

Social Research Methods

Qualitative and Quantitative Approaches

SIXTH EDITION

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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

Regardless of whether we are aware of it, we are surrounded by social research. Educators, parents, business managers, administrators, government officials, business leaders, human service providers, and health care professionals regularly use social research findings and principles in their jobs. They use social research to raise children, reduce crime, improve public health, sell products, or just understand one's life. Research may seem remote but it has a relevance for daily life. Reports of research appear on broadcast news programs, in magazines, and in newspapers. Recently, I read in my daily newspaper about studies showing that children who watch more TV have lower reading scores and more behavior problems, that the D.A.R.E. antidrug program and "boot camps" for criminal offenders are wholly ineffective, that 10- to 14-year-olds who

watch R-rated films are more likely to start smoking than those who watch only G or PG films, that 31 percent of gay teens were physically threatened or injured while in school, and that medical doctors admitted through Affirmative Action programs are just as successful as those admitted on test scores and grades alone.¹

Research does not always guide decisions. Political leaders sometimes advance new policies without scientific evidence or that rely on weak or flawed research. For example, shortly after President George W. Bush took office in 2001, he proposed government funding for "faith-based" social programs instead of traditional methods. Critics observed that almost no evidence showed that faith-based programs were effective. Only a single study existed on a faith-based program to reduce

drug dependence, but it was unpublished and had many methodological flaws.²

This book is about **social research**. In simple terms, research is a way of going about finding answers to questions. Social research is conducted by sociologists, social scientists, and others to seek answers to questions about the social world. You probably already have some notion of what social research entails. First, let me end possible misconceptions. When I ask students what they think research entails, they usually give the following answers:

- Based on facts alone, without theory or judgment
- Read or used only by experts or college professors
- Done only in universities by people with Ph.D. degrees
- Involves going to the library and finding articles on a topic
- Hanging around some exotic place and observing people
- Conducting an experiment in which people are tricked into doing something
- Drawing a sample of people and giving them questionnaires
- Looking up lots of tables from government reports or books
- Using computers, statistics, charts, and graphs

The first three of these answers are wrong, and the others describe only part of what constitutes social research. It is unwise to confuse one part with the whole. Just as you would never mistake wearing shoes for being fully dressed, you should not mistake any one of these items for social research.

Social research involves learning something new about the social world. To do this, a researcher needs to think logically, follow rules, and repeat steps over and over. A researcher combines theories

Social research A collection of methods and methodologies that researchers apply systematically to produce scientifically based knowledge about the social world.

or ideas with facts in a systematic way and uses his or her imagination and creativity. He or she learns to organize and plan carefully and to select the appropriate technique to address a question. A researcher also must treat the people in a study in ethical and moral ways. In addition, a researcher must communicate to others clearly.

Social research is a collection of methods people use systematically to produce knowledge. It is an exciting process of discovery, but it requires persistence, personal integrity, tolerance for ambiguity, interaction with others, and pride in doing quality work. You will learn more about the diversity of social research in Chapter 2.

This book is about research *methodology* and *methods*, two terms often treated as synonyms. Methodology is broader than methods and envelops methods. It is understanding the social-organizational context, philosophical assumptions, ethical principles, and political issues of the enterprise of social researchers who use methods. Methods are sets of specific techniques for selecting cases, measuring and observing aspects of social life, gathering and refining data, analyzing the data, and reporting on results. The two are closely linked and interdependent, but distinct.

ALTERNATIVES TO SOCIAL RESEARCH

You learned most of what you know about the social world by an alternative to social research. A great deal of what you know is based on what your parents and others have told you. You also have knowledge that you have learned from personal experience. The books and magazines you have read and the movies and television you have watched also have given you information. You may also use common sense.

In addition to being a collection of methods, social research is a process for producing knowledge. It is a more structured, organized, and systematic process than the alternatives.³ Knowledge from the alternatives is often correct, but knowledge based on research is more likely to be true and has fewer errors. It is important to recognize that research does not always produce perfect knowl-

edge. Nonetheless, compared to the alternatives, it is less likely to be flawed. Let us review the alternatives before examining social research.

Authority

You gain knowledge from parents, teachers, and experts as well as from books and television and other media. When you accept something as being true just because someone in a position of authority says it is true or because it is in an authoritative publication, you are using authority as a basis of knowledge. Relying on the wisdom of authorities is a quick, simple, and cheap way to learn something. Authorities often spend time and effort to learn something, and you can benefit from their experience and work.

Relying on authorities also has limitations. It is easy to overestimate the expertise of other people. You may assume that they are right when they are not. Authorities may speak on fields they know little about; they can be plain wrong. An expert in one area may try to use his or her authority in an unrelated area. Have you ever seen television commercials in which an expert in football uses that expertise to try to convince you to buy a car? In addition, there are the questions: Who is or is not an authority? Whom do you believe when different authorities disagree?

Authority is frequently misused. For example, the National Center for Public Policy Research, an advocacy group funded by large corporations, had a list of environmental experts in 27 policy fields. Only 51 of the 141 names on the list had a Ph.D. in any area, and some of the Ph.D.'s were in unrelated areas.⁴ All legitimate scientists may not agree 100 percent of the time, but sometimes a person who has training and expertise in one area (e.g., space physics) speaks about an unrelated area (e.g., crime policy). Using the halo effect (discussed later), a person may apply expertise in one area illegitimately to act as an authority in a different area.

A related situation occurs when a person becomes a "senior fellow" or "adjunct scholar" in a private "think tank" that has an impressive name, such as the Center for the Scientific Study of X.

Some think tanks are legitimate research centers, but many are mere fronts created by wealthy special-interest groups to engage in advocacy politics. No regulations control the titles of think tanks, and anyone can become a "scholar" in the group. The purpose is to facilitate the person making authoritative statements to the mass media as if he or she were a neutral third party who had some kind of expertise. In reality, the person may lack expertise and make statements that do not come from serious research.⁵

History is full of past experts whom we now see as being misinformed. For example, some "experts" of the past measured intelligence by counting bumps on the skull; other "experts" used blood-letting to try to cure diseases. Their errors seem obvious now, but can you be certain that today's experts will not become tomorrow's fools? Also, too much reliance on authorities can be dangerous to a democratic society. An overdependence on experts lets them keep others in the dark, and they may promote ideas that strengthen their power and position. When we have no idea of how the experts arrived at their knowledge, we lose some of our ability to make judgments for ourselves.

Tradition

People sometimes rely on tradition for knowledge. Tradition is a special case of authority—the authority of the past. Tradition means you accept something as being true because "it's the way things have always been." For example, my father-in-law said that "drinking a shot of whiskey cures a cold." When I asked about his statement, he said that he had learned it from his father when he was a child, and it had come down from past generations. Tradition was the basis of the knowledge for the cure.

Here is an example from the social world. Many people believe that children who are raised at home by their mothers grow up to be better adjusted and have fewer personal problems than those raised in other settings. People "know" this, but how did they learn it? Most accept it because they believe (rightly or wrongly) that it was true in the past or is the way things have always been done.

