend themselves to one or another approach, it is sometimes possible to study the same issue using a case study and an across-case research design. Let us say we are interested in how a family decides whether to move to a different town. One strategy is to use a case study of five families. We conduct highly detailed observations and in-depth interviews of each family’s decision-making process. Another strategy would be to use an across-case study of the relationship between the husband’s job and family income and a decision to relocate to a different town. We look across 1,000

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families, identifying the husband's job and income of 250 families that had moved and 750 that had not moved during the past five years. In the across-case study, the family unit acts as a carrier of the features of interest: husband's job, income level, and decision to move or not. Across-case research focuses on the relation among features (job, income, and decision), not on what happens within specific families.

SINGLE OR MULTIPLE POINTS IN TIME

Time is a dimension of every study. We incorporate time in two ways, cross-sectionally and longitudinally. **Cross-sectional research** gathers data at one time point and creates a kind of "snapshot" of social life. **Longitudinal research** gathers data at multiple time points and provides more of a "moving picture" of events, people, or social relations across time. In general, longitudinal studies are more difficult to conduct and require more resources. Researchers may collect data on many units at many time points and then look for patterns across the units or cases.¹⁹

Cross-Sectional Research

Cross-sectional research can be exploratory, descriptive, or explanatory, but it is most consistent with a descriptive approach. It is usually the simplest and least costly alternative but rarely captures social processes or change. Both the survey by Edgell and Tranby (2007) on religion and beliefs about racial inequality and the existing statistics study of red and blue states by McVeigh and Sobolewski (2007) are cross-sectional. Of studies described in this

chapter, the exploratory study on race in Puerto Rico (Gavlee 2005) and on housing in Detroit (Krysan, 2008) were also cross-sectional. The descriptive study on death penalty views by Unnever and Cullen (2007) is also cross-sectional.

Deciding whether a study is cross-sectional or longitudinal is not always simple. It is more than simply a matter of length of time. The experiment on priming by Lowery and associates (2007) has "long-term effects" (4 days) in its title and is longitudinal. Data in the survey study by Edgell and Tranby (2007) and the existing statistics study by McVeigh and Sobolewski (2007) were collected over several days or months but are cross-sectional studies. The priming experiment is longitudinal not because of the specific length of time involved but because the study's design incorporated time. Researchers gathered data at two distinct time points and compared these data in the data analysis. In the survey and existing statistics studies, researchers could not collect data all at once. They treated the minor time differences in when they gathered data as irrelevant and ignored the time differences in their study design.

Longitudinal Research

We can use longitudinal studies for exploratory, descriptive, and explanatory purposes. Usually more complicated and costly to conduct than cross-sectional research, longitudinal studies are more powerful. The study on the jury rights movement by McCammon and colleagues (2008) was longitudinal. It focused on explaining the pace and pattern of change across several decades. The authors gathered data from multiple time points, and their design compared data from them.

We now consider three types of longitudinal research: time series, panel, and cohort.

1. Time-series research is a longitudinal study in which data are collected on a category of people or other units across multiple time points. It enables researchers to observe stability or change in the features of the units or can track conditions over time (see Example Box 8, Time-Series Studies).

Even simple descriptive information on one item of time-series data can be very revealing. For

Cross-sectional research Any research that examines information on many cases at one point in time.

Longitudinal research Any research that examines information from many units or cases across more than one point in time

Time-series research Longitudinal research in which information can be about different cases or people in each of several time periods.

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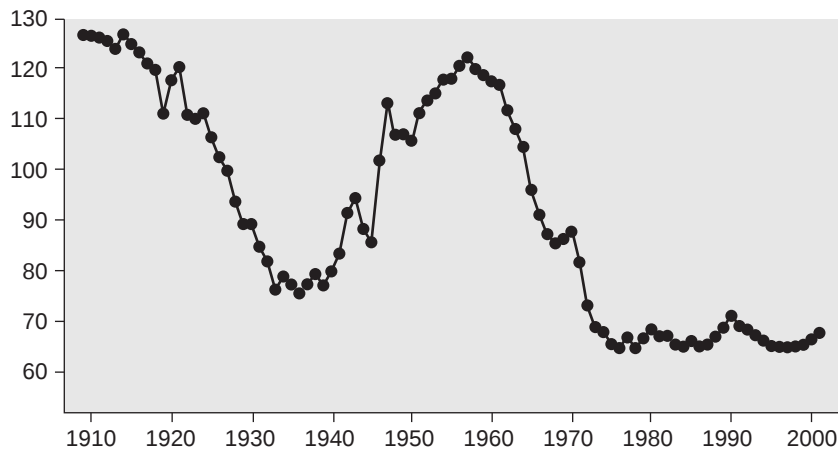


