Chapter 2

Sociological Research Methods

Sections

1. Research Methods
2. Causation in Science
3. Procedures and Ethics in Research

Learning Objectives

After reading this chapter, you will be able to

- describe the basic quantitative and qualitative research methods used by sociologists.
- discuss basic research concepts, including variables and correlations.
- list the standards for proving cause-and-effect relationships.
- explain the steps sociologists use to guide their research.
- discuss ethics in sociological research.

Applying Sociology

People who know what questions to ask about a topic can protect themselves from acting on wrong information. In this chapter you will examine the basic ways that sociologists carry out the research to answer their questions. The chapter also discusses ethical issues that sometimes arise in doing research.

In the photo at left, a focus group is being conducted. A focus group represents one type of interviewing sociologists use to learn about social attitudes, ideas, and values. In a typical focus group, a small number of people who share a certain characteristic have an organized discussion on a topic. A facilitator or trained interviewer leads the discussion by asking predetermined questions.

For example, a group of Republicans might be gathered for questions about the direction of the Republican Party leadership. Or a group of farmers might be guided in a discussion of free trade. The group interaction can help sociologists gain many insights on a topic fairly quickly.

In this chapter you will read about several research methods sociologists use, including survey research, secondary analysis, the experiment, and the case study.

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Chapter Overview
Visit the *Sociology and You* Web site at glencoe.com and click on **Chapter 2—Chapter Overviews** to preview chapter information.

Section 1

Research Methods

Key Terms

- survey *(p. 38)*
- population *(p. 39)*
- sample *(p. 39)*
- representative sample *(p. 39)*
- questionnaire *(p. 40)*
- interview *(p. 40)*
- closed-ended questions *(p. 40)*
- open-ended questions *(p. 41)*
- secondary analysis *(p. 42)*
- field research *(p. 42)*
- case study *(p. 42)*
- participant observation *(p. 42)*

Section Preview

When sociologists do quantitative research, they generally use either surveys or precollected data. Each has its own advantages and disadvantages. Qualitative research uses descriptive rather than numerical data. Field studies are best used when interaction needs to be observed in a natural setting, and when in-depth analysis is needed. The case study is the most popular approach to field research.

Doing Research in the Social Sciences

Like all scientists, sociologists gain their knowledge by doing research. The goal of sociological research is to test common sense assumptions and replace false ideas with facts and evidence. Part of the sociological perspective is to ask "why" and "how" questions and then to form hypotheses to arrive at accurate understandings.

Social scientists differ from other scientists, however, in how they conduct much of their research. Unlike chemists, biologists, or physicists, sociologists (and often psychologists) are very limited in their ability to set up laboratory experiments to replicate real-life conditions. Even if they reproduce conditions as they are in the outside world, the ethical issues involved in manipulating people and controlling events would prevent most sociologists from pursuing this kind of research. For sociologists, the world is their laboratory.

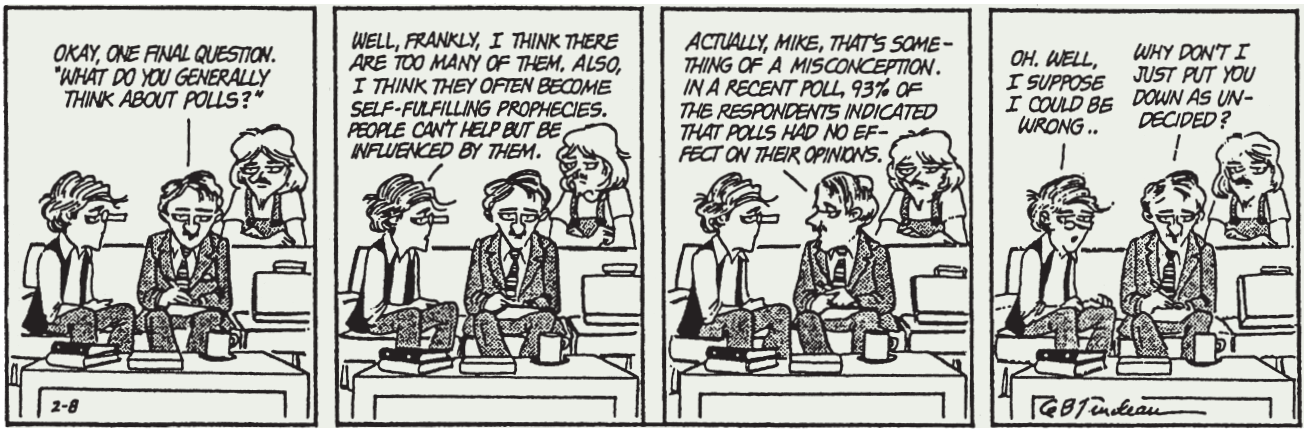
How then do sociologists do research? The methods that sociologists rely on are described below. These methods are classified as either *quantitative* or *qualitative*. Quantitative research uses numerical data, while qualitative research rests on narrative and descriptive data. Quantitative research tools include *surveys* and *precollected data*. About 90 percent of the research published in major sociological journals is based on surveys, so this approach is discussed first.

Survey Research

- **survey** research method in which people respond to questions

The **survey,** in which people are asked to answer a series of questions, is the most widely used research method among sociologists. It is ideal for studying large numbers of people.

The survey is the most widely used research method for collecting data in sociology.



Survey researchers must guard against affecting a respondent's answer.

How are effective surveys conducted? In survey research, care must be taken that surveys are sent to the right number and type of people (Black, 1998; Wysocki, 2003). Researchers describe the people surveyed in terms of *populations* and *samples*.

A **population** is all those people with the characteristics a researcher wants to study. A population could be all high school seniors in the United States, all retired postal workers living in Connecticut, or the number of freshmen who buy school yearbooks.

- **population**
  a group of people with certain specified characteristics

Sociologists would like to collect information on all members of a population, but most populations are too large. Surveys including the entire population would cost too much and take too long for most research projects. Instead, a sample is drawn. A **sample** is a limited number of cases drawn from the larger population. A sample must be selected carefully if it is to have the same basic characteristics as the general population—that is, if it is to be a **representative sample.** If a sample is not representative of the population from which it is drawn, the survey findings cannot be used to make generalizations about the entire population. For example, if you were to conduct a survey using ten students from an advanced biology class, this sample would not be representative of your school. On the other hand, if you randomly selected ten students who walked into the school cafeteria for your survey, these students would probably be more representative of the student body. The sample would probably be too small, however, to give accurate results. The United States Census Bureau regularly uses sample surveys in its highly accurate work. The Gallup Poll and Harris Poll are recognized all over the country as reliable indicators of national trends and public opinion because they use representative samples in their surveys.

- **sample**
  a group of people that represents a larger population

- **representative sample**
  a sample that accurately reflects the characteristics of the population as a whole

How are representative samples selected? The standard way of getting a representative sample is by random, or chance, selection. A random sample can be selected by assigning each member of the population a number and then drawing numbers from a container after they have been thoroughly scrambled. An easier and more practical method uses a table of random numbers. After each member of the population has been assigned a number, the researcher begins with any number in the table and goes down the list until enough subjects have been selected.

SociologyOnline

Student Web Activity
Visit the *Sociology and You* Web site at glencoe.com and click on **Chapter 2—Student Web Activities** for an activity on survey research.

- **questionnaire**
  a written set of questions to be answered by a research participant
- **interview**
  a survey method in which a trained researcher asks questions and records the answers
- **closed-ended questions**
  questions a person must answer by choosing from a limited, predetermined set of responses

How is survey information gathered? In surveys, information is obtained through either a questionnaire or an interview. A **questionnaire** is a written set of questions that survey participants answer by themselves. In an **interview,** a trained interviewer asks questions and records the answers. Questionnaires and interviews may contain *closed-ended* or *open-ended* questions.

Closed-ended questions are those that a person answers by choosing from a limited, predetermined set of responses. Multiple choice questions are closed ended, for example. Because participants are limited to certain responses, closed-ended questions sometimes fail to uncover underlying attitudes and opinions. On the positive side, closed-ended questions make answers easier to tabulate and compare.