Some traditional social knowledge begins as simple prejudice. A belief such as “people from that side of the tracks will never amount to anything” or “you never can trust anyone of that race” comes down from the past. Even if traditional knowledge was once true, it can become distorted as it is passed on, and soon it is no longer true. People may cling to traditional knowledge without real understanding; they assume that because something may have worked or been true in the past, it must always be true.

Common Sense

You know a lot about the social world from your ordinary reasoning or common sense. You rely on what everyone knows and what “just makes sense.” For example, it “just makes sense” that murder rates are higher in nations that do not have a death penalty, because people are less likely to kill if they face execution for doing so. This and other widely held commonsense beliefs, such as that poor youth are more likely to commit deviant acts than those from the middle class or that most Catholics do not use birth control, are false.

Common sense is valuable in daily living, but it can allow logical fallacies to slip into your thinking. For example, the “gambler’s fallacy” says: “If I have a long string of losses playing a lottery, the next time I play, my chances of winning will be better.” In terms of probability and the facts, this is false. Also, common sense contains contradictory ideas that go unnoticed because people use the ideas at different times—for example, “opposites attract” and “birds of a feather flock together.” Common sense can originate in tradition. It is useful and sometimes correct, but it also contains errors, misinformation, contradiction, and prejudice.

Media Myths

Television shows, movies, and newspaper and magazine articles are important sources of information about social life. For example, most people who have no contact with criminals learn about crime by watching television shows and movies and by reading newspapers. However, the portrayals of crime and of many other things on television do not accurately reflect social reality. Instead, the writers who

invent or “adapt” real life for television shows and movie scripts distort reality either out of ignorance or because they rely on authority, tradition, and common sense. Their primary goal is to entertain. For example, only about 5 of 400 films that portray psychiatric treatment do so accurately (Goode, 2002), and almost all media estimates of the size of the Muslim population in the United States are two to three times greater than scientifically based estimates (Smith, 2002).

The media tend to perpetuate the myths of a culture. For example, the media show that most people who receive welfare are Black (actually, most are White), that most people who are mentally ill are violent and dangerous (only a small percentage actually are), and that most people who are elderly are senile and in nursing homes (a tiny minority are). Also, mass media “hype” can create the idea that a major problem exists when it may not (see Box 1.1). People are misled by visual images more easily than other forms of “lying”; this means that stories or stereotypes that appear on film and television can have a powerful effect on people. For example, television repeatedly shows low-income, inner-city, African American youth using illegal drugs. Eventually, most people “know” that urban Blacks use illegal drugs at a much higher rate than other groups in the United States, even though this notion is false.

The media are also a forum in which competing interests try to win public support. Public relations campaigns often use the media as a vehicle to alter what the public thinks about scientific findings. For example, nearly all scientific research supports the global warming thesis (i.e., that pollutants from industrialization and massive deforestation are raising the earth’s temperature and will cause dramatic climate change and bring about environmental disasters). The scientific evidence is growing and getting stronger. In the media, the public sees equal attention to a few dissenters who question global warming. This creates the impression that “no one really knows” or that scientists are undecided about global warming. The media sources rarely say that there are only a few isolated dissenters, that industries with products that are major contributors to global warming pay for most dissenting studies, and that the same industries spend millions of dollars to

BOX 1.1 Safe Driving and Media Myths

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 over 4,000 articles per year on it. Despite media attention about “aggressive driving” and “anger behind the wheel,” there is no scientific evidence for 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 the data on crashes and accidents show declines during the period when road rage reached an epidemic.

Perhaps media reports fueled perceptions of road rage. After hearing or reading about road rage and having a label for the behavior, people began 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 may

be unchanged. It may turn out that the national epidemic of road rage is a widely held myth stimulated by reports in the mass media.

Newspapers and television reports are filled with dire warnings about the many traffic accidents that occur on holidays. Thus, the Fourth of July weekend 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 it 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 safer. This is hardly a unique situation; it happens with many social issues. “Problem promoters” often 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.

Sources: Best (2001), Fumento (1998), and Wald (2004).

publicize the dissenting findings to deflect growing criticism and to delay environmental regulations that might harm their business interests.

Personal Experience

If something happens to you, if you personally see it or experience it, you accept it as true. Personal experience, or “seeing is believing,” has a strong impact and is a forceful source of knowledge. Unfortunately, personal experience can lead you astray. Something similar to an optical illusion or mirage can occur. What appears true may actually be due to a slight error or distortion in judgment. The power of immediacy and direct personal contact is very strong. Even knowing that, people sometimes make mistakes or fall for illusions. Sometimes people believe what they see or experience rather than what

is revealed by careful research designed to avoid such errors.

The four errors of personal experience reinforce each other and can occur in other areas, as well. They are a basis for misleading people through propaganda, cons or fraud, magic, stereotyping, and some advertising.

1. Overgeneralization occurs when you have some evidence that you believe and then assume that it applies to many other situations, too. Limited generalization may be appropriate; under certain conditions, a small amount of evidence can explain a larger situation. The problem is that people often

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

generalize well beyond limited evidence. There are many individuals, areas, and situations about which people know little or nothing, so generalizing from the little they do know might seem reasonable. For example, over the years, I have known five blind people. All of them were very friendly. Can I conclude that all blind people are friendly? Do the five people with whom I had personal experience fully represent all blind people?

Numerous studies cast serious doubt on personal experience and self-knowledge. People often misjudge themselves; eyewitness accounts such as those used in criminal justice tend to be highly inaccurate; most people's estimates of the chance of a mishap are far off from actual probabilities; and people are easily misled by appearances, such as purchasing an SUV for its safety while it actually is more dangerous.⁶

2. Selective observation occurs when you take special notice of some people or events and generalize from them. People often focus on or observe particular cases or situations, especially when they fit preconceived ideas. We often seek out evidence that confirms what we already know or believe and ignore the range of cases and contradictory information. We are sensitive to features that confirm our ideas—features that might otherwise go unnoticed. For example, I believe overweight people are friendly. This belief may be based on stereotypes, what my mother told me, or whatever. I observe overweight people and, without awareness, pay particular attention to their smiling, laughing, and so on. Without realizing it, I notice and remember people and situations that reinforce my pre-

Selective observation Making observations in a way that it reinforces preexisting thinking, rather than observing in a neutral and balanced manner.

Premature closure Making a judgment, or reaching a decision and ending an investigation, before one has the amount or depth of evidence required by scientific standards.

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

conceived ideas. Some psychologists have studied people's tendencies to "seek out" and distort their memories to make them more consistent with what they already think. I "overinterpret" gestures or smiles, pay less attention to contradictory evidence, and do not look for unfriendly behavior among overweight people.

3. Premature closure operates with and reinforces the first two errors. Premature closure occurs when you feel you have all the answers and do not need to listen, seek information, or raise questions any longer. Unfortunately, most of us are a little lazy or get a little sloppy. We take a few pieces of evidence or look at events for a short while and then think we have it figured out. We look for evidence to confirm or reject an idea and stop when a small amount of evidence is present. In a word, we jump to conclusions, such as: I know three people who smoked six packs of cigarettes a day and lived to be 80 years old; therefore, people who smoke lots of cigarettes will live to age 80.