FIGURE 1 United States Birth Rate (births per 1,000 women ages 15–44) 1910 to 2000

Source: Calculated by author from U.S. census data.

example, time-series data on the U.S. birth rate since 1910 (Figure 1) shows that the number of births per woman declined steadily in the 1920s, continued to drop in the 1930s and early 1940s, but sharply reversed direction after World War II ended (1945). This increase began the dramatic upsurge called the “baby boom” of the 1950s to 1960s before declining and becoming stable in the 1970s. Time series can reveal changes not easily seen otherwise. For example, since 1967 the Higher Education Research Institute (2004) has gathered annual survey data on large samples of students entering American colleges for use in applied research by colleges. Time-series results on the percentage of students answering which value was very important for them (Figure 2) show a clear reversal of priorities between the 1960s and 1970s. The students ceased to value developing a meaningful philosophy of life and instead sought material-financial success.

2. The panel study, a powerful type of longitudinal research (see Example Box 9, Panel Studies), is more difficult to conduct than time-series research. Researchers conducting a panel study observe or gather data on exactly the same people, group, or organization across time points. Panel research is formidable to conduct and very costly. Tracking people over time is difficult because

EXAMPLE BOX 8

Time-Series Studies

A time-series study by Pettit and Western (2004) on imprisonment rates among Black and White men in the United States from 1964 to 1997 found that during a major rise in incarceration rates in the 1980s (up by 300%), Black men were six to eight times more likely than White men to go to jail. Young Black men who did not attend college were more likely to be incarcerated, and nearly one in three spent some time behind bars; these rates doubled for Black men who failed to complete high school. By looking across time, the study authors showed that the expansion of the number of jailed people was uneven, and that increasing numbers of jailed people came from certain parts of the U.S. population.

some people die or cannot be located. Nevertheless, the results of a well-designed panel study are very valuable. Even short-term panel studies can clearly show the impact of a particular life event.

Panel study Longitudinal research in which information is about the identical cases or people in each of several time periods.

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FIGURE 2 Value Priorities of U.S. College Freshmen, 1967–2003

Source: From Higher Education Research Institute. (2004). *Recent findings*, Figure 4. Retrieved September 25, 2004, from www.gseis.ucla.edu/heri/findings.html.

However, we learn distinct things from panel studies because we are studying the same people. For example, Brewer et al. (2005) looked at the impact of the September 11, 2001, terrorist attack on attitudes. The researchers asked about trust in other nations and resurveyed the same Americans in a three-wave panel study (October 2001, March 2002, and September 2002). They found that people's feelings toward other nations after the September 11 attack was not temporary but that people's distrust increased over time and was higher one year later. This showed that the attack had ended an entire era of positive feelings and had triggered a much deeper xenophobia among many in the U.S. population.

3. A **cohort study** is similar to the panel study, but rather than observing the exact same people, it studies a category of people who share a similar life experience in a specified period (see Example Box 10, Cohort Studies). Cohort analysis is "explicitly macroanalytic" (i.e., researchers examine the

category as a whole for important features [Ryder, 1992:230]). We focus on the "cohort," or a defined category. Commonly used cohorts include all people born in the same year (called *birth cohorts*), all people hired at the same time, all people who retire in a 1- or 2-year period, and all people who graduate in a given year. Unlike panel studies, we do not have to locate the exact same people for each year in a cohort study but identify only those who experienced a common life event. A cohort study could, for example, compare three marriage cohorts—all people married in each of three years (1970, 1990, and 2010) to see whether they differ as to the features of the marriage ceremony, whether the bride was pregnant at the time of marriage, and other features.

