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chapter 4

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How Do We Know What We Know? The Methods of the Sociologist

EVERYBODY KNOWS THAT DIVORCE IS BAD for children. It's a daily staple on TV talk shows that children of divorced parents are less emotionally well adjusted and have lower rates of achievement in school, poorer grades, lower self-esteem, and higher rates of depression than kids from intact families.

What everybody knows is based on two sorts of studies. First, child psychologists indicate that the majority of the kids they see are children from families of divorce. And there are studies comparing the experiences and achievements of children from divorced families with those of children from intact families. Therefore, we are constantly advised, parents should stay together "for the good of the children."

To a sociologist, though, both sources of data are riddled with problems. How does the population of children in therapy compare with the population of children who are not in therapy? Could it be that children whose parents are divorcing are sent to therapists by courts or mediators? Could it be that whatever problems children might have, they are attributed to the divorce by well-meaning therapists—even if the problems have nothing to do with the divorce?

It turns out that much of what passes for common sense turns out to be wrong. Sociology enables us to use scientific thinking to see the complexity of various issues.

And comparing children from families of divorce with children in intact families compares two incomparable groups. After all, divorce is not an alternative to marriage, it's an alternative to an *unhappy* marriage. And if you were to compare children from families of divorce with children from

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intact families in which there was a lot of conflict between the parents, the children from divorced families actually are doing *better!*

It turns out, in a sense, that what "everybody knows" is wrong. Sociologists Paul Amato and Paul Booth found that children from intact high-conflict families fare worse than children in intact, low-conflict families and children from divorced families. And while we would never prescribe divorce "for the sake of the children," it's clear that the impact of divorce is far more complicated, and children far more resilient, than many popular pundits might imagine (Amato, 2000; Booth and Amato, 2001).

How could these conclusions have been so wrong? It turns out that the populations they chose for their sample, the way they constructed comparisons, and the manner in which they analyzed data led the researchers down an errant path. Most researchers are honest and well intentioned. But the methods they choose can often lead them astray.

This example shows how false it is to dismiss sociology as simply "making a science out of common sense." It turns out that much of what passes for common sense turns out to be wrong. Sociology enables us to use scientific thinking to see the complexity of various issues.

Why Sociological Methods Matter

Sociology is a "social science," a phrase that requires some consideration. As a social *science*, sociology, like economics or political science, uses methods derived from the natural sciences to study social phenomena. Sociologists study group dynamics as an economist might study price fluctuations: When a new variable is introduced to the situation, we can measure its direct impact on its surroundings.

But sociology is also a *social* science, like anthropology or history, attempting to study human behavior as it is lived by conscious human beings. As a result of that consciousness, human beings don't behave in exactly the same ways all the time, the ways that natural phenomena like gravity, or planetary orbits, might. People possess **subjectivity**—a complex of individual perceptions, motivations, ideas, and really messy things like emotions. "Imagine how hard physics would be if particles could think" is how the Nobel Prize–winning physicist Murray Gell-Mann once put it.

Thus, sociology uses a wide variety of methodologies—perhaps a greater variety than any other academic field. The range of different methods sociologists use extends from complex statistical models, carefully controlled experiments, and enormous surveys to such methods as the literary analysis of texts, linguistic analysis of conversations, ethnographic and field research, "participant observation," and historical research in archives.

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That is because the range of questions that sociologists pose for research is also enormous. Instead of being forced to choose between qualitative and quantitative methods, field research, or textual analysis, students of sociology should be exposed to a wide variety of methodologies. The method we use should depend less on some preexisting prejudice and more on what we want to study.

You might think that the choice of method and the type of data that you use are of little importance. After all, you might say, if you are trying to find out the truth, won't every method basically get you to the same results? In fact, though, the methods we use and the kinds of questions we ask are often so important that they actually lead to some answers and away from others. And such answers have enormous implications for public policy.

Here's a recent example. For centuries people have argued about "nature" versus "nurture." Which is more important in determining your life course, heredity or environment? In recent years, the argument has been tilting increasingly toward nature. These days, "everybody knows" intelligence is largely innate, genetically transmitted. The most famous—or, to schoolchildren, "infamous"—test of all is the IQ test, a test designed to measure your "innate" intelligence, or aptitude, the natural, genetically based ability you have to understand things. Sure, good schools and good environments can help, but most studies have found that about 75 percent of intelligence is hereditary. Typically, these sorts of studies are used by opponents of affirmative action to argue that no amount of intervention is going to help those at the bottom—they're at the bottom for a reason.

It turns out, though, that this "fact" was the result of the methods being used to find it out. Most of the data for the genetic basis for intelligence are based on studies of twins. Identical twins share exactly the same DNA; fraternal twins, or other siblings, share only half. Researchers have thus taken the finding that the IQs of identical twins were more similar than for nonidentical twins and other siblings as a demonstration that heredity determines intelligence.

But recently, Eric Turkheimer (Turkheimer et al., 2003, 2005) and his colleagues reexamined those studies and found a curious thing. Almost all the studies of twins were of *middle-class* twins (poor people tend not to volunteer for research studies). When he examined the results from a massive study of more than 50,000 children and factored in the class background of the families, a startling picture emerged. For the children from wealthy families, virtually all the differences in IQ could be attributed to heredity. But among poor children, the IQs of identical twins varied a lot—as much as the IQs of fraternal twins.

The impact of growing up in poverty (an environmental effect) completely offset the effects of heredity. For the poor, home life and environment are absolutely critical. "If you have a chaotic environment, kids' genetic potential doesn't have a chance to be expressed," Turkheimer told a journalist. "Well-off families can provide the mental stimulation needed for genes to build the brain circuitry for intelligence" (Turkheimer, cited in Kirp, 2006).

It turns out that the relationship between heredity and environment, between nature and nurture, is far more complex than anyone imagined: A certain environmental threshold has to be reached before heredity can kick in and "determine" anything. Only under some environmental conditions can the genetic ability emerge. It is a clear indication that it's rarely either/or—either nature *or* nurture. It's almost always both. But it took careful methodologists to see the methodological shortcomings in those previous studies and help to correct the misunderstanding that resulted. And think, then, of the potential geniuses whose environments have never enabled their ability to emerge!

Is intelligence the result of nature or nurture? Both. Class matters also. Poor twins show greater differences in IQ than do middle-class twins, whose IQs are very similar. ▼

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"Are you just pissing and moaning, or can you verify what you're saying with data?"

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Sociology and the Scientific Method

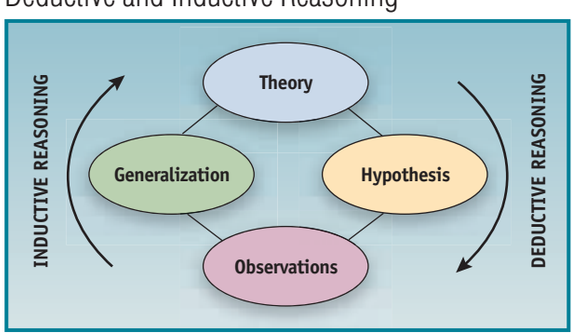
As social scientists, sociologists follow the rules of the scientific method. As in any argument or debate, science requires the use of evidence, or data, to demonstrate a position. The word **data** refers to formal and systematic information, organized and coherent. (The word *data* is the plural of *datum*.) Data are not simply a collection of anecdotes; they are systematically collected and systematically organized.

To gather data, sociologists use a variety of methods. Many of these methods sociologists share with other social scientists. To the sociologist, the choice of method is often determined by the sorts of questions you want to answer. Some sociologists perform experiments just as natural scientists do. Other times they rely on large-scale surveys to provide a general pattern of behaviors or attitudes. They may use historical materials found in archives or other historical sources, much as any historian would. Sociologists will reexamine data from other sources. They might analyze systematically the content of a cultural product, such as a novel, a magazine, a film, or a conversation. Some sociologists rely on interviews or focus groups with particular kinds of people to understand how they see things. Another sociologist might go into the field and live in another culture, participating in its customs and rituals much as an anthropologist might do.

Some of these research methods use **deductive reasoning** in that they logically proceed from one demonstrable fact to the next and deduce their results. These are more like the methods of the natural sciences, and the results we obtain are independent of any feelings that we or our research subjects may have. It's often impossible to then reason from the general to the specific: If you were to find out that a majority of American teachers supported the use of corporal punishment in the schools, you wouldn't be able to predict what your own teacher will do if you misbehave. (Don't worry, it's not true: Most teachers oppose it.)

In other situations, the feelings of our research subjects are exactly what we are trying to study, and we will need to rely on **inductive reasoning,** which will help us to understand a problem using our own human capacity to put ourselves in the other person's position. In this case, the research leads the researcher to a conclusion about all or many members of a class based on examination of only a few members of that class. For example, if you want to understand *why* teachers support corporal punishment, you might interview a few of them in depth, go observe their classrooms for a period of time, or analyze a set of texts that attempt to explain it from the inside (Figure 4.1).

FIGURE 4.1
Deductive and Inductive Reasoning



Loosely, inductive reasoning is reasoning from the specific to the general. This is what Max Weber called **verstehen,** a method that uses "intersubjective understanding." By this he meant that you use your own abilities to see the world from others' point of view. Sometimes sociologists want to check all emotions at the door of their research lab, lest they contaminate their

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What do you think?

MyLab

Happiness

Sociological research has many applications. Large-scale, representative surveys can tell us a lot about our population, about social trends, and about attitudes, behaviors, and beliefs. They also give us results that we can generalize to the larger population. For example, researchers might want to know how happy a population is. One way to find that out is to directly ask a representative sample how happy they feel. Researchers can then generalize their findings to the larger population. For example, national survey data tell us that, in general, Americans say they are happy. So where do you fit in that survey?

Taken all together, how would you say things are these days? Would you say that you are very happy, pretty happy, or not too happy?

- ❍ Very happy
- ❍ Pretty happy
- ❍ Not too happy

See the back of the chapter to compare your answers to national survey data.

findings with human error. At other times, it is our uniquely human capacity for empathic connection that is the source of our understanding.