4. The halo effect states we overgeneralize from what we believe to be highly positive or prestigious. We give things or people we respect a halo, or a strong reputation. We let the prestige "rub 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 that the report will be excellent. I do not make this assumption about a report by someone from Unknown University. I form an opinion and prejudge the report and may not approach it by considering its own merits alone.

How the various alternatives to social research might address the issue of laundry is shown in Table 1.1.

HOW SCIENCE WORKS

Social research involves thinking about questions about the social world and following a set of processes to create new knowledge that is based on science. Let us look at the meaning of *science*; it is a subject that we will examine in more detail in Chapter 4.

TABLE 1.1 Alternatives to Social Research

ALTERNATIVE EXPLANATION TO SOCIAL RESEARCH	EXAMPLE ISSUE: In the division of household tasks by gender, why do women tend to do the laundry?
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.
Tradition	Women have done the laundry for centuries, so it is a continuation of what has happened for a long time.
Common sense	Men just are not as concerned about clothing as much as women are, so it only makes sense that women do the laundry more often.
Media myth	Television commercials show women often doing laundry and enjoying it, so they do laundry because they think it's fun.
Personal experience	My mother and the mothers of all my friends did the laundry. My female friends did it for their boyfriends, but never the other way around. It just feels natural for the woman to do it.

Science

When most people hear the word *science*, the first image that comes to mind is one of test tubes, computers, rocket ships, and people in white lab coats. These outward trappings are a part of science. The natural sciences—biology, chemistry, physics, and zoology—deal with the physical and material world (e.g., rocks, plants, chemicals, stars, blood, electricity, etc.). The natural sciences are the basis

of new technology and receive a lot of publicity. Most people first think of them when they hear the word *science*.

The social sciences, such as anthropology, psychology, political science, and sociology, involve the study of people—their beliefs, behavior, interaction, institutions, and so forth. Fewer people associate these disciplines with the word *science*. They are sometimes called *soft sciences*. This is not because their work is sloppy or lacks rigor but because their subject matter, human social life, is fluid, formidable to observe, and hard to measure precisely with laboratory instruments. The subject matter of a science (e.g., human attitudes, protoplasm, or galaxies) determines the techniques and instruments (e.g., surveys, microscopes, or telescopes) used by it.

Science is a social institution and a way to produce knowledge. It has not always been around; it is a human invention. What people now call science grew from a major shift in thinking that began with the Age of Reason or Enlightenment period in western European history, which occurred between the



"I'm a social scientist, Michael. That means I can't explain electricity or anything like that, but if you ever want to know about people I'm your man."

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1600s and the early 1800s. The Enlightenment ushered in a wave of new thinking. It included a faith in logical reasoning, an emphasis on experiences in the material world, a belief in human progress, and a questioning of traditional religious authority. It began with the study of the natural world and spread to the study of social life. The importance of science as a basis for seeking knowledge is associated with the societal transformation called the Industrial Revolution. The advancement of science or of fields within science, such as sociology, does not just happen. It is punctuated by the triumphs and struggles of individual researchers. It is also influenced by significant social events, such as war, depression, government policy, or shifts in public support.⁷

Before science became fully entrenched, people used prescientific or nonscientific methods. These included the alternatives discussed previously and other methods that are less widely accepted in modern society (e.g., oracles, mysticism, magic, astrology, or spirits). Such prescientific systems were an unquestioned way to produce knowledge that people took to be true. Such prescientific methods still exist but are secondary to science. Some people use nonscientific methods to study topics beyond the scope of science (e.g., religion, art, or philosophy). Today, few people seriously question science as a legitimate way to produce knowledge about modern society.

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 nonnumerical (qualitative) information and evidence that have been carefully gathered according to rules or established procedures.

Empirical 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.

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

Science refers to both a system for producing knowledge and the knowledge produced from that system. The system evolved over many years and is slowly but constantly changing. It combines assumptions about the nature of the world and knowledge; an orientation toward knowledge; and sets of procedures, techniques, and instruments for gaining knowledge. It is visible in a social institution called the scientific community.

The knowledge of science is organized in terms of theories. For now, **social theory** can be defined as a system of interconnected ideas that condenses and organizes knowledge about the social world. Several types of social theory are discussed in Chapter 3. Social theory is like a map of the social world; it helps people visualize the complexity in the world and explains why things happen.

Scientists gather data using specialized techniques and use the data to support or reject theories. **Data** are the empirical evidence or information that one gathers carefully according to rules or procedures. The data can be *quantitative* (i.e., expressed as numbers) or *qualitative* (i.e., expressed as words, pictures, or objects). **Empirical** evidence refers to observations that people experience through the senses—touch, sight, hearing, smell, and taste. This confuses people, because researchers cannot use their senses to directly observe many aspects of the social world about which they seek answers (e.g., intelligence, attitudes, opinions, feelings, emotions, power, authority, etc.). Researchers have many specialized techniques to observe and indirectly measure such aspects of the social world.

Pseudoscience and Junk Science

We must be cautious about **pseudoscience** posing as real natural or social science. The public faces a constant barrage of pseudoscience through television, magazines, film, newspapers, special seminars or workshops, and the like. Some individuals operating a business, or who strongly embrace a belief system, weave a mix of the outward trappings of science (e.g., technical jargon, fancy-looking machines, complex formulas and statistics, or white lab coats) and a few scientific facts with myths, fantasy, or hopes. They then claim a “miracle cure,”

“new wonder treatment,” “revolutionary learning program,” “creationism science,” “evidence of alien visitors,” or “new age spiritual energy.” Pseudoscience may include a few so-called experts who hold mail-order Ph.D. degrees, degrees in unrelated academic fields, or other dubious credentials.

Popular (or “pop”) social science books sometimes cross over into pseudoscience. Some are accurate popularizations of the knowledge that legitimate social researchers have produced. Others appear to be legitimate social science to a nonspecialist but are a distorted picture or a misuse of social science. They promote particular political or social values in the guise of social science. Such books rarely meet the standards of scientific community. For example, the Hite Report on female sexuality was a seriously flawed study conducted by a nonscientist that grossly distorted actual social relations. That did not prevent it from becoming a best-seller that was widely discussed in the mass media. The *Bell Curve* is an example.⁸ There is little quality control on the social science books advertised on television or radio, cited in newspaper articles, or sold at local bookstores. Books that mostly contain personal opinion or political ideology are designed to look like “real” social science texts.

The term **junk science** was invented in the late 1980s by public relations firms hired by major corporations to denigrate the scientific evidence that environmental, public health, and public-interest groups presented against them in the courts. They contrasted it with *sound science* (i.e., studies that supported their position). *Sound* and *junk* are not precise terms, and the quality, methodology, or precision of the research for each does not differ. Instead, people manipulated language to produce the idea that sound science and junk science differ.