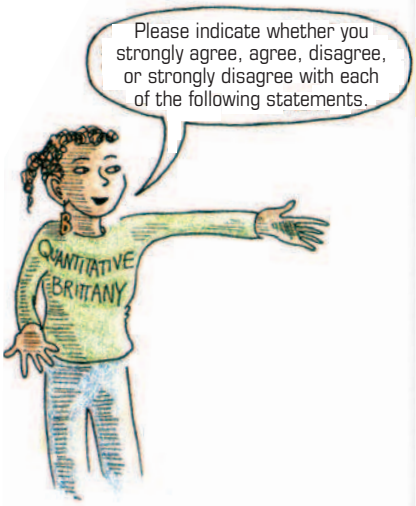


Figure 2.1 Closed-ended and Open-ended Questions

Examples of Closed-Ended Questions	Strongly Agree	Agree	Disagree	Strongly Disagree
a. Most schoolteachers really don't know what they are talking about.	1	2	3	4
b. To get ahead in life, you have to get a good education.	1	2	3	4
c. My parents encouraged me to get a good education.	1	2	3	4
d. School is a lonely place.	1	2	3	4
e. Too much emphasis is put on education these days.	1	2	3	4
f. Most students cheat on tests.	1	2	3	4

Examples of Open-Ended Questions

1. In your own words, please describe your view on the education you have received so far.

2. Do you think school adequately prepares you for employment? Why or why not?

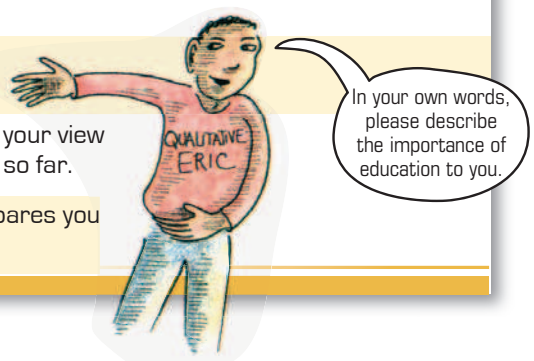


Figure 2.2 Closed-ended Survey Research

Advantages	Disadvantages
• Closed-ended answers can be more precisely measured.	• Surveys are expensive to produce and distribute.
• Responses can be easily compared.	• Responses are limited to preset answers.
• Statistical techniques can be used to make sense of the data.	• Many people don't respond to surveys, resulting in low cost effectiveness.
• A large number of responses can be collected.	• The way a question is stated may influence the answer given. (Negatively phrased questions are more likely to get a negative answer.)

Open-ended questions ask the person to answer in his or her own words. Answers to open-ended questions can reveal many attitudes. However, these answers are not easy to quantify or compare. Another problem may arise if an interviewer changes the meaning of questions by rephrasing them. The same question phrased in different ways can place the emphasis on different issues and evoke different responses.

- **open-ended questions** questions a person is to answer in his or her own words

Secondary Analysis (Precollected Data)

Using precollected information—that is, information someone else has already gathered—is known as **secondary analysis.** It is a well-respected method of collecting data in sociology. In fact, the first sociologist to use statistics in a sociological study—Emile Durkheim—relied on precollected data. (See Focus on Research on page 56.)

- **secondary analysis** using precollected information for data collection and research purposes

What are some sources for secondary analysis? Types of precollected data include government reports, company records, voting lists, prison records, and reports of research done by other social scientists.

The United States Census Bureau is one of the most important sources of precollected data for American sociologists. The Census Bureau collects information on the total population every ten years and conducts countless specific surveys every year. The census contains detailed information on such topics as income, education, race, sex, age, marital status, occupation, and death and birth rates.

Other government agencies also collect information that is of great value to sociologists. The U.S. Department of Labor regularly collects information on the nation's income and unemployment levels across a variety of jobs. The U.S. Department of Commerce issues monthly reports on various aspects of the economy.

Figure 2.3 Secondary Analysis

Advantages	Disadvantages
Precollected data provide sociologists with inexpensive, high-quality information.	The existing information may not exactly suit the researcher's needs because it was gathered for a different reason.
Existing sources of information permit the study of a topic over a long period of time. (With census data, for example, we can trace the changes in the relative income levels of African Americans and whites.)	Sometimes precollected data are outdated.
The researcher cannot influence answers because the data have been collected by others.	Little may be known about collection methods. The people who first collected the data or the collection methods may have been biased.

Field Research

Qualitative research uses narrative or descriptive data rather than quantitative, numerical data. Some aspects of society can best be revealed by qualitative methods. Most of these methods fall under the heading of *field research*. **Field research** looks closely at aspects of social life that cannot be measured quantitatively and that are best understood within a natural setting. High school cliques and "jock" culture are examples of topics best studied by field research.

- **field research** research that takes place in a natural (nonlaboratory) setting

What is the most popular approach to field research?

The most often used approach to field research is the **case study**—a thorough investigation of a single group, incident, or community. This method assumes that the findings in one case can be generalized to similar situations. The conclusions of a study on drug use in Chicago, for example, should apply to other large cities as well. It is the researcher's responsibility to point out the factors in the study that are unique and that would not apply to other situations.

- **case study** intensive study of a single group, incident, or community

When do case studies involve participant observation?

In **participant observation**, a researcher becomes a member of the group being studied. A researcher may join a group with or without informing its members that he or she is a sociologist.

- **participant observation** a case study where the researcher becomes a member of the group being studied

A compelling account of undercover participant observation appears in *Black Like Me,* a book written by John Howard Griffin (2003). Griffin, a white journalist, dyed his skin to study the life of African Americans in the South. Although he had previously visited the South as a white man, his experiences while posing as an African American were quite different.

Participant researchers sometimes do not keep their identities secret. Elliot Liebow studied disadvantaged African American males. Even though he was a white outsider, Liebow was allowed to participate in the daily activities of the men. He said, "The people I was observing knew that I was observing them, yet they allowed me to participate in their activities and take part in their lives to a degree that continues to surprise me" (Liebow, 1967:253).

Every ten years the Constitution of the United States requires a count of the nation's population. The Census Bureau uses survey research techniques to create this statistical picture. Why do you think the Census Bureau asked Congress to authorize the use of sampling techniques?

Focus on Theoretical Perspectives

Figure 2.4 Investigating School Violence and School Funding

This table illustrates the research method a sociologist of a particular theoretical persuasion would most likely choose to investigate school violence and school funding. Any of the three sociologists, of course, could use any of the three research methods.

Theoretical Perspective	Research Method	Approach to the Research Questions
Functionalism	Survey	A questionnaire on violence in high schools is sent to a national, random sample of principals. The survey examines a possible relationship between incidence of school violence and level of school funding.
Conflict Theory	Case Study	A particular high school with low funding is studied with respect to a relationship between school violence and school funding. Researchers interview administrators, teachers, and students. Findings are then generalized.
Symbolic Interactionism	Participant Observation	Concealing her identity, a researcher takes a temporary job at a high school with low funding. She attempts to observe covertly a possible link between school violence and school funding.

Scientists who conduct field research have a responsibility to follow a code of ethics that protects all of their subjects, animal or human.

Section 1 Assessment

Match terms a–e with statements 1–5.

a. population
b. representative sample
c. random sample
d. sample
e. survey

1. selected on the basis of chance, so that each member of a population has an equal opportunity of being selected
2. all those people with the characteristics the researcher wants to study within the context of a particular research question
3. a limited number of cases drawn from the larger population
4. a sample that has basically the same relevant characteristics as the population
5. the research method in which people are asked to answer a series of questions
6. Provide an example of using precollected data.
7. For what reasons would you use participant observation instead of a survey?

Critical Thinking

8. **Analyzing Information** Would you consider the looters in New Orleans following Hurricane Katrina to be a representative sample of the disaster victims? If so, why? If not, why were some news reports presenting them as such?
9. **Drawing Conclusions** You are a sociologist who wants to see if receiving welfare benefits affects long-term job commitment. Describe the research method you would use. Why is the method you chose the best for this topic?
10. **Synthesizing Information** Suggest several areas in your school or community where field research could be used for a research project.