DATA COLLECTION TECHNIQUES

This section is a brief overview of the main data collection techniques. We can group them into two categories based on the type of data you gather: *quantitative*, collecting data in the form of numbers, and *qualitative*, collecting data in the form of words or pictures. Certain techniques are more effective at addressing specific kinds of research questions or

Cohort study Longitudinal research that traces information about a category of cases or people who shared a common experience at one time period across subsequent time periods.

EXAMPLE BOX 9**Panel Studies**

In many large U.S. cities, as many as 50 percent of students who begin high school do not graduate. Neild, Stoner-Eby, and Furstenberg (2008) studied the issue of dropping out by focusing on ninth grade students. They used panel data from the Philadelphia Education Longitudinal Study (PELS) that followed 10 percent of youth in one high school district over time. Students and their parents within those schools were randomly selected to participate in half-hour telephone interviews during the summer after the students had completed the eighth grade. Both parents and students were again interviewed (in English or Spanish) during the fall/winter of the ninth grade year (Wave 2 of the survey), during the summer after ninth grade (Wave 3) and after each subsequent school year until the fall/winter of 2000–2001 (about 6 months after what would have been their fourth year in high school). By the end of the fourth year, 48.9 percent of students who had started in the ninth grade had graduated. The study tried to determine whether ninth grade course failure and attendance added substantially to predicting dropout. They statistically analyzed the data and found that the ninth grade year contributed substantially to the probability of dropping out. It was a key “turning point” in the process. Many students who eventually dropped out had difficulty with the social and academic transition. They had social adjustment difficulties indicated by a rise in behavior and attendance problems, and a high proportion failed key ninth grade classes (math and English) because their preparation for high school-level standards had been inadequate. This is a panel study because the same parents and students were repeatedly interviewed year after year.

Jennings and Zeitner (2003) studied civic engagement, but they focused on the influence of Internet usage among Americans. They noted that cross-sectional data showed that Internet users had high levels of civic engagement, yet more educated people tended to use the Internet more and to be more engaged in civic organizations. Past studies could not identify whether over time increasing usage of the Internet influenced a person’s level of civic engagement. By using panel data collected from a survey of high school seniors in 1965 who were again studied in 1973, 1982, and 1997 (by which time they were in their fifties), the researchers could measure levels of civic engagement before and after Internet use. The Internet was not available until after 1982 but was in wide use by 1997. Both people previously interviewed and their offspring were surveyed. The measure of civic engagement included a wide range of behaviors and attitudes. In general, the authors found that those who were more engaged in civic organizations prior to the availability of the Internet were more likely to use it, and people who used the Internet also increased their civic engagement once they started using the Internet. Whereas Internet users among people in the panels since 1965, who are now in their fifties, increased all forms of civic engagement as they adopted the Internet, their offspring who use the Internet are less likely to be volunteers or become engaged in their local community. Internet use increases levels of civic engagement for the older more than the younger generation, especially younger generation Internet users who use it for purposes other than following public affairs.

topics. It takes skill, practice, and creativity to match a research question to an appropriate data collection technique.

Quantitative Data

Experiments. Experimental research uses the logic and principles found in natural science research. Experiments can be conducted in laboratories or in real life. They usually involve a small

number of people (thirty to one hundred) and address a well-focused question. Experiments are highly effective for explanatory research.

Experimental research Research in which the researcher manipulates conditions for some research participants but not others and then compares group responses to see whether doing so made a difference.