“Junk science” is the term that corporate defenders apply to any research, no matter how rigorous, that justifies regulations to protect the environment and public health. The opposing term, “sound science,” is used in reference to any research, no matter how flawed, that can be used to challenge, defeat, or reverse environmental and public health protection. (Rampton and Stauber, 2001: 223)

The tobacco industry widely 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 It tried to confuse the public and create an impression that scientists lacked clear and consistent research evidence.

The Scientific Community

Science is given life through the operation of the scientific community, which sustains the assumptions, attitudes, and techniques of science. The **scientific community** is a collection of people and a set of norms, behaviors, and attitudes that bind them together. It is a professional community because it is a group of interacting people who share ethical principles, beliefs and values, techniques and training, and career paths. It is not a geographic community. For the most part, the scientific community includes both the natural and social sciences.¹⁰

Many people outside the core scientific community use scientific research techniques. A range of practitioners and technicians apply research techniques that have been developed and refined by the scientific community. For example, many people use a research technique created by the scientific community (e.g., a survey) without possessing a deep knowledge of research, without inventing new methods of research, and without advancing science itself. Yet, those who use the techniques or results of science will be able to do so better if they also understand the principles and processes of the scientific community.

The boundaries of this community and its membership are defined loosely. There is no membership card or master roster. Many people treat a Ph.D. degree in a scientific field as an informal

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

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

“entry ticket” to membership in the scientific community. The Ph.D., which stands for doctorate of philosophy, is an advanced graduate degree beyond the master’s that prepares one to conduct independent research. Some researchers do not have Ph.D.’s and not all those who receive Ph.D.’s enter occupations in which they conduct research. They enter many occupations and may have other responsibilities (e.g., teaching, administration, consulting, clinical practice, advising, etc.). In fact, about one-half of the people who receive scientific Ph.D.’s do not follow careers as active researchers.

At the core of the scientific community are researchers who conduct studies on a full-time or half-time basis, usually with the help of assistants who are students. Working as a research assistant is the way that most scientists gain a real grasp on the details of doing research.

Colleges and universities employ most members of the scientific community’s core. Some scientists work for the government or private industry in organizations such as the National Opinion Research Center and the Rand Corporation. Most are found at the approximately 200 research universities and institutes located in half a dozen advanced industrialized countries. Thus, the scientific community may be scattered geographically, but its members tend to work together in small clusters.

How big is the scientific community? This is not an easy question to answer. Using the broadest definition (including all scientists and those in science-related professions, such as engineers), about 15 percent of the labor force in advanced industrialized countries are members of the scientific community. A better way to look at the scientific community is to examine the basic unit of the larger community: the discipline (e.g., sociology, biology, psychology, etc.). Scientists are most familiar with a particular discipline because knowledge is specialized. In the United States, there are about 17,000 professional sociologists, 180,000 architects, 950,000 lawyers, and 1639,000 accountants, and

819,000 medical doctors. Each year, about 600 people receive Ph.D.’s in sociology, 15,000 receive medical degrees, and 38,000 receive law degrees.

A discipline such as sociology may have about 8,000 active researchers. Many of these individuals complete only one or two studies in their careers. A minority conduct dozens of studies. For topic areas or specialties within disciplines (e.g., study of divorce or the death penalty), there are as few as 100 active researchers.¹¹ The outcomes of the scientific community affect the lives of millions of people, yet most research and new knowledge depend on the efforts of small numbers of people.

The Norms of the Scientific Community

Behavior in any human community is regulated by social norms. The scientific community is governed by a set of professional norms and values that researchers learn and internalize during many years of schooling. The norms are mutually reinforcing and contribute to the unique role of the scientist.¹² The settings in which active researchers work and the operation of the system of science reinforces the norms.¹³ Like other social norms, professional norms are ideals of proper conduct. Because researchers are real people, their prejudices, egos, ambitions, personal lives, and the like may affect their professional behavior. The norms of science do not always work perfectly in practice and are occasionally violated.¹⁴ Likewise, it is important to remember that the operation of science does not occur in a vacuum isolated from the real world. Diverse social, political, and economic forces affect its development and influence how it operates.

The five basic **norms of the scientific community** are listed in Box 1.2. They differ from those in other social institutions (e.g., business, government) and set scientists apart. Scientists check on each other to see that the norms are followed. For example, consistent with the norm of *universalism*, scientists will admire a brilliant, creative researcher even if he or she has strange personal habits or a disheveled appearance. Scientists may argue intensely with one another and “tear apart” a research report as part of the norm of *organized skepticism*. They usually listen to new

Norms of the scientific community A set of informal rules, principles, and values that governs how scientists conduct their research.

BOX 1.2 Norms of the Scientific Community

1. **Universalism.** Irrespective of who conducts research (e.g., old or young, male or female) and regardless of where it was conducted (e.g., United States or 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 or 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.

ideas, no matter how strange. Following *disinterestedness*, scientists are detached and take results, including from their own research, as being tentative. They love to have other scientists read and react to their research, and some have led fights against censorship. This is consistent with the norm of *communalism*. Communalism does not always work, especially when it conflicts with the profit motive. Scientists working in the tobacco, pharmaceutical, and computer chip industries had the publication of research findings suppressed or de-

layed by corporate officials for whom the profit motive overrode the scientific norm of communalism.¹⁵ Scientists expect strict *honesty* in the conduct and reporting of research and become morally outraged when anyone cheats at research.

The Scientific Method and Attitude

You have probably heard of the scientific method, and you may be wondering how it fits into all this. The **scientific method** is not one single thing. It refers to the ideas, rules, techniques, and approaches that the scientific community uses. The method arises from a loose consensus within the community of scientists. A discussion of the fundamental methods of social research is found in Chapter 4.

It is better to focus on the **scientific attitude**, or a way of looking at the world. It is an attitude that values craftsmanship, with pride in creativity, high-quality standards, and 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.

Journal Articles in Science

You may be familiar with certain sociology scholarly journals or specialized magazines. When the scientific community creates new knowledge, it appears in academic books or scholarly journal articles. A more detailed discussion of scholarly journals is in Chapter 5. The primary forms in which research findings or new scientific knowledge

Scientific method The ideas, rules, techniques, and approaches that the scientific community uses to create and evaluate knowledge.

Scientific attitude A way of thinking about and looking at the world that reflects a commitment to the norms and values of the scientific community.

appear are **scholarly journal articles**. They are how scientists formally communicate with one another and disseminate the results of scientific research. They are also part of the much discussed explosion of knowledge. Each discipline or field has over 100 journals, each of which publishes many articles every year. For example, a leader among the nearly 200 sociology journals, the *American Sociological Review*, publishes about 65 articles each year. The journal article is a crucial part of the research process and the scientific community, but it is not always well understood.¹⁶

Consider what happens once a researcher completes a study. First, he or she writes a description of the study and the results as a research report or a paper in a special format. Often, he or she gives an oral presentation of the paper at a meeting of a professional association, such as the American Sociological Association, and sends a copy of it to a few scientists for their comments and suggestions. Next, the researcher sends copies to the editor of a scholarly journal, such as the *Sociological Quarterly* 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 sends the paper to several referees for a **blind review**. The referees are scientists who have conducted research in the same specialty area or topic. The review is "blind" because the referees do not know who conducted the research and the author does not know the referees. This reinforces the norm of universalism, because referees judge the paper on its merits alone. They evaluate the research on the basis of its clarity, originality, standards of good research, and

Scholarly journal article An article in a specialized publication that has members of the scientific community as its primary audience; it is 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 who conducted a study and the researcher does not know the identity of the evaluators in advance.

contribution to knowledge. Journals want to publish research that is well done and that significantly advances knowledge. The referees return their evaluations to the editor, who decides to reject the paper, 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. Sociology, psychology, and political science use blind reviews for almost all scholarly journals, and often three or more scholars review a study. By contrast, fields such as biology, history, and economics use a mix of review processes; sometimes reviewers know the author's identity and only one or two scholars review the study. Blind reviews with many referees slow the process and lower acceptance rates.¹⁷ It is a very cautious method of ensuring quality control that advances the norms of organized skepticism and universalism.