Figure 2.5 Summary of Research Methods

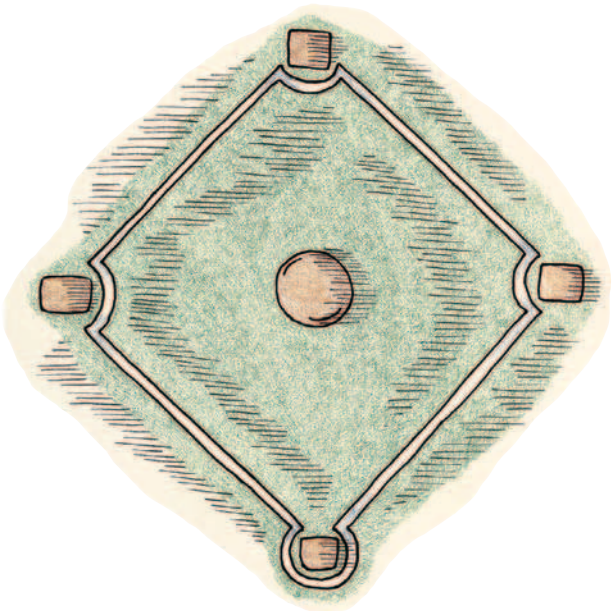
Research Method	Definition	Advantages	Disadvantages
Quantitative Methods			
Survey Research	People answer a series of questions, usually predetermined.	• Precision and comparability of answers • Use of statistical techniques • Information on large numbers of people • Detailed analysis	• Expensive due to large numbers • Low response rate • Phrasing of questions introduces bias in favor of certain answers • Researcher's behavior can affect answers given
Secondary Analysis	Information gathered by one researcher is used by another researcher for a different purpose.	• Inexpensive • Can study a topic over a long period of time • Researcher's influence on subjects avoided	• Information collected for a different reason may not suit another researcher's needs • Original researcher may have already introduced biases • Information may be outdated
Experiment	Research occurs in a laboratory setting with a minimum of contaminating influences (not often used in social research).	• Can be replicated with precision • Variables can be manipulated • Can be relatively inexpensive • Permits the establishment of causation (rather than just correlation)	• Laboratory environment is artificial • Not suited to most sociological research • Number of variables studied is limited
Qualitative Methods			
Case Study	Thorough investigation is done of a small group, incident, or community.	• Provides depth of understanding from group members' viewpoint • Unexpected discoveries and new insights can be incorporated into the research • Permits the study of social behavior not feasible with quantitative methods	• Difficult to generalize findings from one group to another group • Presence of researcher can influence results • Hard to duplicate • Takes lots of time • Difficult to be accepted as a group member (in case of participant observation)

Skills at a Glance

Using Basic Statistical Measures

Statistics are methods used for tabulating, analyzing, and presenting quantitative data. Sociologists, like all scientists, use statistical measures. You will encounter certain statistical measures in this textbook and in periodicals such as *Time, Newsweek,* or *The Economist*. Among the basic statistical measures are averages—including modes, means, and medians.

An *average* is a single number representing the distribution of several figures. For example, suppose the following figures are the salaries of the nine highest-paid major league baseball players:



$3,300,000 (catcher)
$3,600,000 (second base)
$3,600,000 (third base)
$4,200,000 (center field)
$4,300,000 (shortstop)
$4,500,000 (first base)
$4,900,000 (starting pitcher)
$5,300,000 (left field)
$6,100,000 (right field)

There are three kinds of averages that will make these numerical values more meaningful. Each gives a slightly different picture.

- The *mode* is the number that occurs most frequently. In this case, it is $3,600,000, which occurs twice. The mode is appropriate only when the objective is to indicate the most popular number. Suppose a researcher investigating these major league baseball salaries reported the mode alone. Readers would be misled, because the mode would give them no hint of the wide range of salaries ($3,300,000 to $6,100,000).
- The *mean* is the measure closest to the everyday meaning of the term *average*. It lies somewhere in the middle of a range. The mean of the salary figures above—$4,422,222—is calculated by adding all of the salaries together ($39,800,000) and dividing by the number of salaries (9). The mean, unlike the mode, takes all of the figures into account. It is distorted, however, by the highest figure, $6,100,000. Although one player earns $6,100,000, most players make considerably less—the highest-paid player earns nearly twice as much as the lowest-paid player. The mean is distorted when there are extreme values at either the high or the low end of a scale. The mean is more accurate when the high and low values are not widely separated.

The World Champion Boston Red Sox celebrate after winning the World Series. This win might result in salary increases for next year.

- The *median* is the number that divides a series of values in half. Half of the values lie above the median, half below. In this example, the median is $4,300,000. Half of the salaries are above $4,300,000, and half are below it. The advantage here is that the median is not distorted by extremes at either end. If the median falls between two numbers, the average of those two numbers becomes the median.

Working with Statistics

1. Cassie collected newspapers for a recycling plant at the rate of $2.30 per pound of paper. On consecutive days she turned in the following weights: 12 lbs., 13 lbs., 8 lbs., 22 lbs., 8.5 lbs., 13 lbs., and 19 lbs. What was her average pay per day? What was the median pay?
2. The grades on a student's sociology quizzes for a six-week period were 99 percent, 99 percent, 68 percent, 99 percent, 75 percent, and 80 percent. Determine the mean score, the mode, and the median score for that student.

Evaluating Internet Resources

The Internet is one of the most exciting research tools developed in the last century. It can put a library of the most current information at your fingertips. Like every tool, however, it is only as good as its operator. Reading the "instruction manual" and following a few basic "safely rules" will ensure that you get the best results from your online research efforts.

To determine if the site is a valid one, consider the source material. The questions on the following page will help you evaluate the reliability of the information. They will also let you deselect those sources (or articles) that are not particularly relevant to your needs.

WHO

- Who maintains the site? An established authority? An organization? A government?
- Who produced the information? Is he or she qualified, a noted authority? Are you sure?
- Has the site been reviewed, recommended, or given an award? By whom?
- Are there standards or selection criteria that must be met for information to be on this site?
- Can the webmaster be contacted by e-mail?

WHAT

- Is the information reliable?
- Is the information original?
- Is the information scholarly, professional, popular? Is there documentation?
- Is the site comprehensive? Are other sites more comprehensive?
- Does the site contain information, links to other sites, or both?

WHEN

- Is the information up-to-date? Are other sites more current?
- When was the site last updated? How often is the site updated?
- Do the links work?

WHERE

- From where was the information derived?
- Is the information based on personal opinion, experience, interviews, library research, questionnaires, or laboratory experiments?
- How did you access the information on the Internet (for example, web, ftp, telnet, listserv, newsgroup, e-mail)?

HOW

- How is the information presented? Is it presented clearly, accurately, and objectively?
- Is there distortion or bias in meaning?
- Is more than one viewpoint represented?
- Is the information modified in any way?

WHY

- Why is the information being presented?
- What is the purpose/motive? Is it easy to determine the purpose?
- Who is the intended audience?
- Does a sponsoring organization influence what is published here? Is there an e-mail or "snail mail" address to contact the organization?
- Does the information suit your purpose?

Applying Skills

Select a sociology-related Internet site. Evaluate it based on the criteria above.

Reading Tables and Graphs

Tables and graphs present information concisely. Figures 2.6 and 2.7 on the following page show the same information in two different formats. Use these figures to complete these steps for decoding tables and graphs.

1. Begin by reading the title of the table or graph carefully. It will tell you what information is being presented. What information is being presented in Figure 2.6?
2. Find out the source of information. You will want to know whether the source is reliable and whether its techniques for gathering and presenting data are sound. What is the source of the information in these figures? Is it a reliable source?
3. Read any notes accompanying the table or graph. Not all tables and graphs have notes, but if notes are present, they offer further information about the data. The notes in Figure 2.6 and in Figure 2.7 explain that the data refer to the total money earnings of full-time and part-time workers, aged 18 and over, in a March 2003 survey. Why is the note in this table important?
4. Examine any footnotes (marked with a superscript *a*). Footnotes in Figure 2.6 and Figure 2.7 indicate that the data are categorized by the highest degree actually completed. What other interpretation could be made from the term *educational attainment*?