Sociologists study an enormous range of issues. Virtually every area of human behavior is studied, from the large-scale activities of governments, corporations, and international organizations like the European Union or the United Nations, to the most minute and intimate decision making about sexual practices or conversations or self-presentation. As a result, the methods that we use to study sociological problems depend more on the kind of problem we want to study than whether one method is better than any other. Each method provides different types of data, and each type can be enormously useful and illuminate a different part of the problem.

Research methods are like the different ways we use glass to see objects. Some of us will want a magnifying glass, to bring the object so close that we can see every single little feature of the particular object. Others will prefer a prism, by which the object is fragmented into hundreds of tiny parts. A telescope is useful if the object is really far away but pretty useless if you need to see what's happening next door. Bifocals are best if you want to view both close and distant objects through the same lens.

Each of these ways of seeing is valuable. A specific method may be inappropriate to adequately study a specific problem, but no research method should be dismissed as inadequate or inappropriate in all situations. It depends on what you want to know.

Social surveys generate large bodies of data for quantitative analysis. ▼

The Qualitative/Quantitative Divide

Most often we think that the real divide among social science methods is between quantitative and qualitative methods. Using **quantitative methods**, one uses powerful statistical tools to help understand patterns in which the

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▲ **Observational methods enable qualitative researchers to explore subtleties of interaction.**

behaviors, attitudes, or traits under study can be translated into numerical values. Typically, quantitative methods rely on deductive reasoning. So, for example, checking a box on a survey that gives your sex as "male" or "female" might enable the researcher to examine the relative percentages of men and women who subscribe to certain ideas, vote for a particular political party, or avoid certain behaviors.

Qualitative methods often rely on more inductive and inferential reasoning to understand the texture of social life, the actual felt experience of social interaction. Qualitative methods are often derided as less scientific, as quantitative researchers often assume that their own methods eliminate bias and that therefore only quantitative methods are scientific.

These are convenient myths, but they are incorrect; they are, themselves, the result of bias. Both quantitative and qualitative methods are capable of understanding social reality—although each type of method illuminates a different part of that reality. Both types of methodologies have biases, but qualitative methodologists struggle to make their biases explicit (and thus better control them), while quantitative researchers, assuming they have no biases, sometimes don't see them. Personal values always influence the sorts of questions we ask, the hypotheses we develop and test, and the interpretation of the results.

After all, most great scientific discoveries initially relied on simple and close observation of some phenomenon—like the apple falling on the head of Sir Isaac Newton leading to his "discovery" of gravity. Gradually, from such observations, other scientists are able to expand the reach of explanation to include a wider variety of phenomena, and these are then subject to more statistical analysis.

Here's perhaps the classic example. You study a random sample of glasses with water in them, and you discover that the average level of water in the glasses is at about 50 percent. Is the glass half full or half empty? Every single interpretation of data contains such biases.

Try another, less conventional example. Recently, a study found that nationally, 72 percent of the girls and 65 percent of the boys in the high school class of 2003 actually earned their diplomas and graduated from high school (Lewin, 2006). One can interpret this in several different ways: (1) Things are going well, and the overwhelming majority of boys and girls do earn their diplomas; (2) things are going terribly for everyone because nearly one in every three high school students did not earn his or her diploma; (3) things are going significantly worse for boys than for girls, as there is a significant "gender gap" in high school graduation. (Each of these interpretations was made by a different political group.)

Debates among sociologists and other social scientists often focus on which method leads to the "truth." But the correct answer is *both* methods lead us to the "truth"—that is, each method is adept at revealing a different part of the entire social experience.

Doing Sociological Research

The research method you use usually depends on the question you want to address in your research. Once you have formulated your research question, you'll begin to think about the best method you can use to generate the sort of information you will

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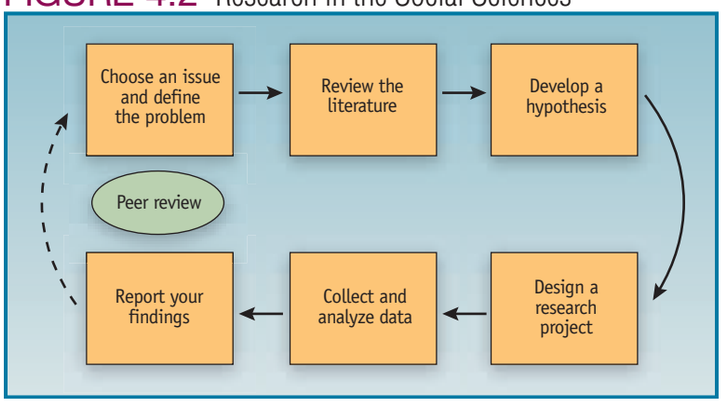
need to address it. And once you've chosen the method that would be best to use, you are ready to undertake the sociological research project. Research in the social sciences follows eight basic steps (Figure 4.2):

FIGURE 4.2 Research in the Social Sciences



1. *Choosing an issue.* What sort of issue interests you? What do you want to know about? Sometimes sociologists follow their curiosity, and sometimes they are invited to study an issue by an agency that will give them a grant for the research. Sometimes sociologists select a problem for research in the hopes that better understanding of the problem can lead to the formulation of policies that can improve people's lives.

   Let's take the example that we used at the beginning of this chapter. Let's say you've read an article in the newspaper in which a politician said that we should make divorce more difficult to obtain because divorce always harms children. This is interesting, you might think. What is the impact of divorce on children?

2. *Defining the problem.* Once you've chosen the issue you want to understand, you'll need to refine your questions and shape them into a manageable research topic. Here, you'll have to decide what sorts of impacts divorce may have on children you might want to explore. How do these children do in school? What is the likelihood that such children would, themselves, have their marriages end in divorce? How do they adjust to divorce socially and psychologically?

3. ***Reviewing the literature.*** Chances are that other social scientists have already done research on the issue you're interested in. You'll need to critically read and evaluate the previous research on the problem to help you refine your own thinking and to identify gaps in the research. Sometimes a review of the literature will find that previous research has actually yielded contradictory findings. Perhaps you can shed a clearer light on the issue. Or perhaps you'll find the research has already been done conclusively, in which case you'll probably want to find another research question.

4. ***Developing a hypothesis.*** Having now reviewed the literature, you can state what you anticipate will be the result of your research. A **hypothesis** predicts a relationship between two variables, independent and dependent. An **independent variable** is the event or item in your experiment that you will manipulate to see if that difference has an impact. If it does, it will affect what's called the dependent variable. The **dependent variable** gets its name because it depends on, or is caused by, the independent variable. The dependent variable is what gets measured in an experiment; it's the change to the dependent variable that constitutes your results.

   In our example, you might develop a hypothesis that "children from divorced families are likely to have more psychological problems and lower school achievement than children in intact families." In this case, the marital status of the parents—whether or not they are divorced—is the independent variable. That's the aspect you would manipulate to see if it causes change in the dependent variable(s). The psychological and educational consequences are those dependent variables; changes in those areas are the things you would measure to get your results.

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5. *Designing a project.* Now that you've developed a hypothesis, you are ready to design a research project to find out the answer. There are numerous different methods. Choose the one best suited to the question or questions you want to ask. Would quantitative or qualitative methods be more appropriate to address this question? What sorts of data might enable you to test your hypotheses?

6. *Collecting data.* The next step of the research is to collect data that will help you answer your research question. The types of data that you collect will depend a lot on the research method you will use. But whatever research method you use, you must ensure that the data are valid and reliable. *Validity* means that your data must actually enable you to measure what you want to measure. And *reliability* means that another researcher can use the same data you used and would find similar results. (We discuss validity and reliability later in this chapter.)

   Researching the impact of divorce on children, you might design a survey that would assess whether divorce has any impact on school achievement or psychological problems. (You would have to ensure that the participants represent all different groups, so that you don't inadvertently measure the effect of race or class on children.) You might choose several different schools (to make sure they were representative of the nation as a whole) and would code all the children as to whether their parents were divorced or not. Then you could see if there were any differences in their grades or if there were any differences in how often they were reported to the school principal for disciplinary problems. You might find that there already was a survey that had questions that could address your research question. Then you would use the existing data and look for those variables that would describe the impact of divorce. (This secondary analysis of existing data might sound like duplication, but it also ensures that the data you use will be valid and reliable.)

   You might decide to use more qualitative methods and do in-depth interviews with children of divorced parents and children from intact couples to see if there were any differences between them.

7. *Analyzing the data.* There are several different ways to analyze the data you have collected, and the technique you choose will depend on the type of method you have adopted. Large surveys need to be coded and analyzed statistically, to discern whether there are relationships among the variables that you predicted in your hypotheses and, if there are such relationships, how strong they are or whether they might have been produced by chance. If you've used qualitative techniques, interviews would need to be coded for their narrative content, and observational field notes would need to be organized and systematically examined. Data analysis is often the most cumbersome and tedious element in the research process, whether you are "crunching the numbers" or transcribing interviews. Data analysis requires care and precision, as well as patience.

8. *Reporting the findings.* No research project, no matter how small, is of much use unless you share it with others. Typically, one seeks to publish the results of research as an article in a peer-reviewed journal or in an academic book, which also passes peer review. Peer review is a process by which others in the field are asked to anonymously evaluate the article or book, to make sure the research meets the standards of adequate research. Peer review is essential because it ensures the acceptance of the research by one's colleagues. More than simple gatekeeping, peer review provides a valuable service to the author, enabling him or her to see how others read the work and providing suggestions for revision.

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Even a student research project needs to experience peer review (as well as review by professors). You should plan to distribute your research projects to other students in the class to see how they reacted to it and to hear their advice for revision.

Sociological research is a statement in a conversation between the researcher and the public. One needs to report one's findings to a larger community to get their feedback as part of a dialogue. Sometimes, that community is your fellow students or other sociologists. But sometimes, one also shares the findings with the larger public, because the public at large might be interested in the results. Many sociologists also make sure to share their findings with the people they studied, because the researcher might feel that his or her research might actually be useful to the subjects of the study.