Some scholarly journals are widely read and highly respected. They receive many more papers 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 the submissions. Thus, publication represents tentative acceptance by the scientific community. Publishing a book involves a somewhat different review process that includes cost and sales considerations, but the acceptance rate is often lower.¹⁸

Unlike the authors of articles for the popular magazines found at newsstands, who are paid for writing, scientists are not paid for publishing in scholarly journals. In fact, they may have to pay a small fee to help defray costs just to have their papers considered. Researchers are happy to make their research available to their peers (i.e., other scientists and researchers) through scholarly journals. Likewise, the referees are not paid for reviewing papers. They consider it an honor to be asked to conduct the reviews and a responsibility of membership in the scientific community. The scientific community imparts great respect to researchers who publish many articles in the foremost schol-

arly journals. The articles confirm that these researchers are leaders in advancing the primary goal of the scientific community—to contribute to the accumulation of scientific knowledge.

A researcher gains prestige and honor within the scientific community, respect from peers, and a reputation as an accomplished researcher through such publications. Researchers want to earn the respect of their peers—other highly trained scientists who are knowledgeable about the research issues. In addition, an impressive record of respected publications helps a researcher obtain grants, fellowships, job offers, a following of students, improved working conditions, and increases in salary.¹⁹

You may never publish an article in a scholarly journal, but you will likely read such articles. They are a vital component of the system of scientific research. Most new scientific knowledge first appears in scholarly journals. Researchers read the journals to learn about the research others conducted, the methods they used, and the results they obtained.

Science as a Transformative Process

You can think of research as the use of scientific methods to transform ideas, hunches, and questions, sometimes called *hypotheses*, into scientific knowledge. In the research process, a researcher starts with guesses or questions and applies specialized methods and techniques to this raw material. At the end of the process, a finished product of value appears: scientific knowledge. A highly productive researcher creates a great deal of new knowledge that greatly improves people's understanding of the world.

You may be starting to feel that the research process is beyond you. After all, it involves complex technical skills and the high-powered scientific community. Yet, the fundamentals of conducting research are accessible to most people. With education and practice, you can learn to do scientific research. In addition to assimilating the scientific attitude or culture, you will need to master how and when to apply research techniques. After reading this book, you should grasp them. Soon you will be able to conduct small-scale research projects yourself.

QUANTITATIVE AND QUALITATIVE SOCIAL RESEARCH

You will learn about both qualitative and quantitative approaches to doing social research in this book. After the first several chapters, the two approaches will be used to help organize most remaining chapters. Each approach uses several specific research techniques (e.g., survey, interview, and historical analysis), yet there is much overlap between the type of data and the approach to research. Most qualitative researchers examine qualitative data, and vice versa.

Unfortunately, there is a lot of ill will between the followers of each research approach. Some find it difficult to understand or appreciate the other approach. Thus, Levine (1993:xii) wrote, "Quantitative social science," which he called "real social science," faced opposition but it "won the battle." Denzin and Lincoln (2003a) argued that qualitative research expanded greatly and is rapidly displacing outdated quantitative research.

Although both share basic principles of science, the two approaches differ in significant ways (see Table 1.2). Each has its strengths and

TABLE 1.2 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 is key	Authenticity is key
Value free	Values are present and explicit
Theory and data are separate	Theory and data are fused
Independent of context	Situationally constrained
Many cases, subjects	Few cases, subjects
Statistical analysis	Thematic analysis
Researcher is detached	Researcher is involved

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

limitations, topics or issues where it glitters, and classic studies that provide remarkable insights into social life.

No matter what approach they adopt, researchers try to avoid the errors discussed earlier in this chapter, to be systematic in gathering data, and to use the idea of comparison extensively. By understanding both approaches, you will know about a range of research and can use both in complementary ways. Ragin (1994a:92) has explained one way the approaches complement each other:

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.

STEPS IN THE RESEARCH PROCESS

The Steps

Conducting research requires following a sequence of steps. The exact sequence and steps vary somewhat with the type of social research (Chapters 2 and 4 discuss types of research), but there are essentially seven major steps. The steps vary slightly by whether a study involves a quantitative or a qualitative approach and data.

Quantitative Approach. The process of conducting a quantitative study begins with a researcher selecting a topic. Quantitative researchers typically start with a general area of study or issue of professional or personal interest, such as the effects of divorce, reasons for delinquency, impact of homelessness, or how elites use the media. However, a topic is too broad for conducting a study. This is why the next step is crucial. The researcher must narrow it down to, or focus on, a specific *research question* that can be addressed in the study. Often this requires a careful review of the *research literature* (discussed in Chapter 5) and developing hypotheses (discussed in Chapter 6) that frequently come from *social theory* (discussed in Chapter 3).

For example, a broad topic—reasons for delinquency—becomes the focused research question: Are teenaged East Asian immigrant males who have strong ties to their home culture and who are not assimilated into the new society more likely to engage in delinquent acts than those with weak ties who have assimilated? A rather vague topic, reasons for delinquency, is focused into a specific reason (i.e., degree of assimilation) for a specific group of people (i.e., teenaged immigrant males from East Asia) that is used to pursue the next step, to *design a study* (discussed in Chapters 6–11). Designing the study requires making 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, theory informs decision making.

After designing the study, a researcher begins to *collect data*. A quantitative researcher will very carefully record and verify information, almost always in the form of numbers, and usually transfers the data into computer-readable format. Once the data are all collected, the researcher begins the fifth step, to *analyze data* (see Chapter 12). This typically involves manipulating the data or numbers using computer software to create many charts, tables, graphs, and statistics. Often the research ends up with a large quantity of computer-generated output that provides the researcher with a condensed picture of the data. The researcher next has to give meaning to or *interpret the data*. By looking at the analyzed data, using background knowledge on the research topic and question, and drawing on theory, a researcher answers the original research question. A researcher also considers alternative interpretations of the data, compares the results of this study with previous studies, and draws out its wider implications. The researcher will be prepared for the final step, to *inform others*. This means writing a report about the study in a specific format (described in Chapter 16) and presenting a description of the study and results to professional audiences and in one or more publications (see Figure 1.1).