5. Look at the headings across the top and down the left-hand side of the table or graph. To observe any pattern in the data, it is usually necessary to keep both types of headings in mind. Figure 2.6 and Figure 2.7 show the median annual earnings of African American and white males and females for several levels of education.
6. Find out what units are being used. Data can be expressed in percentages, hundreds, thousands, millions, billions, means, and so forth. Figure 2.6 and Figure 2.7 use two different units. What are they? When making comparison, it is important that you compare like units.
7. Check for trends in the data. For tables, look down the columns (vertically) and across the rows (horizontally) for the highest figures, lowest figures, repeat numbers, irregularities, and sudden shifts. If you read Figure 2.6 vertically, you can see how earnings vary by race and sex within each level of education. If you read the table horizontally, you can see how earnings vary with educational attainment for white males, African American males, white females, and African American females. What is the advantage of presenting this information as a graph, as in Figure 2.7? What is the disadvantage of using a graph?
8. Draw conclusions from your own observations. Looking carefully at these figures, write a narrative paragraph that summarizes your conclusions based on the data presented in these figures.

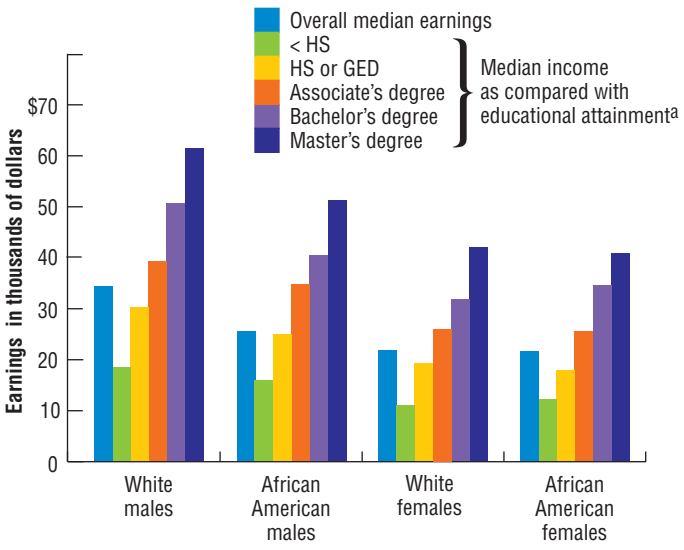
Figure 2.6
Median Earnings in Dollars

Demographic group	Overall median earnings	Median earnings in dollars as compared with education attainment[a]				
		<HS degree	HS or GED	Associate's degree	Bachelor's degree	Master's degree
White males	34,176	18,447	30,174	39,239	51,160	62,460
African American males	26,807	15,727	25,095	35,945	41,664	51,146
White females	22,639	11,508	19,483	26,313	32,003	42,447
African American females	21,548	12,268	18,036	25,068	35,107	41,553

Note: These figures include the total money earnings of full-time and part-time workers, ages 18 and over, surveyed as of March 2003.

[a] In terms of highest degree completed.

Figure 2.7
Median Annual Earnings by Gender, Race, and Education



Note: These figures include the total money income of full-time and part-time workers, ages 18 and over, surveyed as of March 2003.

[a] In terms of highest degree completed.

Source: U.S. Bureau of the Census.

Section 2

Causation in Science

Key Terms

- causation *(p. 50)*
- multiple causation *(p. 50)*
- variable *(p. 51)*
- quantitative variable *(p. 51)*
- qualitative variable *(p. 51)*
- independent variable *(p. 52)*
- dependent variable *(p. 52)*
- intervening variable *(p. 52)*
- correlation *(p. 52)*
- spurious correlation *(p. 53)*

- **causation** the belief that events occur in predictable ways and that one event leads to another
- **multiple causation** the belief that an event occurs as a result of several factors working in combination

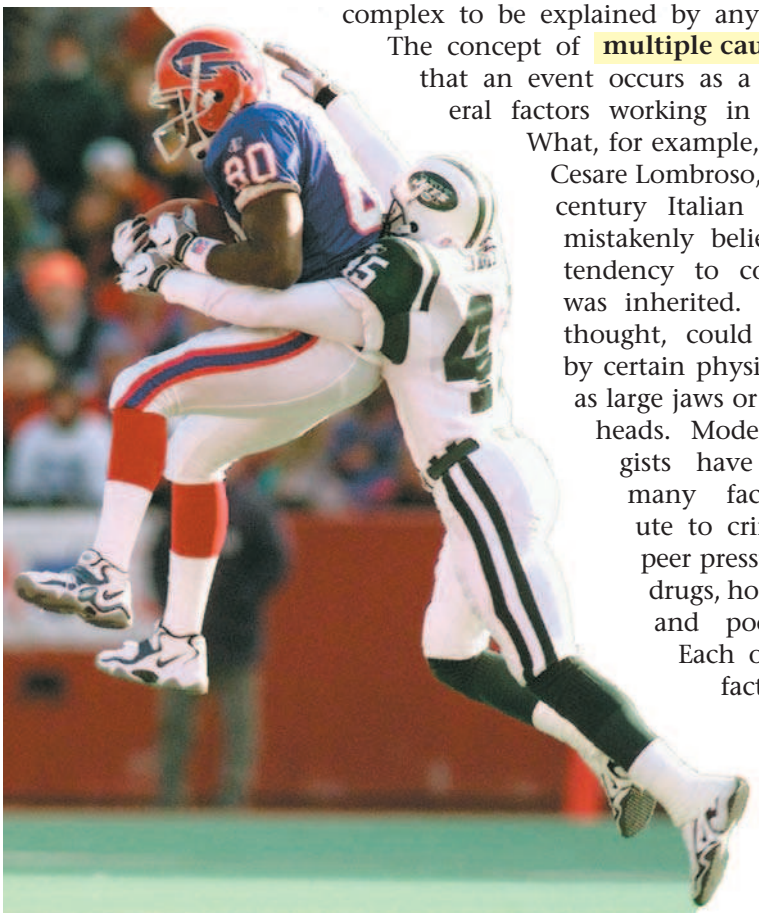
Section Preview

Causation in science is the idea that one event leads to another event. Scientists assume that all events have causes, or determinants. Social events are so complex, however, that many factors may be identified as causes. Three standards must be met before causation can be proved.

The Nature of Causation

Scientists assume that an event occurs for a reason. According to the concept of **causation,** events occur in predictable, nonrandom ways. One event leads to another. Why does this book remain sitting on your desk rather than rising slowly, going past your eyes, and resting against the ceiling? Why does a ball thrown into the air return to the ground? Why do the planets stay in orbit around the sun? Today, the main goal of scientists is to discover the factors that cause events to happen. Social scientists look for the factors that cause social events to happen.

Why do sociologists look for multiple causes? Leo Rosten, a twentieth-century novelist, once wrote, "If an explanation relies on a single cause, it is surely wrong." Social events are generally too complex to be explained by any single factor. The concept of **multiple causation** states that an event occurs as a result of several factors working in combination. What, for example, causes crime? Cesare Lombroso, a nineteenth-century Italian criminologist, mistakenly believed that the tendency to commit crimes was inherited. Criminals, he thought, could be identified by certain physical traits such as large jaws or receding foreheads. Modern criminologists have shown that many factors contribute to crime, including peer pressure, the use of drugs, hopeless poverty, and poor parenting. Each of these single factors is called a *variable*.