EXAMPLE BOX 10**Cohort Studies**

Anderson and Fetner (2008) used data from a cross-national survey of people in various countries conducted in the 1981–1982, 1990, and 2000 periods and examined a question regarding tolerance of homosexuality in the United States and Canada. The authors found that tolerance for homosexuality increased both by birth cohort and over time. Thus, people born later in the twentieth century were more tolerant than people born earlier and everyone was more tolerant in the later time periods. For example, people born in the 1920–1929 era were less tolerant when asked in 1981–1982 than when they were asked 20 years later in 2000. People born in 1960–1963 tended to be more tolerant than the 1920–1929 cohort when they were asked in 1980 and in 2000, and their tolerance increased over time as well. An interesting aspect of this study is the comparison between Canada and the United States. In 1980–1982, Canadians were less tolerant than Americans for every birth cohort. Thus, Canadians born in the 1920s or 1940s or 1960s, who were then in their 60s, 40s, or 20s were all less tolerant than Americans when asked in the 1981–1982 survey. When asked in the 1990 and 2000 surveys, Canadians at every birth cohort were much more tolerant than Americans. In fact, increased tolerance between 1990 to 2000 for Americans was small compared to that of the Canadians. Moreover, the youngest Canadian cohort (people born in the 1960s) increased tolerance far more dramatically than other cohorts and Americans of that cohort. A more detailed analysis showed that Canadians from rural areas, small towns, and large cities all became more tolerant; however, Americans in rural areas and very small towns did not become

tolerant; only those in larger towns or urban areas did so. A researcher who studied only cross-sectional data in 1981–1982 would see small cohort difference with the Americans being slightly more tolerant. Consideration of only cross-sectional data in 2000 would identify very large cohort differences and that the Canadians were much more tolerant than the Americans. By looking longitudinally, it is possible to see how opinions changed by cohort and over time very differently in the two countries.

In another cohort study, Bratter and King (2008) examined data from a 2002 U.S. nationally representative sample of people ages 15–44 who were ever married and who had valid information on the race of their first spouse (1,606 males and 4,070 females). The authors studied marriage cohorts (i.e., all people married in a certain year or set of adjoining years), comparing interracial and same-racial group marriage partners. They investigated whether the marriage was intact or had ended at a later time point. In this study, six cohorts were examined (earlier than 1980, 1980–1984, 1985–1989, 1990–1994, 1995–1999, and after 2000). Comparisons across the cohorts showed that interracial couples tended to have higher divorce rates. However, this was not the case for people married across all years but it was especially strong for those marrying during the late 1980s. The researchers found that White female/Black male and White female/Asian male marriages had higher divorce rates than White/White couples but marriages involving non-White females and White males and Hispanics and non-Hispanic persons had similar or lower risks of divorce.

In most experiments, a researcher divides the people being studied (about seventy people in the study) into two or more groups. The researcher then treats both groups identically except that he or she gives one group but not the other a specific condition: the “treatment.” The Lowery et al. experiment was “priming” students with words related to being smart. The researchers measure the reactions of

both groups precisely. By controlling the setting and giving only one group the treatment, she or he can conclude that differences in group reactions are due to the treatment alone.

Surveys. As researchers, we utilize questionnaires or interviews to learn people’s beliefs or opinions in many research situations (e.g., experiments, field

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research). **Survey research** uses a written questionnaire or formal interview to gather information on the backgrounds, behaviors, beliefs, or attitudes of a large number of people. Usually, we ask a large number of people (100 to 5,000) dozens of questions in a short time frame. The survey by Engell and Tanby (2007) on religious belief and racial inequality had gathered data in 30-minute-long telephone interviews with 2,081 people in the fall of 2003. Unlike an experiment, we do not manipulate a situation or condition to see how people react; we only carefully record answers from many people who have been asked the same questions. Often we select the people for a survey using a random sampling technique. This allows us to generalize information legitimately from a few people (e.g., 1,000) to many more (e.g., several million). We usually present survey data in charts, graphs, or tables and analyze them with statistics. Most frequently, we use surveys in descriptive research, sometimes in explanatory research, and only rarely in exploratory research.

Nonreactive Research. In experimental and survey research, we actively engage the people we study by creating experimental conditions or directly asking questions. These are called *reactive* methods because a research participant could react in some way because he or she is aware of being in a study. Other quantitative research is called **nonreactive research** because the study participants are not aware that information about them is part of a study. Four types of nonreactive studies are unobtrusive research, existing statistical information, content analysis, and secondary data analysis. *Secondary data analysis* is the statistical analysis of quantitative data that were previously collected and stored (often originally from a survey). Here we briefly consider two types of nonreactive research: content analysis and existing statistical information.