Qualitative Approach. Norman Denzin and Yvonna Lincoln (2003b:31–38) describe a slightly different set of steps for qualitative research. Qualitative researchers begin with a self-assessment

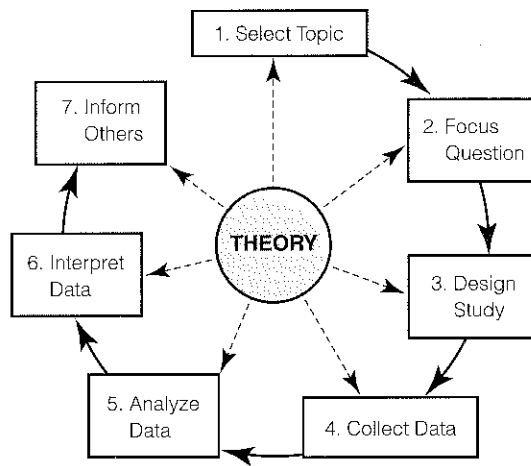


FIGURE 1.1 Steps in the Quantitative Research Process

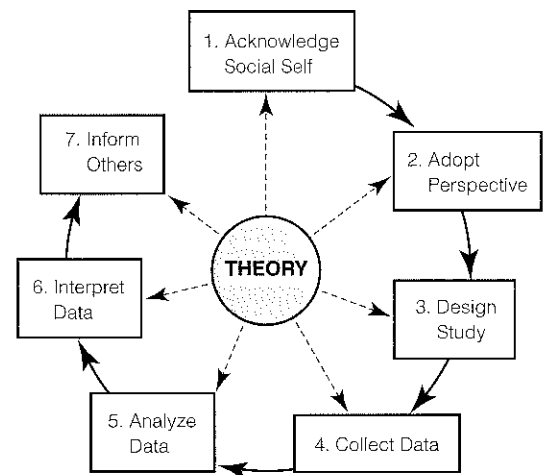


FIGURE 1.2 Steps in the Qualitative Research Process

and reflections about themselves as situated in a sociohistorical context. It is a highly self-aware *acknowledgment of social self*, or of a researcher's position in society. Qualitative researchers do not narrowly focus on a specific question, but ponder the theoretical-philosophical *paradigm* (discussed in Chapter 4) in an inquisitive, open-ended settling-in process as they *adopt a perspective*. Like the quantitative researcher, a qualitative researcher will *design a study* (Chapter 6), *collect data* (Chapters 13–14), *analyze data* (see Chapter 15), and *interpret data*. The qualitative researcher is likely to collect, analyze, and interpret data simultaneously, going back and forth between these steps. He or she also tends to build new theory as well as draw on existing theory during these steps. At the *interpret data* stage, many quantitative researchers test hypotheses they previously developed whereas qualitative researchers tend to create new concepts and emphasize constructing theoretical interpretations. The last step, to *inform others*, is similar for both approaches, but here again, the report styles to present results to other people vary by approach (see Chapter 16). (See Figure 1.2.)

The neat seven-step process shown in Figures 1.1 and 1.2 are oversimplified. In practice, researchers rarely complete step 1, then leave it to move to step 2, and so on. Research is an interactive

process in which steps blend into each other. A later step may stimulate reconsideration of a previous 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. It is an ongoing process, and the end of one study often stimulates new thinking and fresh research questions.

The seven steps are for one research project. A researcher applies one cycle of the steps in a single research project on a specific topic. Each project builds on prior research and contributes to a larger body of knowledge. The larger process of scientific discovery and accumulating new knowledge requires the involvement of many researchers in numerous research projects all at the same time. A single researcher may be working on multiple research projects at once, or several researchers may collaborate on one project. Likewise, one project may result in one scholarly article or several, and sometimes several smaller projects are reported in a single article.

Quantitative Studies

To illustrate the seven steps in social research, what follows are short summaries of four quantitative and two qualitative studies published in scholarly journals between 2000 and 2004 on the topic of

immigration from Mexico to the United States. The authors are from different academic fields and apply various research techniques.

Quantitative Example 1. R. Michael Alvarez and Tara L. Butterfield (2000) studied why voters supported California's anti-immigrant Proposition 187.

Select a Topic. California has public referendums on many issues. Proposition 187 in 1994 sought to take away most social services and health care from illegal immigrants. The authors wanted to learn who supported California Proposition 187 and why.

Focus the Question. In 1994, the California state economy was in the midst of the worst recession since the 1930s Depression. Over a million jobs were lost, creating terrible budget problems for state and local governments. At this time, officials proposed Proposition 187 to end alleged increases in fraud and abuse of public services by illegal immigrants. The authors thought Proposition 187 was diverting public attention away from the real problem—a bad economy and government budget problems—and treating a vulnerable population, immigrants, as scapegoats. They thought nativism could be the real source of voter support for Proposition 187. Nativism periodically has appeared in U.S. history to justify the power and privileges of native-born people over newcomers. It is a competitive response in which settled insiders seek to defend and protect their entrenched interests by blaming their problems on and focusing increased hostility toward politically weak outsiders.

Design the Study. The authors surveyed a sample of voters to see whether those who fit a nativist profile (i.e., feel competition from, blame various economic problems on, and direct hostility toward immigrants) supported Proposition 187.

Collect the Data. The authors acquired data from a national survey organization that gave questionnaires to 3,147 registered voters as they left voting booths. Voters were asked about their race, personal finances, beliefs about the state's economy, education level, area of residence, political party,

political ideology, vote for governor, and employment status.

Analyze the Data. The authors used advanced statistical analysis to measure the impact of opinions and background factors on support for Proposition 187.

Interpret the Data. The authors found that the strongest predictor of support for Proposition 187 was a voter's beliefs about the state's economy. Voters who blamed California's economic problems on immigrants and who faced the greatest economic and cultural competition from immigrants—non-Latinos with less education who lived close to many recent immigrants—most strongly supported Proposition 187. Political party and ideology had little effect on voting. The authors concluded that nativism was a major source of voter support for Proposition 187.

Inform Others. The authors presented their findings at the 1996 Southern Political Science Association and later submitted the study to *Social Science Quarterly*.

Quantitative Example 2. Lisa Magaña and Robert Short (2002) looked at what politicians said about Mexican and Cuban immigrants.

Select a Topic. The authors examined the statements by political candidates about Mexican and Cuban immigrants.

Focus the Question. The authors applied social construction theory, which refers to how groups, individuals, and symbols are perceived by the culture at-large. They looked at views expressed by political candidates in the press and how the views might inform political policy or be used to scapegoat certain groups for social problems.

Design the Study. The authors' content analyzed statements in newspapers over a six-year period (1993–1999), examining federal, state, and local elections during election years and nonelection years, including candidates of both U.S. political parties.

Collect the Data. Data came from Lexis-Nexus, an electronic database containing full-text newspaper articles. The search was restricted to references of what U.S. politicians said concerning Mexican and Cuban immigration. Their final sample contained 495 articles.

Analyze the Data. The authors looked at tables with percentages and statistical tests.