Types of Sociological Research Methods

Sociologists typically use one of two basic types of research methods. One type of method relies on observation of behavior, either in a controlled setting, like a lab, or in its natural setting, where people usually do the behavior you're studying (what we call the "field"). Another type relies on analysis of accumulated data, either from surveys or from data already collected by others. Each of these basic types is composed of several subtypes.

Experiments require a very specific procedure: You have to divide the research subjects into two or more groups, make sure that they are similar for the purposes of the experiment, and then change the conditions in some specified way for one group and see if that results in a change. For instance, does heating coffee cause it to boil? Get two pots of coffee, put one on the burner and the other in the freezer, and check it out.

What social scientists call *variables* help us measure whether, how, and in what ways something changes (varies) as a result of the experiment. There are different kinds of variables. The independent variable is the agent of change, the element that you predict is the cause of the change, the ingredient that is added to set things in motion: the lit stove in the example above. The dependent variable is the one that changes, the variable whose change "depends" on the introduction of the independent variable: the coffee in the pot.

These are the key types of variables. But there are others. There are **extraneous variables,** which may influence the outcome of an experiment but are not actually of interest to the researcher. Extraneous variables might include the material the coffeepot is made of and whether your stove uses gas or electricity. (These might influence the speed of the boiling, or how high the temperature is, but they're not what you are interested in.) And there are **confounding variables** that may be affecting the results of the study but for which you haven't adequately accounted. Again, in the example above, the intelligence of the researcher to correctly sort the pots might confound, or complicate, the result.

Sociologists rarely conduct experiments: It's too hard to change the independent variable. Say you want to know if children of divorced parents are more likely to become juvenile delinquents. You can hardly divide children into two groups and force the parents of the first to divorce and the second to stay together.

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Instead of experiments, sociologists are likely to engage in the following types of research:

- *Observation.* Observing people in their natural habitat, joining their clubs, going to their churches, getting jobs in their offices. This is usually called *participant observation.*
- ***Interviews.*** Asking a small group of people open-ended questions, such as "Can you describe your last road rage experience?"
- *Surveys.* Asking a lot of people closed-ended questions, such as "How many times have you gotten angry in traffic in the last month?"
- *Content analysis.* Analyzing artifacts (books, movies, TV programs, magazine articles, and so on) instead of people.

What about going to the library and looking things up in books? Isn't that doing research? Sociologists would call that an incomplete literature review. A real **literature review** needn't perform any original or new research, but it must carefully examine all available research already done on a topic or at least a systematic sample of that research, through a specific critical and theoretical lens.

Let's look at each of these methods in a bit more detail.

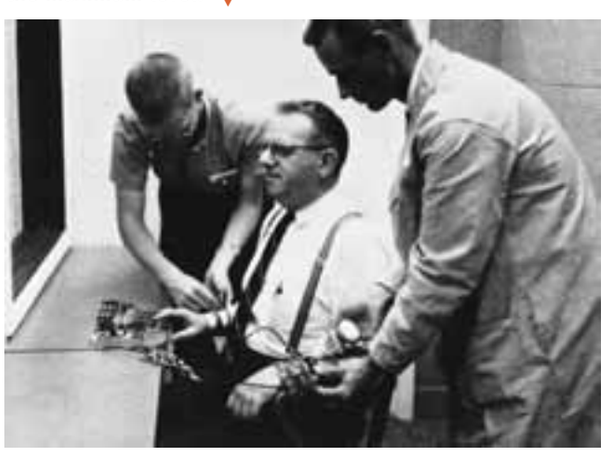
Observational Methods

In all observational studies, we directly observe the behavior we are studying. We can do this in a laboratory, conducting an experiment, or we can do it in the place where it more "naturally" occurs. When we observe phenomena, we do more than just watch—we watch scientifically, testing hypotheses against evidence.

Experiments. An **experiment** is a controlled form of observation in which one manipulates independent variables to observe their effects on a dependent variable. To make an experiment valid, one typically uses two groups of people. One is the **experimental group**, and they are the group that will have the change introduced to see what happens. The other is the **control group,** and they will not experience the manipulation of the variable.

A control group enables us to compare the outcomes of the experiment to determine if the changes in the independent variable had any effects on the dependent variable. It is therefore very important that the experimental group and the control group be as similar as possible (by factors such as age, race, religion, class, gender, and so on) so that we can reduce any possibility that one of these other factors may have caused the effects we are examining.

In the "Obedience to Authority" studies, social psychologist Stanley Milgram pretended to attach electrodes to his associate to administer increasingly painful electric shocks when he answered questions incorrectly. Two out of every three test subjects (65 percent) administered shocks all the way up to the maximum level. ▼



In one of the most famous, or infamous, experiments in social psychology, Stanley Milgram (1963, 1974) wanted to test the limits of people's obedience to authority. During the trials that followed the end of World War II, many Nazis defended themselves by claiming that they were "only following orders." Americans were quick to assume that this blind obedience to some of the most horrifying orders was a character trait of Germans and that such obedience could never happen in the United States. Milgram decided to test this assumption.

He designed an experiment in which a subject was asked to participate in an experiment ostensibly about the effects of negative reinforcement on learning. The "learner" (a colleague of the experimenter) was seated at

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a table and hooked up to a machine that would supposedly administer an electric shock of increasing voltage every time the learner answered the question wrong. The "teacher" (the actual subject of the experiment) sat in another room, asked the questions to the learner, and had to administer the electric shock when the learner gave the wrong answer.

The machine that administered the shocks had a dial that ranged from "Minor" at one end of the dial to a section marked in red that said "Danger—Severe Shock." And when the teacher reached that section, the "learner" would scream in apparent agony. (Remember, no shocks were actually administered; the experiment was done to see how far the teacher would go simply by being told to do so by the experimenter. The experimenter would only say, "Please continue," or, "The experiment requires that you continue.")

What would you have done? What percentage of Americans do you think administered a shock to another human being simply because a psychologist told them to? And what percentage would have administered a potentially lethal electric shock? What would you do if your sociology professor told you to give an electric shock to the person sitting next to you in class?

The results were startling. Most people, when asked, say they would be very unlikely to do such a thing. But in the experiment, over two-thirds of the "teachers" administered shocks that would have been lethal to the learners. They simply did what they were told to do, despite the fact that they could hear the learners screaming in pain, and the shocks were clearly labeled as potentially fatal. (After the experiment was over, the teacher and learner met, and the teachers were relieved to realize that they did not actually kill the learners.) And virtually no one refused to administer any shocks to another person. From this, Milgram concluded that Nazism was not the result of a character flaw in Germans but that even Americans, with their celebrated rebelliousness and distaste for authority, would obey without much protest.

Let's look at an equally startling but far less controversial experiment. In the late 1960s and early 1970s, sociologists Robert Rosenthal and Lenore Jacobson decided to test the *self-fulfilling prophesy*—the idea that you get what you expect or that you see what you believe (Rosenthal and Jacobson, 1968). They hypothesized that teachers had expectations of student performance and that students performed to those expectations. That is, the sociologists wanted to test their hypothesis that teachers' expectations were actually the cause of student performance, not the other way around. If the teacher thinks a student is smart, the student will do well in the class. If the teacher expects the student to do poorly, the student will do poorly.

Rosenthal and Jacobson administered an IQ test to all the children in an elementary school. Then, without looking at the results, they randomly chose a small group of students and told their teachers that the students had extremely high IQs. This, Rosenthal and Jacobson hypothesized, would raise the teachers' expectations for these randomly chosen students (the experimental group), and these expectations would be reflected in better performance by these students compared with other students (the control group).

At the end of the school year, Rosenthal and Jacobson returned to the school and administered another IQ test to all the students. The "chosen few" performed better on the test than their classmates, yet the only difference between the two groups was the teachers' expectations. It turned out that teacher expectations were the independent variable, and student performance was the dependent variable—not the other way around.

(Before you blame your teachers' expectations for your own grades, remember that professors have been made aware of these potential biases and have, in the past 40 years, developed a series of checks on our expectations. Your grades probably have at least as much to do with your own effort as they do your professors' expectations!)

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Neither of these experiments could be conducted in this way today because of changes in the laws surrounding experiments with human subjects. Thus, sociologists are doing fewer experiments now than they once did.

Field Studies. Many of the issues sociologists are concerned with are not readily accessible in controlled laboratory experiments. Instead, sociologists go "into the field" to conduct research among the people they want to study. (The field is any site where the interactions or processes you want to study are taking place, such as an institution like a school or a specific community.) In observational studies, we rely on ourselves to interpret what is happening, and so we test our sociological ways of seeing.

Some observational studies require **detached observation,** a perspective that constrains the researcher from becoming in any way involved in the event he or she is observing. This posture of detachment is less about some notion of objectivity—after all, we are relying on our subjective abilities as an observer—and more because being detached and away from the action reduces the amount that our observation will change the dynamic we're watching. (Being in the field, even as an observer, can change the very things we are trying to study.)

For example, let's say you want to see if there is a gender difference in children's play. If you observe boys and girls unobtrusively from behind a one-way mirror or screen, they'll play as if no one was watching them. But if they know there are grownups watching, they might behave differently. Detached observation is useful, but it doesn't enable you as a researcher to get inside the experience. For that you'll have to participate in the activities of the people you are studying. **Participant observation** requires that the researcher do both, participate and observe. Many participant observers conceal their identity to blend in better with the group they're studying.

Juggling these two activities is often difficult. In one famous case, Leon Festinger (1957) studied a cult that predicted the end of the world on a certain date. All cult members were required to gather at the leader's house and wait for the end of the world. Festinger participated in the group's activities and every hour or so rushed to the bathroom to record what he was observing. Other cult members assumed he had some digestive distress!