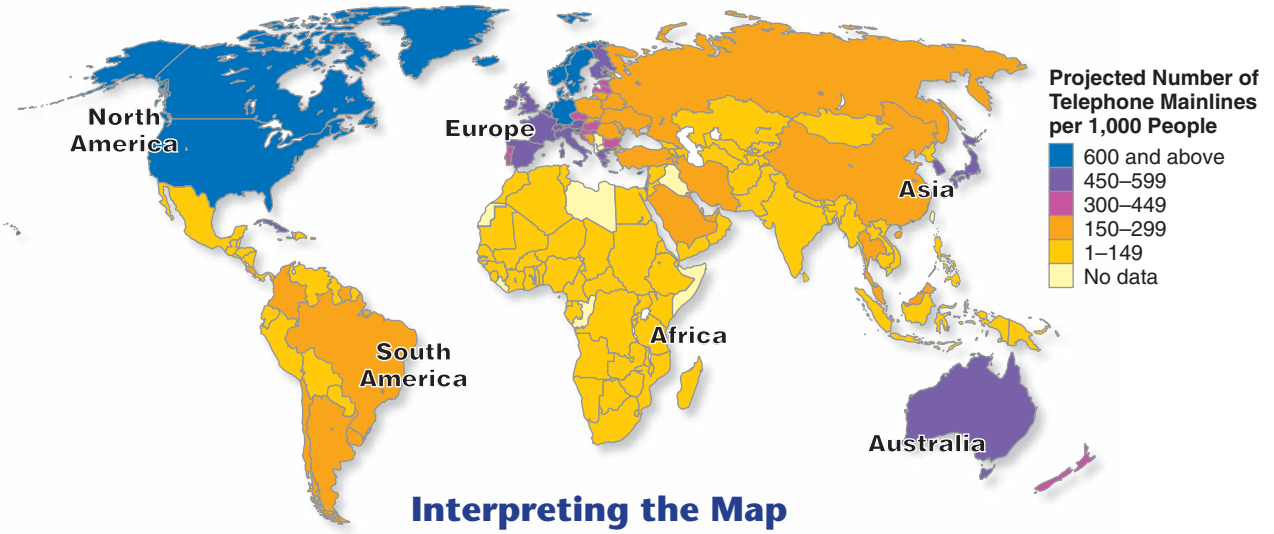


What is the cause and effect in this interaction?

World View

The Wired World

This map shows the number of telephone mainlines per thousand people for 2002. This data is an example of a quantitative variable.



Interpreting the Map

1. Explain why the data in this map constitutes a quantitative variable.
2. What would need to be done with the data to make it a qualitative variable?
3. If you were using telephone mainlines per 1,000 people in research, would it likely be a dependent or independent variable?

Source: United Nations Development Programme, 2004.

Variables and Correlations

A **variable** is a characteristic—such as age, education, or occupation—that is subject to change.Variables can be *quantitative* or *qualitative, independent* or *dependent*.

How do variables differ? Some materials have greater density than others. Some people have higher incomes than others. The literacy rate is higher in developed countries than in developing countries. Each of these characteristics is a **quantitative variable,** a variable that can be measured and given a numerical value.

In contrast, a **qualitative variable** is identified by membership in a category. It is an "either/or" or a "yes/no" variable. Sex, marital status, and group membership are three qualitative variables often used by sociologists. People are either male or female; they are married or unmarried; they are band members, football players, sophomores—or they are not.

- **variable**
  a characteristic that is subject to change
- **quantitative variable**
  a characteristic that can be measured numerically
- **qualitative variable**
  a characteristic that is defined by its presence or absence in a category

When they conduct studies, sociologists and other scientists identify the qualitative and quantitative variables to investigate. They then define these variables as either independent or dependent. The **independent variable** in a study is the variable that causes something to occur. The researcher changes, or looks for changes, in this variable. The **dependent variable** is what results from the change in the independent variable. For example, you might look at the time spent studying for a test as an independent variable that could cause a change in a grade—a dependent variable. The independent variable of poverty is one of several independent variables that can produce a change in the dependent variable of hunger. Whether a variable is dependent or independent can change depending on the situation. The extent of hunger may be a dependent variable in a study of poverty; it may be an independent variable in a study of crime.

- **independent variable** a characteristic that causes something to occur
- **dependent variable** a characteristic that reflects a change

An **intervening variable** influences the relationship between an independent and a dependent variable. The existence of a government support program, for example, may intervene between poverty and hunger. If a strong safety net exists, for instance, very poor parents and their children may experience no more hunger than those in the working class. Poverty is the cause of hunger but does not have to be if government intervention in the form of income and food exists. The poor *without* a safety net will experience more hunger. The poor *with* a safety net will not.

- **intervening variable** a variable that changes the relationship between an independent and a dependent variable

What is a correlation?

A **correlation** is simply a measure of how things are related to one another. When a change in a trait, behavior, or an event (independent variable) is tied to a change in another trait, behavior, or event (dependent variable), a correlation exists. The correlation may be positive or negative.

- **correlation** a measure of the relationship between two variables

A *positive correlation* exists if both the independent variable and the dependent variable change in the same direction. A positive correlation exists if we find that grades (dependent variable) improve as study time increases (independent variable). (See Figure 2.8.)

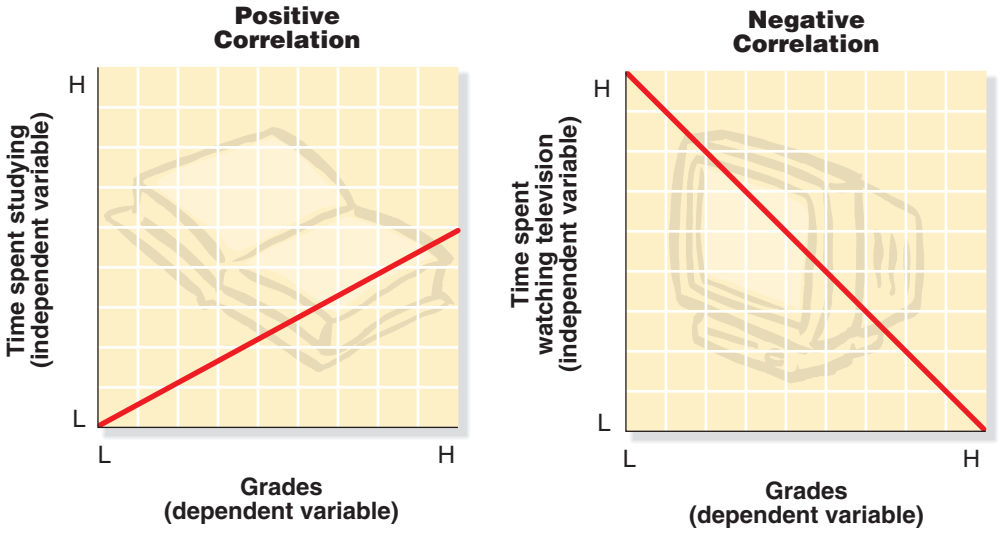
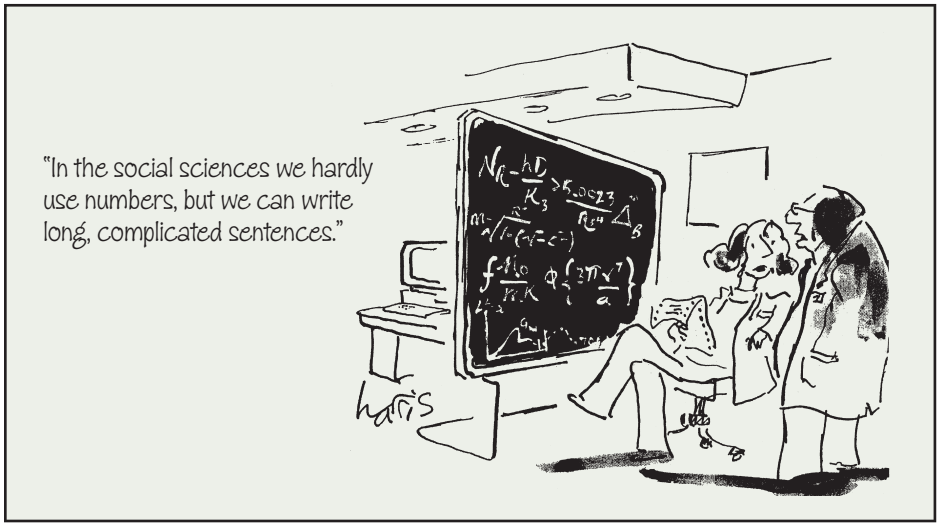


Figure 2.8 Positive and Negative Correlations

In a positive correlation, increases in the independent variable are associated with increases in the dependent variable. Grades improve with time spent studying.