Interpret the Data. The major topic discussed was illegal Mexican immigration during the six years. In the mainstream media press, the topic was treated as very negative because there is little political fallout when candidates appeal to more anti-immigrant constituencies. Republican candidates for federal office made most of the negative statements, primarily about economic and cultural issues. Candidates from neither party discussed Cuban immigrants. The authors suggest that the political rhetoric regarding immigration is a distorted view of immigration issues in the public eye with social policy implications.

Inform Others. The authors published their results in *Review of Policy Research*.

Quantitative Example 3. Yeuch-Ting Lee and Victor Ottati (2002) studied attitudes toward U.S. immigration policy and general ingroup/outgroup feelings.

Select a Topic. The authors examined sources of American attitudes toward immigrants.

Focus the Question. The authors focused on California Proposition 187 designed to deny public services to illegal immigrants. Past research suggested that some people hold very strong membership feelings about their racial-ethnic group and treat non-group members unfavorably. They wanted to see whether this general orientation also shaped people's positions about the new law, because it had significant support and in public its supporters claimed they were not motivated by racial-ethnic prejudice. The authors compared three hypotheses about attitudes toward illegal immigrants: (1) an ingroup/outgroup bias (i.e., people favor their own racial-ethnic group), (2) economic concerns (i.e., people

fear a loss of jobs), or (3) obedience to law (i.e., people want everyone to obey the law).

Design the Study. The authors used a questionnaire with 10 questions about treatment of immigrants. A high score indicated humane treatment for all immigrants. They also asked participants whether an illegal immigrant's children born in the United States (hence U.S. citizens) should have an opportunity for education in the United States and whether they would vote for a law like Proposition 187. The authors conducted three studies in which participants read a story about a Mexican immigrant and answered questions about immigration and other issues. By varying the ethnic background of participants and the story, they sought to test the three hypotheses.

Collect the Data. Data for study 1 had two sets of 100 college students, one set from Springfield Massachusetts, and one from Mexico City, Mexico. Participants read a story about a hypothetical person who migrated to the United States from Mexico and would suffer many negative consequences if the Proposition 187 became law. In study 2, participants were 286 U.S. citizens of several ethnic groups. They read the same story and were asked about immigration. In study 3, participants were 125 Anglo American college students from California. Some read the same story about a Mexican immigrant, others one where the immigrant was an Anglo-Canadian. In addition to questions on immigration, the child's education, and voting, participants were asked about economic threat due to immigration and about the importance of obeying the law.

Analyze the Data. For study 1 data, the authors found large differences between U.S. and Mexican college students: 76 percent of the American versus 5 percent of Mexican college students favored Proposition 187. For study 2 data, they found large differences by ethnic group among Americans: Anglo Whites had the lowest favorable treatment scores, next came Asian and African Americans, and highest scores were given by Hispanics. The difference between Asian and African Americans and Hispanics were small, but that between

non-Anglos and Anglos was large. For example, 70.0 percent of Anglos, 12.6 percent of Asian and African Americans, and 3.5 percent of Hispanics would vote for Proposition 187. In study 3, the authors statistically compared the impact of the story (Mexican versus Canadian immigrant), belief in economic threat, and law obedience.

Interpret the Data. The first two studies showed that Anglo Whites held a very different position from Mexican nationals and non-Whites. The source of Anglo White opinions was most interesting. Ethnic group membership, fear of economic threat, and law obedience each contributed to an unfavorable view on immigrants and support for Proposition 187. However, only the racial-ethnic factor predicted unfavorably on the question about the immigrant child's education. The authors concluded that although it was not the sole factor, a desire to exclude racial-ethnic outsiders was important for the anti-immigrant views of many Anglo Whites.

Inform Others. The authors submitted their paper to the *Journal of Social Psychology* in July 2000, and it appeared in print in October 2001.

Quantitative Example 4. William Kandel and Douglas Massey (2002) examined Mexican communities with high rates of out-migration coming to the United States.

Select a Topic. The "culture of migration" in which young Mexicans "expect" to live and work in the United States and see migration to the United States as a normal part of the life course.

Focus the Question. The authors examined students in the Mexican state of Zacatecas, a major source of migrants to the United States. The authors developed an equation to express the culture of migration that predicts a desire to migrate and not continue with schooling in Mexico. Predictions are based on a young person's social connections to others who have migrated.

Design the Study. The researchers used a questionnaire and selected schools in the capital city, a medium-sized town, and two dozen smaller agrarian settlements, focusing on students in grades 6

through 12 at upper-level technical schools and senior high schools to get 7,061 students.

Collect the Data. Students completed a 5-page questionnaire in classrooms that asked about social and demographic characteristics of family members (age, education, occupation, job location, marital status, and household membership), the student's educational history, time spent studying and chores or paid labor, whether the student's father had been to the United States, the migratory experience of the student's nuclear and extended families, and the student's own aspirations.

Analyze the Data. Statistical tables and sophisticated statistical tests were used.

Interpret the Data. The odds of wanting to work in the United States rise steadily with families having higher migratory involvement. Students and families reduce their investment in moving up in Mexico and invest in migration, raising the odds that they actually will migrate as they get older. The authors found that aspirations to work in the United States are much lower for females, but rise with age.

Inform Others. Study results were presented at the 1999 annual meeting of the American Sociological Association and later published in the journal *Social Forces*.

Qualitative Studies

Quantitative Example 1. Sofia Villenas (2001) examined the lives of Latina women in a small North Carolina town.

Acknowledge Social Self. The author says she is first-generation Chicana born in Los Angeles of immigrant parents from Ecuador and a detribalized descendant of the Quechua-speaking people of the South American Andes. After getting a degree in Latin American/Chicano/a Studies, she was a bilingual Spanish teacher from Los Angeles. While at the University of North Carolina working on a Ph.D., she was a bilingual instructor for adult English-as-a-second-language (ESL) classes, a bus driver, and an ESL instructor for mothers in parenting classes in a small North Carolina town.

Adopt a Perspective. The author self-consciously applied a race-based feminist perspective to explore connections between racial power and the political economy. She positioned herself as an insider and outsider to both the Latino community and that of English-speaking professionals, to understand both racial ideologies and the daily experience of Latina mothers in rural North Carolina.

Design the Study. The author's community roles also brought her into close relationships with Latino families and with Latina mothers in particular. For two years she participated in social events, community meetings, school meetings, and Catholic mass in Spanish.

Collect and Analyze the Data. The author tape-recorded the oral life histories of 21 Latino community members, including 11 mothers with whom she worked most closely. She engaged in participant observation and analyzed public agency and town documents, including the local daily newspaper.

Interpret the Data. In a kind of benevolent racism, White educators, health care, and social service providers saw "American" (racially coded for "white") women as superior and as models for Latinas to emulate, and saw Latina mothers as "uneducated" and in backward "macho" families. By contrast, the Latina mothers saw themselves as strong and educated, adhering to principles for living that were superior to what they saw in a small American town. They were proud *mujeres de hogar* (women of the home) who imparted distinct moral education that was critical to the Latino community.

Inform Others. The study results were published in *Anthropology and Education Quarterly*. A description of how Villenas's biography and feminist approach affected her research also appeared in the *Harvard Education Review* (1996).