In another famous study, Laud Humphreys (1970) was interested in the negotiation of anonymous homosexual sex in public restrooms. He volunteered to act as a lookout for the men who waited at a rest stop along the New Jersey Turnpike, because it was against the law to have sex in public restrooms. As the lookout, he was able to observe the men who stopped there to have sex and jotted down their license plate numbers. Later, he was able to trace the men's addresses through their license plate numbers and went to their homes posing as a researcher doing a general sociological study. (This allowed him to ask many questions about their backgrounds.) His findings were as astonishing as they were controversial. Most of the men who stopped at public restrooms to have sex with other men were married and considered themselves heterosexual. Most were working class and politically conservative and saw their behavior simply as sexual release, not as an expression of "who they really were."

Humphreys's research has been severely criticized because he deceived the men he was studying, and he disguised his identity. As a result, universities developed institutional review boards (IRBs) to insure that researchers comply with standards and ethics in conducting their research. But Humphreys was also able to identify a population of men who had sex with other men who did not identify as gay, and this was later thought to be one of the possible avenues of transmission for HIV from the urban gay population into heterosexual suburban homes.

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Increasingly, field researchers use the ethnographic methods of cultural anthropology to undertake sociological research. **Ethnography** is a field method used most often by anthropologists when they study other cultures. While you don't pretend to be a participant (and you identify yourself as a researcher), you try to understand the world from the point of view of the people whose lives you are interested in and attempt, as much as possible, to put your own values and assumptions about their activities "on hold." This avoids two extreme outcomes: (1) If you try to forget your own cultural assumptions and immerse yourself, you risk "going native"—which means you uncritically embrace the group's way of seeing things. (2) If you see the other group only through the filter of your own values, you impose your way of seeing things and can't really understand how they see the world. At its most extreme, this is a form of cultural imperialism—imposing your values on others. Ethnographers attempt to steer a middle path between these extremes.

Ethnographers live and work with the group they're studying to try to see the world from the others' point of view. Two of the most famous of such studies are William F. Whyte's *Street Corner Society* ([1943] 1993) and Elliot Liebow's *Tally's Corner* (1968). Both studies examined the world of working-class and poor men; Whyte's subjects were White and Italian in Boston; Liebow's were Black men in Washington, D.C. In both cases, readers learned more about the complexity in these men's lives than anyone had ever imagined.

Recent field work among urban minorities has echoed these themes. Martin Sanchez Jankowski (1991) lived with Latino gangs in Los Angeles. Contrary to popular assumptions that might hold that gangs are composed of children from broken homes, adrift and delinquent because they are psychologically maladjusted, Sanchez Jankowski found that most came from intact families, were psychologically better adjusted than non–gang members, and saw gang membership as a reasonable economic alternative to unemployment and poverty. Gangs provided good steady jobs, high wages (with high risks), and the rich social relationships that come from community. Similarly, Elijah Anderson's research on young Black men in the inner

▲ **Ethnography enables researchers to see people's worlds up close, in intimate detail, bringing out both subtle patterns and structural forces that shape social realities. Here you can see an ethnographer talking with villagers in Bundu Tuhan, Malaysia.**

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city (1992, 2000) gave a far deeper understanding of the complex of meanings and motives for behavior that had often been reduced to rather one-dimensional stereotypes.

Ethnography taxes our powers of observation and stretches our sociological muscles to try to see the world from the point of view of other people. Philippe Bourgois (1995) lived for three years in New York City's Spanish Harlem, studying the culture of crack dealers. Loic Wacquant (2003) trained for over three years right alongside local boxers in a training gym in Chicago's South Side. Nancy Sheper-Hughes (1992) studied the poor in Brazil, revealing the physical and psychological violence that permeates their everyday lives and structures social interaction. Javier Auyero (2000) studied clients' own views of the patronage systems that sustain survival in shantytowns on the outskirts of Buenos Aires, Argentina. Chen Hsiang-Shul (1992) studied the transnational worlds of Taiwan immigrants in New York. Ethnographic methods enable us to see people's worlds up close, in intimate detail, bringing out both subtle patterns and structural forces that shape social realities.

Interview Studies. The most typical type of qualitative study uses interviews with a small sample. These studies use a **purposive sample,** which means that respondents are not selected randomly and not representative of the larger population but selected purposively—that is, each subject is selected precisely because he or she possesses certain characteristics that are of interest to the researcher.

One problem with interview studies is not the size of the sample but the fact that the sample is not a probability sample—that is, it is not a random sample, but rather the sample is selectively drawn to make sure that specific characteristics are included or excluded. Purposive samples do not allow sociologists to generalize about their results as reliably as they can with random samples. However, they do enable researchers to identify common themes in the data and can sensitize us to trends in attitudes or behaviors among specifically targeted groups of people.

For example, let's say you wanted to study feelings of guilt among new mothers, to see how much these feelings were influenced by television shows and magazine articles that instruct women on how to be good mothers. It wouldn't make much sense to conduct a random sample, because you wouldn't get enough new mothers in the sample. You could use a "snowball" technique—asking one new mother to refer you to others. Or you could draw a random sample from a nonrandom population—if, for example, the manufacturers of baby foods could be persuaded to give you their mailing lists of new mothers and you selected every hundredth name on the list. (We discuss sampling further below.)

All the methods above involve actually interacting with real people—either in a controlled environment or in their natural habitat. These methods give us a kind of up-close and personal feel to the research, an intimate knowledge with fine nuance and detail.

You know the old expression of being unable to see the forest for the trees. Field methods such as ethnographies are often so focused on the minute patterns of leaves and bark on an individual tree that they lose a sense of the shape and size of the forest. Because the researcher wants to understand broad patterns of behaviors and attitudes, sociologists also use more quantitative methods involving our interaction not with people but with data. Of course, these methods might reveal the larger patterns, but it's hard to make out the nuances and subtleties of the individual trees.

Analysis of Quantitative Data

Quantitative data analysis involves the use of surveys and other instruments to understand those larger patterns mentioned previously.

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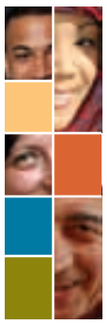

Sociology and our World

How to "Read" a Survey

- Four out of five doctors recommend Zytrolvan.
- Forty-three percent of Americans support the president's policy.

We hear statements like these all the time. But what do they mean?

According to the American Association for Public Opinion Research, an intelligent analysis of survey results requires that you know some minimal information:

- Who sponsored the survey, and who conducted it?
- What is the population being studied?
- What is the sample selection procedure?
- What are the size of the sample and the completion rates?
- What is the wording of the questions?
- What are the method, location, and dates of data collection?
- How precise are the findings, including weighting or estimating procedures and sampling error?
- Are some results based on parts of the sample rather than the whole sample?

Unfortunately, very few of the survey results you hear about in the mass media (or, for that matter, in many textbooks) include all of the necessary information. Therefore you cannot be sure of their accuracy. If the accuracy of the numbers is important to you, look up the references. If there are no references, start to worry.

Surveys. **Surveys** are the most common method that sociologists use to collect information about attitudes and behaviors. For example, you might be interested in how religion influences sexual behavior. A survey might be able to tell you whether one's religious beliefs influence whether an adolescent has had sex (it does), or whether a married person has committed adultery (it doesn't). Or a survey might address whether being a registered Republican or Democrat has any relationship to the types of sports one likes to watch on television (it does).

To construct a survey, we first decide the sorts of questions we want to ask and how best to ask them. While the simplest question would be a dichotomous question, in which "yes" and "no" were the only choices, this form of question can provide only limited information. For example, if you asked, "Do you believe that sex before marriage is always wrong?," you might find out some distribution of moral beliefs, but such answers would tell you little about how people *use* that moral position, whether they apply it to themselves or to others, and how they might deal with those who transgress.

Usually, we ask questions that can be graded on a scale. The most common form is a **Likert scale** that arranges possible responses from lowest to highest. Instead of a simple "yes" or "no" answer, we are asked to place ourselves on a continuum at one of five points or one of seven points. When we answer a question on a survey by saying whether we "strongly agree," "agree," "neither agree nor disagree," "disagree," or "disagree strongly," the researchers are using a Likert scale (Figure 4.3).

Once we've decided what questions to ask, we have to decide to whom to ask them. But you can't ask everyone: It would cost too much, take too long, and be impossible to analyze. Sociologists take a **sample** (or a subset) of the population they want to study. (We've already discussed the purposive sampling of interview studies.) This is usually done by telephone or by mail. If you want to know what Americans think about an issue, you can't ask all of them. A **random sample** asks a number of people, chosen by an abstract and arbitrary method, like tossing a piece of paper with each person's name on it into a hat or selecting every tenth name in a telephone book or every thousandth name on the voter registration list. In this way, each person has an equal chance of being selected.

FIGURE 4.3 A Likert Scale

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When you take a random sample, you assume that those not in the population from which you are choosing your sample are themselves random. For example, choosing from the phone book would exclude those people who don't have telephones (who tend to be rural and conservative) as well as those who use only their cell phones and are not listed (who tend to be urban and liberal). Using voter registration rolls would exclude those who are not registered, but researchers assume an equal number of liberals and conservatives are not registered.

Often the differences between different groups of people are what you actually want to study. In that case, you'd take a **stratified sample,** in which you divide people into different groups before you construct your sample and make sure that you get an adequate number of members of each of the groups. A stratified sample divides the sample into proportions equal to the proportions found in the population at large.

Let's say you wanted to do a study of racial attitudes in Chicago Heights, Illinois. (Chicago Heights is 38 percent African American, 37 percent White, 24 percent Hispanic, 13.5 percent other, 2.7 percent multiracial, 0.8 percent Native American.) A random sample might actually give you an inaccurate portrait because you might, inadvertently, have an unrepresentative sample, with too few or too many of a particular group. What if your random sample was gathered through voter records, a common method? You'd lose all those residents who were not registered to vote, who tend to be concentrated among minorities and the poor, as well as the young (and the median age in Chicago Heights is 30.6 years old). What if you called every one-hundredth number in the phone book—you'd lose all those who were unlisted or who don't have landline phones and overrepresent statistically those who have several numbers (and would therefore stand a higher chance of being called). So your random sample could turn out to be not very representative. A stratified sample would enable you to match, in the sample, the percentages in the actual population, making the data much more reliable.