In a negative correlation, increases in the independent variable are associated with decreases in the dependent variable. Grades decrease as time spent watching television increases.



The man in this cartoon believes social science research is not very scientific. What do you think?

In a *negative correlation,* the variables change in opposite directions. An increase in the independent variable is linked to a decrease in the dependent variable. A negative correlation exists if we find that grades (dependent variable) go down as time spent watching television (independent variable) increases.

It is very important to remember that the existence of a correlation does not necessarily mean a cause-and-effect relationship exists. People with long arms often have long legs. However, the length of a person's arms does not cause the legs to grow longer. Both of these variables are controlled by other factors. It is much easier to show a correlation between two variables than it is to show causation.

Standards for Showing Causation

In a causal relationship, one variable actually causes the other to occur. Three standards are commonly used to determine causal relationships. Let's look at the example of church attendance and juvenile delinquency.

- **Standard 1:** *Two variables must be correlated.* Some researchers found that juvenile delinquency increases as church attendance declines—a negative correlation. Does this negative correlation mean that not attending church causes higher delinquency? To answer this question, the second standard of causality must be met.
- **Standard 2:** *All other possible factors must be taken into account.* The fact that two events are correlated does not mean that one causes the other. The negative correlation between church attendance and delinquency occurs because age is related to both church attendance (older adolescents attend church less frequently) and delinquency (older adolescents are more likely to be delinquents). In fact, the correlation between lower church attendance and delinquency is known as a **spurious correlation**—an apparent relationship between two variables that is actually caused by a third variable affecting both of the other variables. Thus, before we can predict that a causal relationship exists between church attendance and delinquency, we need to take other factors into consideration. In this instance, the age variable reveals that the relationship between church attendance and

spurious correlation
a relationship between two variables that is actually caused by a third factor

Another Time

Reason and Science

Seventeenth-century Europe was an exciting place for those interested in using scientific methods in the search for truth. Copernicus was an astronomer who held that the sun was at the center of the solar system. Traditional belief at the time placed the earth at the center. Galileo sought to replace traditional myths with new knowledge based on reason and observation. This is one essential aspect of the scientific method.

In 1609, . . . Galileo turned his recently constructed telescope to the heavens, and through his startling observations made available to astronomy the first qualitatively new evidence it had known since the ancients. And each of his observations—the craters and mountains on the surface of the Moon, the moving spots on the Sun, the four moons revolving around Jupiter, the phases of Venus, the "unbelievably" numerous individual stars of the Milky Way—was interpreted by Galileo as powerful evidence in favor of the Copernican heliocentric [sun-centered] theory.

. . . Many individuals not previously involved in scientific studies now took up the telescope and saw for themselves the nature of the new Copernican universe. Astronomy, by virtue of the telescope and Galileo's compelling writings, became of vital interest to more than specialists. Successive generations of late Renaissance and post-Renaissance Europeans, increasingly willing to doubt the absolute authority of traditional doctrines both ancient and ecclesiastical, were finding the Copernican theory not only plausible but liberating. A new celestial world was opening up to the Western mind, just as a new terrestrial world was being opened by the global explorers.

Source: Excerpted from *The Passion of the Western Mind.* Copyright, © 1993 by Richard Tarnas. Reprinted by permission of Ballantine Books, a Division of Random House, Inc.

Thinking It Over

1. Can you analyze two important effects that the scientific revolution fueled by Galileo has had on individual behavior in the West?
2. How did Galileo employ the sociological imagination in his work?

delinquency is not a causal one. Finding hidden causes and exposing spurious correlations is one of the greatest challenges in scientific research.

- **Standard 3:** *A change in the independent variable must occur before a change in the dependent variable can occur.* This means that the cause must occur before the effect. Do people stop attending church before they become delinquents? Or does delinquent behavior occur before people stop attending church? Or do these variables appear at the same time? Even if age were not a factor in this correlation and no other factor could be found, causality between these two variables still could not be established since it cannot be determined which occurs first.

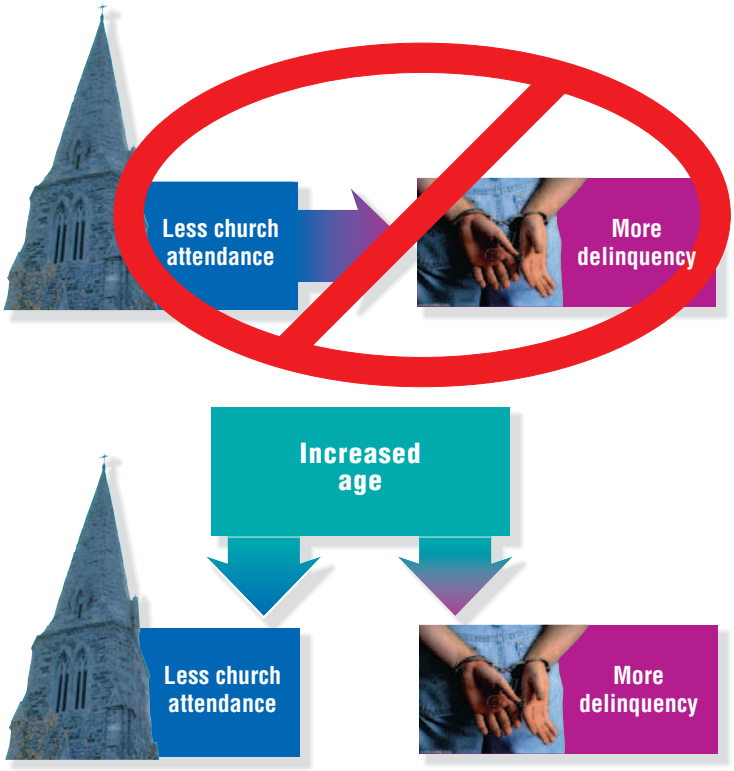


Figure 2.9
A Spurious Correlation
As you read on page 53, the correlation between juvenile delinquency and not attending church is a spurious correlation.

Section 2 Assessment

Match terms a–i with the numbered statements below.

a. causation
b. multiple causation
c. variable
d. quantitative variable
e. qualitative variable
f. independent variable
g. dependent variable
h. correlation
i. spurious correlation

1. something that occurs in varying degrees
2. the variable in which a change or effect is observed
3. a change in one variable associated with a change in another variable
4. the idea that an event occurs as a result of several factors operating in combination
5. a factor that causes something to happen
6. the idea that the occurrence of one event leads to the occurrence of another event
7. a factor consisting of categories
8. when a relationship between two variables is actually the result of a third variable
9. a variable measured in numerical units

Critical Thinking

10. Making Comparisons In your own words, explain the difference between correlations and causation. Illustrate each with an example not found in the text.

Focus on Research

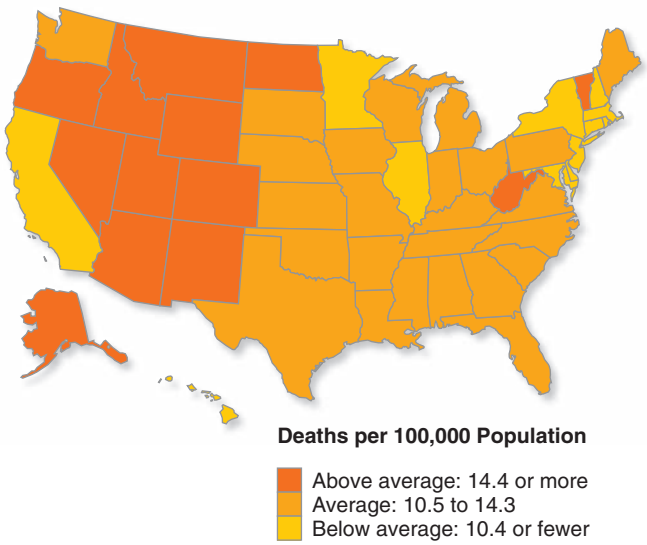
Secondary Analysis: A Model for Research

Emile Durkheim was the first person to be formally recognized as a sociologist. (See p. 17 for more on this pioneer.) He was also the most scientific of the pioneers. Durkheim conducted a study that stands as a classic research model for sociologists today. His investigation of suicide was, in fact, the first sociological study to use statistics. In Suicide (1964, originally published in 1897), Durkheim argued that some aspects of human behavior—even something as personal as suicide—can be explained on the societal level, without reference to individuals.