Qualitative Example 2. Tracy J. Andrews, Vickie D. Ybarra, and Teresa Miramontes (2002) explored the experiences of undocumented immigrant women from Mexico.

Acknowledge Social Self. The authors included an anthropologist who had previously conducted

research on Native Americans, a clinic worker who was also a public health clinical instructor, and a student who spent six years on ongoing cooperative research and internship projects before going to medical school after working on this study.

Adopt a Perspective. The study was at a health clinic in an area in which there was little prior research on immigrant women. The authors adopted an interdisciplinary, clinical-helping orientation. They assessed propositions of neoclassical economic and social capital theories to explain international migration and compared them to migration decision-making processes of the women in the study.

Design the Study. The study took place at the Yakima Valley Farm Workers Clinic (YVFWC) in Washington State. The clinic addressed the health care and social service needs of migrant and seasonal farmworkers, immigrants, and those without financial resources. It was the largest provider of prenatal care and each year about 1,300 women used the clinic's prenatal services. Approximately 40 percent of these women were undocumented immigrants from Mexico. Researchers used standardized questions and open-ended questions in Spanish to interview 14 women.

Collect the Data. The interviews were tape-recorded in Spanish and addressed three topics: (1) the border crossing experience and its context, (2) reasons for crossing the border, and (3) motivation to cross. The authors also conducted research into the political, historical, economic, and demographic factors of the national and local context for migrants from Mexico. They had access to a unique "First Steps Database" that had detailed health information on pregnant undocumented immigrant women going back to 1989.

Analyze the Data. In addition to describing the historical context and giving a demographic profile, the authors provided information and quotes from the 14 women. Most of the women crossed in remote borderland areas under great danger—including circumstances related to their being women and/or their traveling with children. Their motivations were mixed but joining a husband or

family member who had already migrated and finding employment were key factors.

Interpret the Data. The human social capital and rational economic choice models based on male experiences cannot capture the women's experiences. Age and family history were critical factors, and the decision-making processes combined employment options, being the manager of child care, and a sense of household responsibilities. Many took enormous risks to reunite with husbands and to keep their families intact.

Inform Others. The findings were published in the *Social Science Journal*.

WHY CONDUCT SOCIAL RESEARCH?

Students, professors, professional researchers, and scientists in universities, research centers, and the government, with an army of assistants and technicians, conduct much social research. This research is not visible to the average person. Although the results may appear only in specialized publications or textbooks, the basic knowledge and research methods of professional researchers are the basis for all social research.

In addition to those in universities, people who work for newspapers, television networks, market research firms, schools, hospitals, social service agencies, political parties, consulting firms, gov-

ernment agencies, personnel departments, public interest organizations, insurance companies, and law firms conduct research as part of their jobs. Numerous people make use of social research techniques. The findings from research yield better informed, less biased decisions than the guessing, hunches, intuition, and personal experience that were previously used (see Box 1.3). Unfortunately, those being studied may feel overstudied or overloaded by the research. For example, the many exit poll studies during elections have prompted a backlash of people refusing to vote and debates over legal restrictions on such polling.

Also, some people misuse or abuse social research—use sloppy research techniques, misinterpret findings, rig studies to find previously decided results, and so on. But the hostile reactions to such misuse may be directed at research in general instead of at the people who misuse it.

CONCLUSION

In this chapter, you learned what social research is, how the research process operates, and who conducts research. You also learned about alternatives to research—ways to get fast, easy, and practical knowledge that, nonetheless, often contains error, misinformation, and false reasoning. You saw how the scientific community works, how social research fits into the scientific enterprise, and how the

BOX 1.3 The Practitioner and Social Science

Science does not, and cannot, provide people with fixed, absolute Truth. This is 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 incertitude 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 ana-

lysts) 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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oning. You saw how
rks, how social re-
erprise, and how the

pt decisions in their
n scientific thinking
personal conviction,
oo, can use social sci-
ifficult but possible.
to locate the best
use careful, independ-
rors or fallacies; and
g complete, final an-
ys be open to new
n sources, and con-
ffered to support a

norms of science and journal articles are crucial to the scientific community. You also learned the steps of research.

Social research is for, about, and conducted by *people*. Despite the attention to the principles, rules, or procedures, remember that social research is a human activity. Researchers are people, not unlike yourself, who became absorbed in a desire to create and discover knowledge. Many find social research to be fun and exciting. They conduct it to discover new knowledge and to gain a richer understanding of the social world. Whether you become a professional social researcher, someone who applies a few

research techniques 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 offered the following valuable advice in his *Sociological Imagination* (1959:196):

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	overgeneralization	scientific method
data	premature closure	selective observation
empirical	pseudoscience	social research
halo effect	scholarly journal article	social theory
junk science	scientific attitude	
norms of the scientific community	scientific community	

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?
7. How does a study get 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 Ethan Bronner, "Study of Doctors Sees Little Effect of Affirmative Action on Careers," *New York Times* (October 8, 1998); Fox Butterfield, "Most Efforts to Stop Crime Fall Far Short, Study Finds," *New York Times* (April 16, 1997); Bob Whitby, "Truth or Dare," *Isthmus* (Madison, WI) (November 8, 1996); "Lies, Damned Lies, and . . .," *Economist* (July

19, 1997); James Brooke, "Homophobia Often Found in Schools, Data Show," *New York Times* (October 13, 1998); Wysong, Aniskiewicz, and Wright (1994); John O'Neil, "See a Movie, Then Light Up," *New York Times* (July 6, 2004); and Jane Brody, "TV's Toll on Young Minds and Bodies," *New York Times* (August 3, 2004).

2. See Laurice Goodstein, "Church-Based Projects Lack Data on Results," *New York Times* (April 24, 2001).
3. For more on fallacies, see Babbie (1998:20–21), Kaplan (1964), and Wallace (1971).
4. See Rampton and Stauber (2001:256).
5. From Rampton and Stauber (2001:274–277, 305–306).
6. On the limits to self-knowledge, Wilson and Dunn (2004); on inaccurate eyewitness accounts, Wells and Olson (2003); on inaccurate risk evaluation, Gowda and Fox (2002), Paulos (2001); on SUVs, Bradsher (2002).
7. The rise of science is discussed in Camic (1980), Lemert (1979), Merton (1970), Wuthnow (1979), and Ziman (1976). For more on the historical development of the social sciences, see Eastrope (1974), Laslett (1992), Ross (1991), and Turner and Turner (1991).
8. See Herrnstein and Murray (1994) and a critique in Fischer et al. (1996).
9. See Rampton and Stauber (2001:229–252).
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).
13. Norms are discussed in Hagstrom (1965), Merton (1973), and Stoner (1966).
14. Violations of norms are discussed in Blume (1974) and Mitroff (1974).
15. See Lawrence K. Altman, "Drug Firm, Relenting, Allows Unflattering Study to Appear," *New York Times* (April 16, 1997); John 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).
16. The 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).
17. See Clemens and Powell (1995:446).
18. See Clemens and Powell (1995:444).
19. 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).