Another type of sample is a **cluster sample.** In these, the researcher might choose a random sample of neighborhoods—say every tenth block in a town—and then

How do we know what we know?

Finding Hard-to-Get Answers through Sampling

Calculating the number of deaths as a consequence of war is a gruesome but difficult task. We might know how many troops armies have, but what about civilian casualties? In Iraq, for example, different sources of data—hospital records, media reports, police reports, or mortuary data—all provide conflicting numbers. (These numbers are low because many people don't go to hospitals, are buried by their families, and are not reported to the media or police. What's more, Iraq has never had a national census, so random sampling would be uncertain because the lists of residents from which such a sample might be drawn would be incomplete.)

Demographer Gilbert Burnham and his colleagues at the Johns Hopkins School of Public Health conducted cluster samples in which they picked out neighborhoods at random and surveyed all the people living in them. They examined data from 47 neighborhoods, each of which had about 40 residents living in it. They asked residents whether anyone had died since the U.S. invasion and what the cause of death was and certified over 90 percent of the deaths. They compared this to data from before the invasion, and they calculated that about 650,000 more people had died than would have died had the war never begun, a number significantly higher than earlier estimates (*The Economist*, October 12, 2006).

The statistical methods we use often have significant impact on how we perceive an event.

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survey every person in that "cluster." This sort of sample often provides a richer "local" feel to a more representative sample.

Surveys are extremely common in the contemporary United States. There are dozens of organizations devoted to polling Americans on every possible attitude or behavior on a daily basis. Politicians rely on survey data to tailor their policies and shape their message. These are often so targeted and biased that they may make the politicians feel more comfortable, but they may tell us little about what the actual citizenry thinks about a particular issue. Some surveys are created by websites or popular magazines, and these sometimes get attention for their results even though most fail to use valid methods of sampling and questioning. Still, numerous surveys that we see, hear, or read about are developed and privately administered by bona fide research organizations like Roper or Gallup; other sound surveys are publicly financed and available to all researchers, such as the General Social Survey at the National Opinion Research Center in Chicago.

Survey Questions. Surveys are the mainstay of sociological research, but coming up with good survey questions is hard. The wording of the question, the possible

Source: From the homepage of General Social Survey website, www.gss.norc.org <http://www.gss.norc.org>. Reprinted by permission of General Social Survey.

The General Social Survey has been surveying American attitudes and behaviors since 1972.

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answers, even the location of the question in the survey questionnaire can change the responses.

Take a classic example (Rugg, 1941). In a national survey, respondents were asked two slightly different questions about freedom of speech:

- Do you think the United States should forbid public speeches against democracy?
- Do you think the United States should allow public speeches against democracy?

When the results came in, 75 percent of respondents would *not allow* the speeches, but only 54 percent would *forbid* them. Surely *forbid* and *not allow* mean the same thing in practice, but the wording changed the way people thought about the issue. Psychologists, sociologists, and statisticians are still trying to figure how to avoid this problem.

Have you ever shoplifted? No? Well, then, have you ever taken an object from a store without paying for it? Respondents are much more likely to answer "yes" to the second version because it somehow doesn't seem as bad, even though it's really the same thing.

Do you think women should have the right to have an *abortion*? How about the right to *end their pregnancy?* You guessed it—far more respondents favor the right to end a pregnancy than to have an abortion.

How about the placement of the question in the survey? Respondents are much more likely to respond honestly to the shoplifting question if it's near the end of the survey. When sensitive or embarrassing questions come early, respondents are put off, wondering how intimate the questions are going to get. After they get a little practice by answering questions about their gender, race, age, and occupation, then they are able to handle the tough questions more readily.

Secondary Analysis of Existing Data. Given the enormous amount of time and money it takes to conduct a survey from scratch, many sociologists rely on the survey data previously collected from others. **Secondary analysis** involves reanalyzing data that have already been collected. Often this new analysis asks different questions of the data than the original researcher asked.

Others may need to use existing historical data. After all, if you're interested in political debates in seventeenth-century France, you can't very well conduct a survey or interview the participants. Still others use content analysis to explore what people actually mean when they give the sorts of responses they do.

For example, let's say you were interested in the effect of political persuasions on moral attitudes and behavior. Perhaps your hypothesis was that the more conservative one is politically, the more conservative one might be morally. You've operationalized your variables on political persuasion by assuming conservatives are registered Republican and liberals are registered Democrat and that morally conservative people will disapprove of divorce and be less likely to get a divorce. You decide to test the hypothesis that because Republicans are less likely to approve of divorce than Democrats are, then Republicans are less likely to get divorced (attitudes lead to behavior).

You find that a reputable social scientific researcher had done a survey of a sample of Americans, but this researcher was interested only in gender and racial differences in moral attitudes and behavior. It's possible that the research contains other background variables, such as age, political persuasion, educational background, or occupation. Secondary analysis of the existing data will enable you to answer your questions. In addition, you might be able to find data on statewide divorce rates and statewide political attitudes; while these will not answer the question

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at the more individual level, they can point to broad patterns about whether conservatives are true to their beliefs and so less likely to divorce. (The answer is apparently no; states that voted Republican in the last two presidential elections have higher divorce rates than states that voted Democratic, with eleven "red states" recording higher divorce rates than any "blue state") (Crary, 1999; Dossier: Red State Values, 2006).

Also, there may be different forms of data you can use. Sometimes, for example, researchers will conduct an *interview* and use only a numeric scale to register responses. But then certain answers to certain questions might prompt the interviewer to ask for more information. These responses may be written down as notes or sentences on the initial interview forms. Going back to these forms might require you to do content analysis of the narrative responses people gave to the questions.

While field studies do not permit exact replication—the cultural group you study is indelibly changed by the fact that you have studied it—one can reasonably "replicate" (reproduce) a field study by careful research. For example, if you are in the field, doing an ethnography, and you keep a running record of both your observations and the research strategies and decisions you made while in the field, other researchers can follow your decision making and attempt to understand a similar phenomenon.

One of my graduate students had gone to college at the University of New Mexico. As an undergraduate, one of her professors told me, she had done a marvelous ethnographic study of local "taggers"—kids who develop elaborate signatures in writing graffiti on walls and public buildings. For several months she hung out with these taggers and interviewed many of them. Just after she wrote her honors thesis, she discovered that someone had just published an ethnographic study of taggers in Denver (Ferrell and Stewart-Huidobro, 1996). She was heartbroken to discover that their conclusions were similar to her own; as she saw it, they had "scooped" her, beaten her to the punch. But her professor explained that actually each researcher had replicated the study of the other researcher, and thus their conclusions were supported, not weakened. This student's work had been validated, not undermined. Although they were not identical, the fact that two teams researching two different examples of a phenomenon in two different cities came to similar conclusions actually strengthens the **generalizability** of the findings of each. We can learn a great deal by such replication because it suggests the extent to which the results of a study can be generalized to other circumstances.

Content Analysis

Content analysis is usually not a quantitative method but instead involves an intensive reading of certain "texts"—perhaps books, or pieces of conversation, or a set of articles from a newspaper or magazine, or even snippets from television shows. Some content analysis involves taking a random sample of such pieces of conversation, or media representations, and then develops intricate coding procedures for analyzing them. These answers can then be analyzed quantitatively, and one can generate observable variations in the presentations of those texts.

If you want to know if the media images of girls or boys have changed much over the past ten years, then content analysis might enable you to do this. You might choose ten magazines, the five most popular among boys and girls of a certain age. Then you might look at all the issues of those magazines in the month of August of every year for the past ten years and look at the sections called "Back-to-School Fashions." You could devise a coding scheme for these fashions, to judge whether they are more or

▲ Content analysis of national magazines can be used to chart the differences in gender ideals. Women today are less likely to be defined only as mothers, or in relation to their husbands' occupations, and more likely to be seen as independent and complex individuals.

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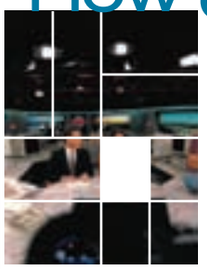
How do we know what we know?



Balanced Reporting and the Value of Content Analysis

Many news programs brag that they give you "balanced reporting" and "both sides of the story," when actually they are manipulating the statistics.

Say proposition *X* is up for voting. The reporters will interview one person who approves of it and another who disapproves, giving viewers the impression that the population is divided equally, when actually 90 percent or more of the population may approve, and fewer than 10 percent disapprove.

For some "issues," the percentage is closer to 99.9 percent. Smoking causes cancer. Saturated fat increases blood cholesterol. It's hard to find a physician who will disagree with these statements, but in the interest of "balanced reporting," reporters will still scour the countryside to find one.

The great example is global warming. Top climate change scientists from around the world have produced numerous major reports in the past decade that assert a remarkably high level of scientific consensus that (1) global warming is a serious problem with human causes, and (2) it must be addressed immediately (Adger et al., 2002). In 1997, the head of the U.S. National Oceanic and Atmospheric Administration said "there is a better scientific consensus on [global warming] than on any issue I know—except maybe Newton's second law of dynamics" (Warrick, 1997, A1). Yet America's major papers, including the *New York Times, Washington Post, Los Angeles Times*, and *Wall Street Journal*, continue to report on the supposed "uncertainties" about global warming among scientists. Content analysis studies find one reason for inaccuracy is methodological—the journalistic norm of "balanced" reporting actually creates this bias in the content presented (Boykoff and Boykoff, 2004; Stamm, Clark, and Eblacas, 2000; Zehr, 2000).

Oddly enough, many people fall for this phenomenon, concluding that the issue in question is subject to controversy when there really isn't one, or that "nobody really knows," when in fact almost everybody knows. Sometimes it isn't enough to see the numbers; you have to also understand how the numbers are used.

less gender conforming in terms of style, color, and the like. Then you could see if the race or class of the models who are wearing those clothes changes.