To carry out his secondary analysis, Durkheim used precollected data from the government population reports of several countries. Much of it was from the French government statistical office. He collected data for approximately 26,000 suicides and classified them by age, sex, marital status, whether there were children in the family, religion, location, time of year, method of suicide, and other factors. (And all this before there were computers!) As he gathered his data, he continually refined and adjusted his hypotheses.

Durkheim wanted to see if suicide rates were related to how socially involved individuals felt. He identified three suicide types in his study: egoistic, altruistic, and anomic.

Map A
Suicide Rates for the Year 2002



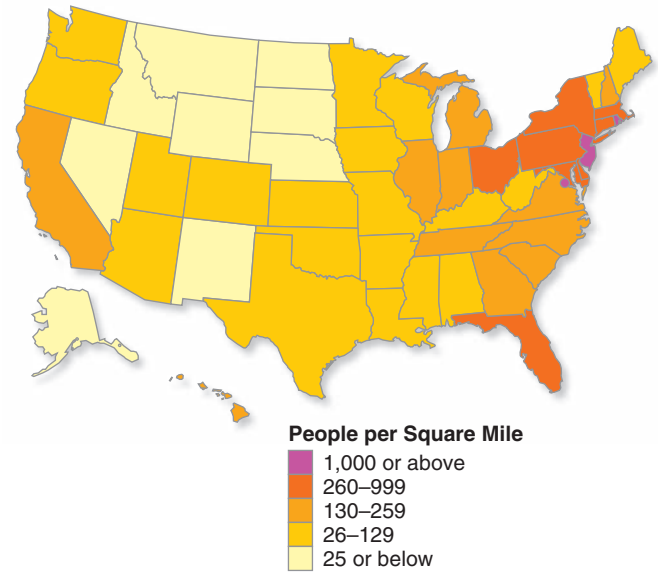
Source: *National Vital Statistics Reports,* from the Centers for Disease Control and Prevention, 2005.

He hypothesized that *egoistic* suicide increases when individuals do not have sufficient social ties. For example, he proposed that adults who never married and were not heavily involved with family life were more likely to commit suicide than married adults.

He also predicted that *altruistic* suicide was more likely to occur when social ties are too strong. The mass suicides of cult members is one example. Military personnel trained to lay down their lives for their countries (such as Japanese kamikaze pilots) is another illustration.

Durkheim also thought that *anomic* suicide increased when existing social ties were broken. For example, suicide rates spike during economic depressions. People suddenly without jobs are more prone to kill themselves. Suicide may also increase during periods of prosperity. People may loosen their social ties by taking

Map B
People Per Square Mile



Source: U.S. Census Bureau, *Statistical Abstract of the United States: 2004–2005.*

new jobs, moving to new communities, or finding new mates.

Durkheim found strong support for his predictions. Suicide rates were higher among unmarried than married people and among military personnel than civilians. They were also higher among people involved in nationwide economic crises.

As a result of his study, Durkheim drew several important conclusions. First, social behavior can be explained by social rather than psychological factors. Second, suicide is affected by the closeness of social ties. Finally, society can be studied scientifically, and sociology is worthy of academic recognition (Ritzer, 1996).

Working with the Research

1. Emile Durkheim's study of suicide suggested that one factor in the suicide rate is the degree to which the individual has group ties. One indication of social ties is population density. Based on Map B, where would you expect to find the highest suicide rates in the United States? Does Map A agree with your predictions?
2. Durkheim noted that "psychological explanations are insufficient when analyzing social behavior." In your own words, tell what this statement means.
3. Which perspective do you think Durkheim followed in his study of suicide: the functionalist, the conflict, or the symbolic interactionist? Give reasons for your answer.
4. Using what you have learned from Durkheim's research, formulate a hypothesis about mass suicide.

Section 3

Procedures and Ethics in Research

Key Terms

- scientific method *(p. 58)*
- hypothesis *(p. 58)*

Section Preview

The research process is made up of several distinct steps. These steps represent an ideal. It is not always necessary or even possible that they be strictly followed. Researchers have an ethical obligation to protect participants' privacy and to avoid deceiving or harming them. Preserving the rights of subjects must be weighed against the value of the knowledge to be gained.

Steps for Doing Research

- **scientific method** the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses

Scientists use a research model known as the **scientific method.** It involves the pursuit of knowledge in a systematic way. As shown in Figure 2.10 on the following page, the steps in the scientific method include identifying a problem, reviewing the literature, formulating hypotheses, developing a research design, collecting data, analyzing data, and stating findings and conclusions.

1. **Identify the Problem.** Researchers begin by choosing an object or topic for study. Most topics are chosen because they interest the researcher, address a social problem, test a major theory, or respond to a government agency's or organization's needs.
2. **Review the Literature.** Once the object or topic of study has been identified, the researcher must find out all he or she can about any earlier research. This process is called a *literature search*. For example, a sociologist investigating suicide will probably develop an approach related to the classic study of suicide by Emile Durkheim, as well as to the work of other sociologists who have since researched the topic.

- **hypothesis** testable statement of relationships among variables

3. **Formulate Hypotheses.** The next step is to develop a *hypothesis* based on what is known. A **hypothesis** is a testable statement of relationships among well-defined variables. One hypothesis might be, "The longer couples are married, the less likely they are to divorce." The independent variable is length of marriage, and the dependent variable is divorce.
4. **Develop a Research Design.** A research design states the procedures the researcher will follow for collecting and analyzing data. Will the study be a survey or a case study? If it is a survey, will data be collected from a cross-section of an entire population, such as the Harris and Gallup polls, or will a sample be selected from only one city? Will simple percentages or more sophisticated statistical methods be used? These and many other questions must be answered so the researcher will have a sound plan to follow.
5. **Collect Data.** There are three basic ways of gathering data in sociological research—asking people questions, observing behavior, and analyzing existing materials and records. Sociologists studying interracial marriages could question couples about ways they communicate. They could locate an organization with many interracially married couples and observe couples'

behavior. Or they could compare the divorce rate among interracially married couples with the divorce rate of the population as a whole.

6. **Analyze Data.** Once the data have been collected and classified, they can be analyzed to determine whether the hypotheses are supported. It is not unlike putting together pieces of a jigsaw puzzle. This is not as easy or automatic as it sounds, because results are not always obvious. Because the same data can be interpreted in several ways, judgments have to be made. Guarding against personal preferences for particular outcomes is especially important in this phase of research.
7. **State Findings and Conclusions.** After analyzing the data, a researcher is ready to state the conclusions of the study. It is during this phase that the methods are described (for example, survey, case study) and hypotheses are formally accepted, rejected, or modified. By making the research procedures public, scientists make it possible for others to duplicate the research, conduct a slightly modified study, or go in a very different direction.