Content Analysis. **Content analysis** is a technique for examining the content or information and

symbols contained in written documents or other communication media (e.g., photographs, movies, song lyrics, advertisements). To conduct a content analysis, we identify a body of material to analyze (e.g., school textbooks, television programs, newspaper articles) and then create a system for recording specific aspects of its content. The system might include counting how often certain words or themes appear. After we systematically record what we find, we analyze it, often using graphs or charts. Content analysis is a nonreactive method because the creators of the content didn't know whether anyone would analyze it. Content analysis lets us discover and document specific features in the content of a large amount of material that might otherwise go unnoticed. We most frequently use content analysis for descriptive purposes, but exploratory or explanatory studies are also possible (see Example Study Box 11, Content Analysis).

Existing Statistics. Using **existing statistics research**, we locate a source of previously collected information, often in the form of official government reports. We then reorganize the information in new ways to address a research question. Locating the sources and verifying their quality can be time consuming. Frequently, we do not know whether the needed information is available when we begin a study. We can use existing statistics research for exploratory, descriptive, or explanatory purposes but most frequently for descriptive research.

Survey research Quantitative research in which the researcher systematically asks a large number of people the same questions and then records their answers.

Nonreactive research Research methods in which people are not aware of being studied.

Content analysis Research in which the content of a communication medium is systematically recorded and analyzed.

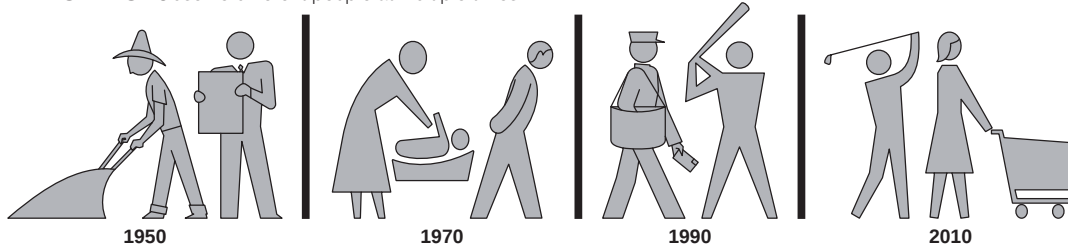
Existing statistics research Research in which one reexamines and statistically analyzes quantitative data that have been gathered by government agencies or other organizations.

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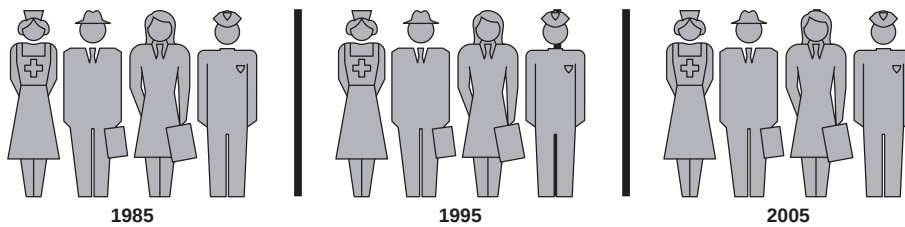
CROSS-SECTIONAL: Observe a collection of people at one time.



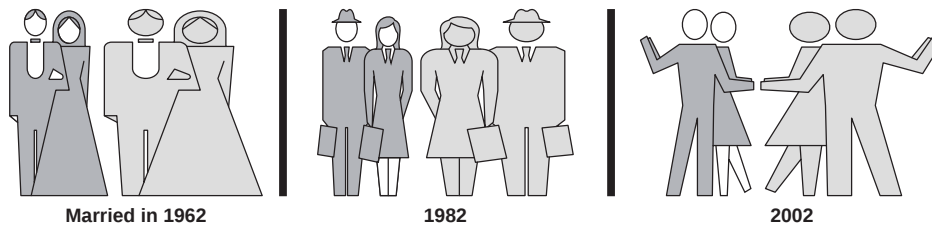
TIME SERIES: Observe different people at multiple times.



PANEL: Observe the exact same people at two or more times.



COHORT: Observe people who shared an experience at two or more times.