Making the Right Comparisons

No matter what research method we choose, it is always important to make sure we are comparing things that are, in fact, comparable (Table 4.1). Otherwise, one risks making claims that turn out not to be true. For example, as we saw at the beginning of the chapter, it is often assumed that divorce has negative consequences for children, both in terms of their school achievement and in terms of their psychological health. But such studies were based on comparisons of children from divorced and married parents and never examined the quality of the marriage. Then, as we saw, children from intact *but unhappy* marriages actually do worse (have lower grades and more psychological problems) than children from divorced families!

Such an example reminds us that researchers in this case needed to distinguish between two types of married parents, happy and unhappy. Policies derived from the original study would have disastrous results for the children who lived in families in which there was a lot of conflict and the parents were really unhappy—even worse consequences than had the parents divorced (Booth and Amato, 2001).

Take another example of how researchers compared the wrong groups. You've probably heard the idea that homosexuality is often the result of a certain family

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dynamic. Specifically, psychiatrists found that the gay men they saw in therapy often had overdominant mothers and absent fathers (which, the theory goes, caused their homosexuality by preventing the men from making the healthy gender transition away from mother and identifying with father [Bieber et al., 1962]). Such a dynamic would, the researchers believed, keep them "identified" with their mothers, and therefore "feminine" in their psychological predisposition. For decades, this family dynamic was the foundation of the psychological treatment of homosexual men. The problem was in the comparative group. The gay men in therapy were compared with the family arrangements of heterosexual men who were not in therapy.

It turned out, though, that the gay men who were not in therapy did not have overdominant mothers and absent fathers. And it also turned out that heterosexual men in therapy *did* have overdominant mothers and absent fathers. In other words, having an overdominant mother and an absent father didn't seem to be the cause of homosexuality but was probably a good predictor of whether a man, straight or gay, decided to go into therapy.

TABLE 4.1

Research Methods

RESEARCH METHOD	KEY POINTS
Experiments	Some variables can be tightly controlled and monitored, but it's difficult to control the independent variable.
	Replication is easy and convenient.
	Ethical considerations prevent many experiments with human subjects.
Field studies	Sociologists can conduct research directly with the people they want to study.
	Researchers can often tease out both subtle patterns and structural forces that shape social realities.
Interview studies	A carefully selected sample makes it easy to identify common themes and highlight trends and behaviors within a very specific group.
	Generalizing about results is not reliable because the sample group is so targeted.
Surveys	It is easy and convenient to collect large amounts of data about equally large numbers of people.
	Data may be corrupt due to poor methodology, including poorly worded questions and question ordering.
Secondary analysis of existing data	It is often easier and cheaper to rely on information collected by others; sometimes it's the only way to "replicate" a field study.
	You are completely dependent on the original sources and can't use common follow-up methods.
Content analysis	A researcher can quantitatively analyze an existing text and make generalizable observations based on it.

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Social Science and the Problem of "Truth"

One thing that is certain about social life is that nothing is certain about social life. Sociology is both a social *science,* sharing basic strategies and perspectives with the natural sciences, and a *social* science, attempting to study living creatures who often behave unpredictably and irrationally, for complex rational, emotional, or psychological reasons. Because a single "truth" is neither knowable nor even possible, social scientists approach their research with the humility of the curious, but armed with a vast array of techniques that can help them approach "truths."

Even if truth is impossible, we can approach it. Like all other sciences, we approach it through addressing two central concerns, predictability and causality. **Predictability** refers to the ability to generate testable hypotheses from data and to "predict" the outcomes of some phenomenon or event. **Causality** refers to the relationship of some variable to the effects it produces. According to scientific requirements, a cause is termed "necessary" when it always precedes an effect and "sufficient" when it initiates or produces the effect.

Predictability and Probability

Auguste Comte (1798–1857), often considered the founder of sociology, actually founded something that he called "social physics." He believed that human society follows permanent, unchangeable laws, just as the natural world does. If they know just two variables, temperature and air pressure, chemists can predict with 100 percent certainty whether a vial of H_2O will be solid, liquid, or gas. In the same way, social physicists would be able to predict with 100 percent certainty the behavior of any human population at any time. Will the crowd outside the football game get violent? What political party will win the election? The answer should be merely a matter of analyzing variables.

For 50 years, sociologists analyzed variables. They made a lot of predictions. Some were accurate, many not particularly accurate at all. It turns out that human populations have many more variables than the natural world. Yet predictability is of central concern to sociologists because we hope that if we can understand the variations of enough variables—like race, ethnicity, age, religion, region, and the like—we can reasonably guess what you would be more likely to do in a particular situation. And that—being able to use these variables to predict future behavior—is the essence of predictability.

The number of predictive variables increases dramatically as the group gets bigger and the behavior more complex, until the sociologist has no chance of ever finding them all. But even if we could, predicting human behavior would still be inaccurate because of the observer effect: People *know* that they are being studied. People change their behavior, and even their beliefs and attitudes, based on the situation that they are in, so the variables that are predictive today may not be tomorrow, or even five minutes from now.

Did *you* know?

Actually, scientists have answered the question of which came first. Because living things evolve through changes in their DNA, and because in each animal the DNA is the same in every single cell (beginning with the first cell in reproduction, the zygote), then chickens evolved from nonchickens through a series of tiny changes caused by mutations in the male and female DNA in the process of reproduction. Such changes would only have an effect when a new zygote was created. So, what happened was that two nonchickens mated, but the zygote contained the mutations that produced the first "chicken." When it broke through its shell—presto, the first chicken. So the egg came first.

Causality

Students who take a foreign language in high school tend to be less xenophobic (fearful or suspicious of people from foreign countries). Does taking

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a foreign language decrease their level of xenophobia, or are xenophobic people less likely to sign up for foreign language classes?

In 1958, marriage between men and women of different races was illegal in many states, and, according to the Gallup Poll, 96 percent of the population disapproved of it. Then the Supreme Court legalized interracial marriage in the *Loving v. the Commonwealth of Virginia* decision (1967). In 1978, only 66 percent of the population disapproved. Did legalization change people's minds, or did the Supreme Court base its decision on changing mores of the society?

Causality attempts to answer the question we have asked each other since primary school: Which came first, the chicken or the egg? Which "caused" which to happen? Which is the independent variable (the cause), and which is the dependent variable (the effect)?

In quantitative research, variable *A* is supposed to have a causal impact on variable *B,* but it is not always easy to decide which is the cause and which is the effect. Scientists use a number of clues. Let's look at the old saw that watching violence on television and in the movies (variable *A*) makes children violent (variable *B*).

Imagine I place 50 children at random into two groups. One group of 25 children watches a video about bears learning to share, and the other watches a video about ninjas chopping each others' heads off. I then monitor the children at play. Sure enough, most of the children who watched the sharing video are playing nicely, and the ones who watched the ninjas are pretending to chop each others' heads off. Can I establish a causal link?

The answer is a resounding "maybe." There are several other questions that you have to answer:

1. Does variable *B* come after variable *A* in time? Were the children calm and docile until after they watched the ninja video?
2. Is there a high correlation between variable *A* and variable *B?* That is, are all or almost all of the children who watched the ninja video behaving aggressively and all those who watched the bear video behaving calmly?
3. Are there any extraneous variables that might have contaminated the data? Maybe the sharing bears were so boring that the children who watched them are falling asleep.
4. Is there an observer effect that might be contaminating the data? Maybe I'm more likely to classify the behaviors of the ninja video kids as aggressive.

Any or all of these questions might render your assertion that watching ninja videos "causes" violent behavior unreliable. Sociologists must constantly be aware of possible traps and biases in their research—even in a controlled experimental setting like this one.

One must also always be on guard against logical fallacies that can lead you in the wrong direction. One problem is what is called the "compositional fallacy" in logic: comparing two groups that are different, assuming they are the same, and drawing an inference between them. Even if all members of category *A* are also members of category *B* doesn't necessarily mean that all members of category *B* are members of category *A*. In its classic formulation: Just because all members of the Mafia (*A*) are Italian (*B*) doesn't mean that all Italians (*B*) are members of the Mafia (*A*).

Did *you* know?

Where there are more storks, there are more babies. That's true! The higher the number of storks in an area, the higher the birthrate. Could it be that storks actually do bring babies? Well, no. It turns out that storks tend to inhabit rural areas, and rural areas have higher birthrates than urban areas. That is, an extraneous variable (urban versus rural) is the variable that connects those two causally unrelated variables.

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Issues in Conducting Research

No research project involving human beings is without controversy. Debates have always raged about the validity of studies, and we often come to believe that we can explain anything by statistics. That may be true—that you can prove even the most outrageously false things by the use of statistical manipulations—but not all "proofs" will be equally valid or hold up in the court of review by other social scientists. Most sociological research is published in academic or scholarly journals—such as the *American Sociological Review, Social Problems, Social Forces,* or the *American Journal of Sociology*. The American Sociological Association sponsors several "flagship" journals and controls the selection of editors to ensure that the entire range of topics and perspectives is covered. Each subfield of sociology has its own journals, devoted to those specific areas of research. In the sociology of gender alone, for example, there are dozens of journals, including *Gender & Society* or *Men and Masculinities,* a scholarly journal that I edit.

"That's the gist of what I want to say. Now get me some statistics to base it on."

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In all such reputable journals, articles are subject to "peer review"—that is, each article is evaluated by a set of reviewers who are, themselves, competent researchers in that field. Peer review accomplishes two tasks: (1) It ensures that the research is evaluated by those who are competent to evaluate it and assess the adequacy of the research, and (2) it ensures that the editor's own particular biases do not prejudice her or him in the decision to accept or reject the article. Peer review is the standard model for all serious academic and scholarly journals.

In completing the research, there are three issues that you always need to keep in mind.