CASE STUDY: Observe a small set intensely across time.

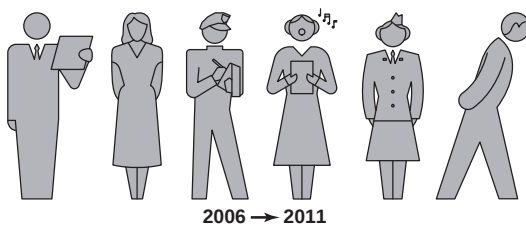


FIGURE 3 The Time Dimension in Social Research

WHAT ARE THE MAJOR TYPES OF SOCIAL RESEARCH?

EXAMPLE BOX 11

Content Analysis

Lawrence and Birkland (2004) conducted a content analysis of school shootings after the ones in 1999 at Columbine High School. The researchers were interested in how media coverage shaped eventual legislation on the issue. They examined and coded the content of four data sources: newspaper articles in two leading newspapers between April and August 1999 that mentioned the incident, television news stories in 1999, Congressional debates on the issue in 1999–2000, and legislation introduced in the U.S. Congress in 1999–2000. The authors discovered that some reasons for the shooting that the media and the debates emphasized (influence of pop culture and peer pressure) did not appear in legislation but other issues did (school security and access to guns). An issue (law enforcement measures) not evident in media stories became prominent in debates and legislation.

Qualitative Data

Qualitative data come in a vast array of forms: photos, maps, open-ended interviews, observations, documents, and so forth. We can simplify such data into two major categories: field research (including ethnography, participant observation, depth interviewing) and historical-comparative research.

Field Research. Field research involves conducting ethnographic case studies on a small group of people for a length of time. Field research begins with a loosely formulated question, then selects a group or site for study, gains access to, and then adopts a social role in the setting and begin observing. Field researchers carefully observe and interact in the field setting for a few months to several years. They get to know personally the people being studied and conduct informal interviews. Data are in the form of detailed notes taken on a daily basis. While observing, researchers constantly consider what they observed and refine ideas about its significance. Finally, the researchers leave the field site, review notes, and prepare written reports. Field research is usually used for exploratory and descriptive studies; it is sometimes used for

EXAMPLE BOX 12

Field Research

Mitchell Duneier (1999) conducted a field research of street vendors in Greenwich Village, New York City. He gained entree by browsing through books at one vendor whom he had befriended. The vendor introduced him to other vendors, panhandlers, people who were homeless, and others. Duneier observed them on and off over 4 years, periodically working as a magazine vendor and scavenger. As a White college professor, it took adjustment to learn the daily life and win acceptance among low-income African American men who made a living selling used books and magazines on the sidewalk. In addition to observing and tape-recording life on the sidewalk, Duneier conducted many informal interviews, read related documents, and had a photojournalist take numerous photos of the field site and its people.

Duneier concluded with a critique of the popular “broken window” theory of social control and crime reduction. Where others saw only a disorderly street environment causing deviant behavior and crime, Duneier found a rich informal social life with honor, dignity, and entrepreneurial vigor among poor people who were struggling to survive. He noted that upper-middle-class government officials and corporate leaders often advocate for laws and regulations that threaten to destroy the fluid, healthy informal social structure he discovered because they do not know the people or understand life on the sidewalk. They see only social disorganization because the vibrant daily lives of those who make a living among the flow of people on the sidewalk do not mesh with the upper-middle-class world that is centered in large complex organizations with formal regulations, official procedures, fixed hierarchies, and standardized occupations.

explanatory research. (See Example Box 12, Field Research).

Field research Qualitative research in which the researcher directly observes and records notes on people in a natural setting for an extended period of time.

EXAMPLE BOX 13**Historical-Comparative Research**

Mahoney (2003) presented a puzzle about the countries of Spanish America, specifically 15 countries that had been mainland territories of the Spanish colonial empire. He observed that their relative ranking, from most to least developed in 1900, remained unchanged in 2000; that is, the least developed country in 1900 (Bolivia) remained the least developed in 2000. This picture of great stability contrasts with dramatic changes and improvements in the region during the twentieth century. Going back to the height of the Spanish empire in the seventeenth century, Mahoney noted that the richest, most central colonies in that period later became the poorest countries while marginal, backwater, poor colonies became the developed, richest countries by the late nineteenth century.

To solve this puzzle, Mahoney used two qualitative data analysis tools, path dependency and qualitative comparative analysis (QCA). His data included maps, national economic and population statistics, and several hundred historical studies on the specific countries. He concluded that the most central, prosperous Spanish colonies were located where natural resources were abundant (for extraction and shipment to Europe) and large indigenous populations existed (to work as coerced labor). In these colonies, local elites arose and created rigid racial-ethnic stratification sys-

tems. The elites concentrated economic-political power with themselves and excluded broad parts of society. The systems continued into the nineteenth century when new political events, trade patterns, and economic conditions appeared. In the 1700–1850 era, liberal-minded elites who were open to new ideas did not succeed in the central, prosperous colonies. In contrast, colonies that had been on the fringe of the Spanish empire in South America were less encumbered by rigid systems. New elites who were able to innovate and adapt arose in a “great reversal” of positions. After this historical “turning point,” some countries had a substantial head start toward social-economic development in the late 1800s. These countries built political-economic systems and institutions that propelled them forward; that is, they “locked into” a particular direction or path that brought increasing returns.

Mahoney (2003:53) argued, “Explanations of differences in units that draw on the current attributes of those units will often be inadequate.” In other words, a cross-sectional approach that tries to explain differences among the countries by using data at only one point in time cannot capture significant long-term dynamic processes. An explanation that includes the impact of distant historical events and takes a long-term view is superior.

Historical-Comparative Research. Historical-comparative research is a collection of related types of research. Some studies investigate aspects of social life in a past historical era in one society or in a few. Other studies examine a different culture or compare two or more cultures. We might focus on one historical period or several, compare one or more cultures, or mix historical periods and cul-

tures. As with field research, we start with a loosely formulated question and then refine and elaborate on it during the research process. We often use a mix of evidence, including existing statistics, documents (e.g., books, newspapers, diaries, photographs, and maps), observations, and interviews. Historical-comparative research can be exploratory, descriptive, or explanatory, but it is usually descriptive. Not all historical-comparative research follows a qualitative approach; some examine quantitative data (e.g., survey data) in a different time point or a different culture.

You read about the Warsaw uprising earlier in this chapter (Example Study Box 2). In this

Historical-comparative research Qualitative research in which the researcher examines data on events and conditions in the historical past and/or in different societies.

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study, the research examined past events in one country/culture. It is also possible to look across multiple countries and time (see Example Box 13, Historical-Comparative Research).

study can be classified in a number of different ways (e.g., by its purpose, research technique) and that the dimensions loosely overlap with each other (see Chart 1). The dimensions of research are a “road map” through the terrain of social research.

CONCLUSION

This chapter provided an overview of the dimensions of social research. You saw that one research

KEY TERMS

action research	descriptive research	longitudinal research
applied research	evaluation research	needs assessment
basic research	existing statistics research	nonreactive research
case-study research	experimental research	panel study
cohort study	explanatory research	participatory action research
commissioned research	exploratory research	reflexive knowledge
content analysis	field research	social impact assessment
cost-benefit analysis	historical-comparative research	survey research
cross-sectional research	instrumental knowledge	time-series research

REVIEW QUESTIONS

1. When is exploratory research used, and what can it accomplish?
2. What types of results does a descriptive research study produce?
3. What is explanatory research? What is its primary purpose?
4. What are the major differences between basic and applied research?
5. Who is likely to conduct basic research, and where are results likely to appear?
6. Explain the differences among the three types of applied research.
7. How do time-series, panel, and cohort studies differ?
8. What are some potential problems with cost-benefit analysis?
9. What is a needs assessment? What complications can occur when conducting one?
10. Explain the differences between qualitative and quantitative research.

NOTES

1. Abbott (2004:40–79) offers a more comprehensive and complex organization of methods.
2. See Finsterbusch and Motz (1980), Freeman (1983), Lazarsfeld and Reitz (1975), Olsen and Micklin (1981),

and Rubin (1983) on applied research. Whyte (1986) critiques social research that is not applied. McGrath and colleagues (1982) discuss judgment calls relevant in applied research.