Remain Objective and Avoid Bias

You must strive for objectivity, to make sure that your prejudices and assumptions do not contaminate the results you find. That is not to say that your political persuasion or your preconceived assumptions cannot guide your research: They can. Indeed, they will even if you don't want them to. You'll invariably want to do research on something that interests you, and things usually interest us because we have a personal stake in understanding or changing them.

Despite these assumptions, though, you must be careful to construct the research project so that you find out what is really there and not merely develop an elaborate way to confirm your stereotypes. The research methods you use and the questions you ask have to allow for the possibility that you're wrong. And you, as a researcher, have to be prepared to be surprised, because we often find things we didn't expect to find.

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There are two kinds of biases that we must be aware of:

1. There are your own sets of assumptions and values, your political positions on specific issues. Everyone has these, as they are based on widely held cultural values (although, as we saw in the first chapter, they are often contradictory). These may determine what you might be interested in studying, but this kind of bias should not make it impossible for the results to surprise you.
2. A second kind of bias is not the values that inform your choice of subject but biases *in the research design itself* that corrupt your results and make them unreliable and invalid. One must be sure to be as conscientious as possible in the integrity of the research design to avoid excluding specific groups from your sample.

For example, if you are vehemently antichoice, you might decide to research the moral and religious status of women who have abortions. You might hypothesize that abortion is morally wrong and those women who had an abortion were not informed by morality or committed to any religion. That research question is informed by your biases, which is fine. But if you do a survey of women who have had abortions and find out that about a quarter of them did so even though they claimed that it was morally wrong or that nearly one-fifth of them were born-again or evangelical Christians, you are obligated by your commitment to science to report those findings honestly. (Incidentally, that is what you would find were you to study the question [Alan Guttmacher Institute, 1996; Henshaw and Kost, 1996; Henshaw and Martire, 1982; Medical World News, 1987].)

If you find that most women don't regret their decision, and then readminister the survey this time only to women who identify as evangelicals and exclude any women who voted Democratic in the last election, you might find the results you were hoping for. But now your survey would be biased, because you systematically excluded some particular group, which skews the results.

Objectivity doesn't mean not having any values; it means being aware of them so that we are not blinded by them.

Avoid Overstating Results

Overstating one's findings is one of the biggest temptations to any sociological researcher. Findings are often not "newsworthy" unless you find something really significant, and funding sources, such as governmental research institutes and private foundations, often link continuing funding to such glamorous and newsworthy findings. Even when you do your first research project, you'll likely be tempted to overstate your results, if for no other reason than to impress your professor with some "big" finding and get a better grade.

But there are temptations to overstate within the research methodologies themselves. In ethnographic research, for example, one can say a lot about a little—that is, one's insights are very deep, but one has only examined a very small phenomenon or group of people. One cannot pretend that such insights can be generalized to larger populations without adequate comparisons. In survey research one can say a little about a whole lot: Through good sampling, one can find out the attitudes or behaviors of Americans, but one cannot explain why they hold such beliefs or take such actions, nor can one explain how they "use" their beliefs.

Researchers must be cautious about inferring why something happens from the fact that it does happen. A **correlation,** or some relationship between two phenomena, doesn't necessarily mean that one is the *cause* of the other. A correlation between

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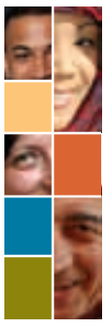

Sociology and our World

Major League Baseball Prevents Divorce?

I recently read in the "relationships" section of my Internet server's webpage that cities with major league baseball teams have lower divorce rates than those that do not. Cities that introduced teams in the past decade have seen their divorce rates decline up to 28 percent. This led a University of Denver psychologist to claim that having a major league baseball team leads to greater compatibility among couples. "One way to get going is to head for your nearest ballpark," he said (Mattox, 1999).

A simple correlation between two variables—in this case rates of divorce and proximity to major league baseball teams—is often offered as "proof" that going to major league baseball games helps to sustain marriages. (This might prompt some government agency to give away a lot of tickets to struggling marriages!) But for what other reasons might there be a correlation between baseball teams and low divorce rates?

Could it be that baseball teams are located in major cities, which have lower divorce rates than the suburbs or rural areas? Could those cities also be places where there are a lot of *other* things going on (theater, movies, concerts, and the like) that enrich one's life? Don't those cities also have basketball teams and football teams? Or major symphonies and large libraries? Could it be that cities with major league teams are also those with the lowest rates of *marriage?* Could it be that those cities that introduced teams in the past decade are those in the Sun Belt where many retirees live—that is, people who are unlikely to get divorced?

It's also true that cities with major league baseball teams are in the North, where there are far more Catholics and Jews, who have lower divorce rates than Protestants who are the overwhelming majority in the South, where there are fewer teams.

And besides, the divorce rate in the United States has been declining *overall* since 1992, so it's no surprise that those cities with new teams would also have a decline in the divorce rate.

a dependent variable and an independent variable tells you that they are related to each other, that one varies when the other varies. Finding a relationship between two variables tells you nothing about the *direction* of that relationship. And it doesn't tell you *why* they both vary together.

For example, there is a strong correlation between the amount of ice cream sold in the United States and the number of deaths by drowning. The more ice cream sold, the higher the number of drowning deaths. Does eating ice cream lead to drowning? Of course not. Both ice cream sales and deaths by drowning happen during the summer, when the temperature gets hot and people eat more ice cream and go swimming more often. The temperature causes both, and so it appears that there is a relationship between them.

Another potential problem is that events in society are not isolated from other events. To measure the impact of one variable on another might be possible in a social vacuum, but in real life, there are so many other things that might get in the way of accurate measurement. Confounding variables need to be assessed in some fashion—by trying to measure them, by minimizing their impact, or by assuming that they confound everything equally and therefore can be safely ignored.

As a result of all these potential problems, researchers must be careful not to overstate their information and aware of a variety of possible explanations for the results they find.

Maintain Professional Ethics

The researcher must also be ethical. As scientists, sociologists are constantly confronted with ethical issues. For example, what if you were interested in studying the social impact of oil drilling in the Alaska wilderness on indigenous people who live near the oil

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wells? And suppose that the research would be funded by a generous grant from the oil companies who would profit significantly if you were to find that the impact would be either minimal or beneficial. Even if your research were completely free of corporate influence, people would still be suspicious of your results. Research must be free of influence by outside agencies, even those that might provide research grants to fund the research. And it must be free of the perception of outside influence as well, which means that much research is funded by large foundations or by government agencies.

The most important ethical issue is that your research should not actually hurt the people you are researching. Recall the example of psychologist Stanley Milgram's experiment on obedience to authority in which one subject administered "shocks" to another.

The psychological consequences of deceptive experiments led to significant changes in research ethics. An act of Congress in 1970 made "informed consent" a requirement of research. Only after all adult subjects of an experiment (or the parents of minors) are clearly informed about the object of the experiment and assured of confidentiality can they consent to the experiment. And only then can the experiment proceed. Today, all major research universities have a committee on research involving human subjects (CORIHS) or an institutional review board (IRB) that oversees all research undertaken at the university.

▲ **One of the most infamous research studies in U.S. history was the Tuskegee experiment, in which nearly 400 African American men with late-stage syphilis were deliberately left untreated to test what the disease would do to them.**

The Institutional Review Board

Every research project that goes through a university must pass the inspection of an institutional review board that has strict guidelines to protect test subjects. The researcher cannot even begin the data collection unless he or she can guarantee:

- *Informed consent*. Test subjects must be informed, in advance, of the nature of the project, what it's about, what they will have to do in it, and any potential risks and benefits they will face. It's possible to waive informed consent, but only under extreme circumstances—for instance, if you want to study hired killers who would kill you if they discovered that they were being studied.
- *Continuous consent*. Test subjects must be informed that they can back out of the project at any time for any reason, no questions asked.
- *Confidentiality*. Any information that would allow the subject to be identified must be stored separately from the other test data, and it must never be published.
- *Anonymity*. Test subjects must be anonymous. Pseudonyms must be used instead of real names, and if there is any question, even the respondents' biographical data must be modified.
- *Freedom from deception*. Test subjects must not be deceived unless it is absolutely necessary, the deception is unlikely to cause major psychological trauma, and they are debriefed immediately afterwards.
- *Freedom from harm*. Test subjects must not be subjected to any risk of physical or psychological injury greater than they would experience in real life, unless it is

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absolutely necessary—and then they must be warned in advance. "Psychological injury" extends to embarrassing questions like "Have you ever been pregnant?"

- *Protected groups*. Children and adolescents, college students, prisoners, and other groups have a protected status, because they cannot really give consent (children are too young, and college students may believe that they must participate or their grade will suffer). The IRB requires special procedures for studies involving these groups.

In recent years, IRBs have expanded the scope of their review to include any research that involves human subjects in any way whatever. Sometimes, this has resulted in oversight leading to "overreach." For example, one review board asked a linguist studying a preliterate culture to "have the subjects read and sign a consent form." Another IRB forbade a White student studying ethnicity from interviewing African American Ph.D. students "because it might be traumatic for them" (Cohen, 2007, p. 1).

But what if the questions you want to answer are answerable only by deception? Sociologist Erich Goode undertook several research projects that utilized deceptive research practices (Goode, 1996a, 1996b, 2002). Refusing to submit his research proposals to his university's CORIHS guidelines, he took personal ads in a local magazine to see the sorts of responses he would receive. (Though the ads were fictitious, the people responding to them were real and honestly thought they were replying to real ads. They thus revealed personal information about themselves.)

He took out four ads to determine the relative importance of physical attractiveness and financial success in the dating game. One was from a beautiful waitress (high attractiveness, low financial success); one was from an average-looking female lawyer (low attractiveness, high success). One was from a handsome male taxicab driver (high attractiveness, low success), and the final one was from an average-looking male lawyer (low attractiveness, high success). While about ten times more men than women replied to the ads at all, the two ads that received the most replies from their intended audience were for the beautiful waitress and the average-looking male lawyer. Goode concluded that in the dating marketplace, women and men often rank potential mates differently, with men seeking beauty and women seeking financial security.