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3. See Crespi (1987) and Dutka (1982) on the use of survey research in legal proceedings.
4. See Turner and Turner (1991:181).
5. For a brief introduction to evaluation research, see Adams and Schvaneveldt (1985:315–328), Finsterbusch and Motz (1980:119–158), and Smith and Glass (1987). A more complete discussion can be found in Burnstein and associates (1985), Freeman (1992), Rossi (1982), Rossi and Freeman (1985), Saxe and Fine (1981), and Weiss (1972).
6. See Oliner (1994).
7. Smith and Glass (1987:41–49) discuss PPBS and related evaluation research.
8. See Reinhartz (1992:252).
9. See Cancian and Armstead (1992), Reason (1994), and Whyte (1989).
10. On participatory action research, see Cassell and Johnson (2006), Kemmis and McTaggart (2003), and Stoecker (1999).
11. Social impact research is discussed in Chadwick and associates (1984:313–342), Finsterbusch and Motz (1980:75–118), and Finsterbusch and Wolf (1981). Also see Rossi and colleagues (1982) and Wright and Rossi (1981) on “natural hazards” and social science.
12. See Becker and Vanclay (2003) and *Guidelines and Principles For Social Impact Assessment* by The Interorganizational Committee on Guidelines and Principles for Social Impact Assessment (1994). http://www.nmfs.noaa.gov/sfa/social_impact_guide.htm
13. See Burawoy and colleagues (2004).
14. Hammersley (2000) makes this generalist versus narrow practitioner distinction.
15. Babbie (1998), Bailey (1987:38–39), and Churchill (1983:56–77) also discuss explanatory, exploratory, and descriptive research.
16. See Guy and colleagues (1987:54–55) for discussion.
17. For discussions of case-study research, see George and Bennett (2005), Gerring (2007), Miller (1992), Mitchell (1984), Ragin (1992a, 1992b), Stake (1994), Vaughan (1992), Walton (1992b), and Yin (1988).
18. (see George and Bennett 2005:19–22; Gerring 2007; McKeown 2004; Ragin 2008:71–84; Snow and Trom 2002).
19. See Mitchell (1984) and Stake (1994).

Theory and Research

What Is Theory?
Social Theory versus Ideology
The Parts of Social Theory

Aspects of Theory
The Dynamic Duo
Conclusion

*One of the major functions of theory is to order experience with the help of concepts.
It also selects relevant aspects and data among the enormous multitude of “facts”
that confront the investigator of social phenomena.*

—Lewis Coser, “*The Uses of Classical Sociological Theory*,” p. 170

The percent of people who regularly smoke cigarettes has declined in the United States. We suspect that the decline is due to public campaigns that warned about the dangers of smoking to health. We find that more educated, higher income people tend to smoke less than less educated and low-income people. A theory of social resources suggests that this is because people who are educated and have higher incomes read more, have a long-term time horizon, and have more resources to make lifestyle adjustments compared to less educated and low-income people. However, smoking is more than a health issue. It can also be a symbolic fashion statement and lifestyle issue of cultural taste. Likewise, education and income level indicate more than knowledge and resources but also suggest membership in different class cultures (i.e., the ways people of different social classes culturally distinguish themselves). A theory of cultural taste suggests that people adopting an upper-middle-class lifestyle would not smoke because it is culturally less fashionable for their class. In contrast, people who adopt a working-class lifestyle would be more likely to smoke in part because it is a feature of their class culture. Other aspects of class culture include music taste. Highly educated, high-income people tend to prefer classical music while less educated, low-income prefer bluegrass and heavy metal music. Logically, a theory of cultural taste implies that taste in music is related to smoking because of the different class lifestyles. This is exactly what Pampel (2006) found is happening. But the results are even more interesting. Both well-educated, high-income people and less educated, low-income people tend to enjoy jazz. The jazz subculture has long included smoking. Consistent with cultural taste theory, Pampel found that jazz lovers are more likely to smoke than nonjazz lovers of the same social class.

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