While these were interesting findings, many sociologists question Goode's research methods (Saguy, 2002). Goode defended his behavior by saying that the potential daters didn't know that they were responding to fake ads, and that therefore no harm was done, because people often receive no reply when they respond to ads. But ask yourself: Did he have to deceive people to find this out? How else might he have obtained this information? Do you think he crossed a line?

In every research project, you must constantly balance the demands of the research (and your own curiosity) against the rights of the research subjects. This is a delicate balance, and different people may draw their lines in different places. But to cause possible harm to a research subject is not only unethical, it is also illegal.

Social Science in the 21st Century: Emergent Methodologies

New technologies provide opportunities for new research methods. For example, a new methodology called "field experiments" combines some of the benefits of both field methods and experimental research. On the one hand, they are experiments, using matched pairs and random assignment, so that one can infer causality. On the other hand, they take place "in the field," that is, in real-life situations. You've probably seen field experiments reported on television because they often reveal hidden biases in employment, housing markets, or consumer behavior.

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Here are some examples of how field methods reveal biases and discrimination in employment, housing, and consumerism. Matched pairs of prospective "car buyers" go to an auto showroom, or prospective "tenants" walk into a real estate office, or "job seekers" answer a "help wanted" ad. In each case, the prospects consist of a White couple and a minority couple, or a man and a woman. They go to the same showroom, and look at the same cars, and get very different price quotes. Or the White couple is shown several houses that are listed with the real estate broker, but the Black couple is told they've been rented or sold. And while a male and female applicant answered the same job ad, the male job applicant is told about a managerial opening and the female applicant is given a typing test. Because the experiment was conducted in real time in real life, the discrimination is readily evident, because the only variable that was different was race or gender. (When shown on TV, the news reporter will often go back to the car showroom or real estate office with videotape made by the participants and confront the dealer or agent with the evidence of the discrimination.) Recently, field experiments have revealed what minorities had long suspected but could never prove: They are discriminated against by taxi drivers who do not stop for them (Ayres and Siegelman, 1995; Cross et al., 1990; Yinger, 1970).

Just as social scientists are finding new methods, they are always trying to refine older survey techniques to obtain the most accurate data. For example, surveys of sexual behavior always find that people are somewhat self-conscious about revealing their sexual behaviors to strangers talking to them on the phone—let alone someone sitting across from them in a face-to-face survey interview. Researchers have developed a new survey technology—telephone audio computer-assisted self-interviewing—that greatly reduces the requirement of revealing your sexual behavior to a stranger. And some of the results indicate that a significantly higher percentage of Americans report same-sex sexual behavior than previously estimated (Villarroel et al., 2006).

Perhaps the most significant new technology is the proliferation of Internet chat rooms and listservs that has created virtual online communities of people who are drawn to particular issues and interests. If you want to study, for example, collectors of Ming dynasty pottery or buffalo head nickels, you would find several chat groups of such people online. Imagine how much time and energy you would save trying to track them down! They're all in one place, and they all are guaranteed to be exactly what you are looking for. Or are they?

Here's a good example. For the past few years, I have been doing research on White supremacist and Aryan youth in the United States and several European countries. There are many Internet chat rooms and portals through which one can enter the virtual world of the extreme right wing. Online, I can enter a place where eight White supremacists, neo-Nazis, and White power young people are discussing current events. I can listen in, perhaps even participate and ask them some questions. (Professional ethics require that whenever you are doing research you must disclose to them that you are doing research.) I could get some amazing "data" that way. But how can I be sure it's reliable?

After all, what if several of them aren't really White supremacists at all, but a couple of high school kids goofing around, a couple of graduate students in anthropology or sociology doing their "field work," or even a student in an introductory sociology course doing research for a term paper for my class?

Have you ever gone online and pretended to be someone you weren't? How many people do you know who have done that?

Obviously, one cannot rely solely on the information gathered in such chat rooms. (In my case, I decided I had to interview them in person.) But any new method can be embraced only with caution and only when accompanied by research using more traditional methodologies.

In fact, it is often the combination of different methods—secondary analysis of already existing large-scale survey data coupled with in-depth interviews of a

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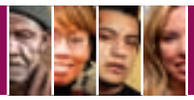
subsample—that are today providing the most exciting research findings in the social sciences. You needn't choose one method over another; all methods allow you to approach social life in different ways. Combined in creative combinations, research methods can shed enough light on a topic that many of its characteristics and dynamics can become clear.



Chapter Review

1. ***Why do sociological methods matter?*** Sociological methods are the scientific strategies used to collect data on social happenings. The methodology one chooses has an effect on the questions one asks and the answers one gets from research. Sociologists follow the rules of the scientific method; this means their arguments must be backed up by data that are systematically collected and analyzed. Research is also divided between quantitative research, which is statistically based, and qualitative research, which is used to understand the texture of social life and is text based.

2. ***How do sociologists do research?*** Sociological research follows eight basic steps. First, choose an issue. Then define your topic in a meaningful and manageable way. Next, review the literature to see what has been done on the subject and what gaps exist in the research, and if you are engaging in deductive research, develop a hypothesis. Design your project based on the most suitable methodology. Collect data; then analyze the data using a method appropriate to your data collection strategy. Finally, report your findings.

3. ***What types of research do sociologists do?*** Sociologists use one of two basic types of research methods, one that involves observation of behavior and one that involves analysis of accumulated data. Participant observation involves observing behavior in real-life situations, where the researcher relies on himself to interpret what is happening while trying to see phenomena from the point of view of those being observed. Sometimes a researcher will live for a period with the group she is studying; this is called ethnography. Interviews involve asking a small group of individuals who are purposively sampled with open-ended questions. Surveys are characterized by asking a large number of people closed-ended questions; the results are used to analyze patterns and to generalize to the larger population. Content analysis involves looking at objects such as text, photos, books, and the like.

4. ***How does social science handle the problem of "truth"?*** Sociologists try to approach truth by addressing predictability and causality. Predictability is important to social scientists because if we can understand how variables affect behavior, attitudes, and beliefs, then we can predict how one will act, think, or feel. Predictability is never completely accurate, so sociologists speak in terms of probability. Causality refers to one event being the direct result of another event or variable. In order to have causality, you must have certain conditions. First, variable *B* has to come after variable *A* in time. Next, there must be a high correlation between variable *A* and variable *B*. Also, one must account for any possible extraneous variables that might be having an effect on variable *B*. Finally, one must look to see if there is an observer effect contaminating the data.

5. ***What are some issues sociologists encounter in conducting research?*** If statistical data can be manipulated to support any point of view, then how do we know what reports to trust and what not to trust? Sociologists publish their research results in peer-reviewed journals. In addition to peer review, sociologists strive to be objective and to avoid bias. This means making sure your own prejudices and assumptions do not contaminate your research. In addition to the possibility of your own bias contaminating the research, the research design itself may be biased, which means it may corrupt your results and make them invalid. To counter this, sociologists avoid overstating their results, avoid attributing causality to a correlation, and maintain professional ethics.

6. ***What methodologies are emerging in sociology?*** Technology is constantly advancing, and research methods keep pace. Telephone sampling has moved from using a random sampling of names listed in the phone book to random-digit dialing by computer. Field experiments use matched pairs and random assignment to infer causality. This type of study is often used to uncover hidden biases. In addition to developing new methodologies, social scientists are using new technology to refine and improve old methodologies. The Internet probably provides the best possibilities for new data collection and research techniques, as it provides unprecedented access to data and to individuals.

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Key Terms

Causality (p. 116)
Cluster sample (p. 110)
Confounding variable (p. 103)
Content analysis (p. 113)
Control group (p. 104)
Correlation (p. 119)
Data (p. 98)
Deductive reasoning (p. 98)
Dependent variable (p. 101)
Detached observation (p. 106)
Ethnography (p. 107)
Experiment (p. 104)
Experimental group (p. 104)
Extraneous variable (p. 103)
Generalizability (p. 113)
Hypothesis (p. 101)
Independent variable (p. 101)
Inductive reasoning (p. 98)
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Likert scale (p. 109)
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Purposive sample (p. 108)
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Random sample (p. 109)
Sample (p. 109)
Secondary analysis (p. 112)
Stratified sample (p. 110)
Subjectivity (p. 96)
Survey (p. 109)
Verstehen (p. 98)

What does America think?

Happiness

These are actual survey data from the General Social Survey, 2004.

Taken all together, how would you say things are these days? Would you say that you are very happy, pretty happy, or not too happy? In 1971, 17 percent of respondents said they were not too happy; in 2004 it was much lower, at 12 percent. Differences between Whites and Blacks were significant in 1972, with 32 percent of White respondents and 19 percent of Black respondents saying they were very happy. Black respondents were almost twice as likely to say they were not too happy than were Whites. By 2004, those differences had evened out; 34.8 percent of White respondents and 34.0 percent of Black respondents said they were very happy. In 2004, 10.5 percent of White respondents and 16.4 percent of Black respondents reported being not too happy.

CRITICAL THINKING | DISCUSSION QUESTIONS

1. What do you think the researchers were actually measuring with their survey question? If you were going to measure happiness in a survey, how would you operationalize the term, *happiness?*
2. What social and historical factors contributed to the increase in Black respondents' reported level of happiness between 1972 and 2004?

▶ Go to this website to look further at the data. You can run your own statistics and crosstabs here: **http://sda.berkeley.edu/cgi-bin/hsda?harcsda+gss04**

REFERENCES: Davis, James A., Tom W. Smith, and Peter V. Marsden. General Social Surveys 1972–2004: [Cumulative file] [Computer file]. 2nd ICPSR version. Chicago, IL: National Opinion Research Center [producer], 2005; Storrs, CT: Roper Center for Public Opinion Research, University of Connecticut; Ann Arbor, MI: Inter-University Consortium for Political and Social Research; Berkeley, CA: Computer-Assisted Survey Methods Program, University of California [distributors], 2005.