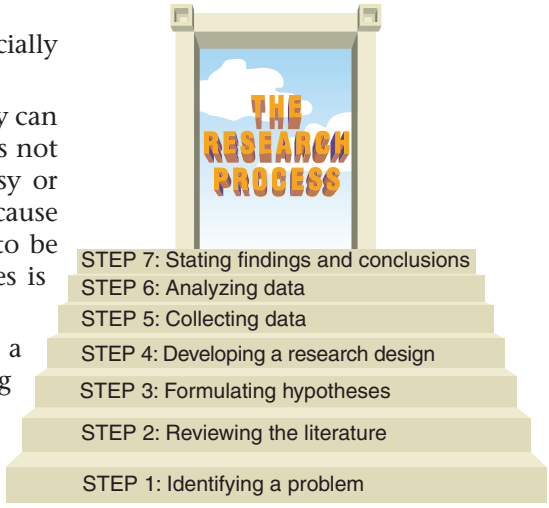


Figure 2.10
Steps in the Research Process

Realistically, do sociologists follow these steps? Some sociologists believe that this research model is too rigid to be used in studying human society. Even though most sociologists do follow the model, they do not necessarily follow it mechanically. They may conduct exploratory studies prior to stating hypotheses and developing research designs. Or they may change their hypotheses and research designs as their investigations proceed.

Ethics in Social Research

Research is a distinctly human activity. Although there are principles for conducting research, such as objectivity and verifiability, scientists sometimes fail to live up to these principles. At times, even the ethics of research is not honored by researchers.

Unfortunately, there is a long list of examples of ethical lapses in medical research. During the Nuremberg trials, 16 Nazi doctors were convicted of conducting sadistic experiments on concentration camp inmates. From 1932 to 1972, the Public Health Service of the U.S. government deliberately did not treat 399 syphilitic African American agricultural workers and day laborers so that biomedical researchers could study the full evolution of the disease (Jones, 1993). For twenty years, researchers at Germany's University of Heidelberg used human corpses, those of adults and children, in high-speed automobile crash tests (Fedarko, 1993). Federal investigators in the United States have documented over ten years of fraud in some of the most important breast cancer research ever done (Crewdson, 1994).

Several social scientists, also, have been criticized for conducting research considered unethical. In each case, subjects were placed in stressful situations without being informed of the true nature of the experiments (See pages 144 and 188 for a discussion of two of these studies).

More often, however, sociologists routinely protect the rights of research subjects and avoid deceiving or harming them. For example, Mario Brajuha, a graduate student at a major American university, kept detailed field notes while doing a participant observation study of restaurant work (Brajuha and Hallowell, 1986).

It is generally thought that using human corpses in automobile crash tests is unethical. Do you agree?

TECH TRENDS

Has Technology Made Privacy Obsolete?

A recent episode of NBC's *Today* show featured a segment about a Louisiana woman whose male neighbor had secretly installed video cameras in her bedroom and bathroom. Because of the cameras, the neighbor was able to secretly observe this woman in her most private moments. While researchers have been observing subjects for many years, it is alarming that this immoral and extremely illegal use of technology is now within the financial range and technical ability of many people.

Some sociologists and psychologists are concerned about the ethics of videotaping research subjects. One of the requirements of the Code of Ethics of the American Sociological Association (see Appendix) is to protect the privacy of research subjects. Imagine, then, that a sociologist came to your school to conduct research and asked permission to place video cameras in the hallways, classrooms, and cafeteria. Do you think that permission from school administrators would meet this requirement? What if every student in the school gave permission for the cameras? How would you feel if you gave your permission, but then did something really silly or wrong in front of one of the cameras?

Lawsuits have been filed in some states by workers after discovering that their employers had installed hidden cameras in rest rooms or changing rooms to reduce high levels of employee theft. Managers claim that dishonest employees often use these areas to hide company products in their purses or bags. Workers argue that they are entitled to expect a minimum level of privacy and that hidden cameras violate that expectation. But, objects management, if workers know the cameras are there, they won't be caught. Similarly, if researchers begin videotaping with the consent of their subjects, will they get a true record of behavior? If they do not advise their subjects of the taping, what happens if a criminal act is recorded? Do the researchers have an obligation to release the tape to the authorities? Ethical issues will continue to arise as technology allows investigators to invade new areas.

Analyzing the Trends

Develop an argument for or against the use of video equipment in a sociological research project. Be sure to use logical arguments and evaluate the issues of maximizing benefits to society while minimizing the harms sociological work might create.

Because of suspected arson at a restaurant where Brajuha was employed as a waiter, his field notes became an object of interest to the police, the district attorney, the courts, and some suspects. For two years, he refused to reveal the contents of his field notes to the police. He did so in the face of a subpoena, the threat of imprisonment, and possible harm to himself, his wife, and his children. Brajuha was protecting the privacy rights of those individuals described in his notes.

What is sociology's code of ethics? Conducting ethical research means showing objectivity; using superior research standards; reporting findings and methods truthfully; and protecting the rights, privacy, integrity, dignity, and freedom of research subjects. The American Sociological Association has published guidelines for conducting research. (This code has been reproduced in full in the Appendix of this text.) Briefly put, the Code of Ethics is concerned with getting the greatest possible benefit with the least possible harm.

Can researchers act ethically and still get the information they need? Sometimes acting ethically is difficult. The researcher must sometimes make hard decisions about morally questionable issues, such as the situation in which Mario Brajuha found himself. Moreover, the researcher must balance the interests of those being studied against the need for accurate, timely data. Balance is the key to the issue of ethics. At the least, the people involved in sociological research should be protected from social, financial, or psychological damage or legal prosecution.

Section 3 Assessment

1. The steps below describe a research project on children without brothers or sisters ("only" children). Put steps a–g in order of how they would occur according to the steps in the research process.
   - **a.** A researcher reads many articles about theory and research on the intelligence level of only children.
   - **b.** From previous research and existing theory, a researcher states that only children appear to be more intelligent than children with siblings.
   - **c.** A researcher collects data on only children from a high school in a large city.
   - **d.** A researcher writes a report giving evidence that only children are more intelligent than children with brothers or sisters.
   - **e.** A researcher decides to study the intelligence level of only children.
   - **f.** A researcher classifies and processes the data collected in order to test a hypothesis.
   - **g.** A researcher decides on the data needed to test a hypothesis, the methods for data collection, and the techniques for data analysis.

Critical Thinking

2. **Drawing Conclusions** What issues in studying society might interfere with following the scientific method precisely?
3. **Analyzing Information** Can secret observation of people ever be considered ethical? Why or why not?

Should You Believe Everything You Read?

It is sometimes said that we are living in the "age of instant information." One unfortunate side effect is the tendency for studies and research results to be reported in the media without background or explanation. There are, however, some easy steps you can follow that will make you a savvy consumer in the information marketplace.

Be Skeptical. Be suspicious of what you read. The media sound-bite treatment tends to sensationalize and distort information. For example, the media may report that $500,000 was spent to find out that love keeps families together. In fact, this may have been only one small part of a larger research project. Moreover, chances are the media have oversimplified even this part of the researcher's conclusions.

Consider the Source of Information. The credibility of a study may be affected by who paid for the results. For example, you should know whether a study on the relationship between cancer and tobacco has been sponsored by the tobacco industry or by the American Cancer Society. Suppose that representatives of tobacco companies denied the existence of any research linking throat and mouth cancer with snuff dipping. Further suppose that an independent medical researcher concluded that putting a "pinch between your cheek and gum" has led to cancer in humans. The self-interest of the tobacco companies taints their objectivity.

At the very least, you want to know the source of information before making a judgment. This caution is especially relevant to Internet research. Because Internet information varies widely in its accuracy and reliability, sources must be evaluated with great care.

Do Not Mistake Correlation for Causation. Remember that a correlation between two variables does not mean that one caused the other. At one time, the percentage of Americans who smoked was increasing at the same time that life expectancy was increasing. Did this mean that smoking caused people to live longer? Actually, a third factor—improved health care—accounted for the change. Do not assume that two events are related causally just because they occur together.

Doing Sociology

Bring to class an article reporting on a study. These can often be found in news magazines. Be prepared to explain how these three safeguards apply to the article's report.

Chapter 2

Assessment

Summary

Section 1: Research Methods

Main Idea: When sociologists do quantitative research, they generally use either surveys or precollected data. Each has its own advantages and disadvantages. Qualitative research uses descriptive rather than numerical data. Field studies are best used when interaction needs to be observed in a natural setting and when in-depth analysis is needed. The case study is the most popular approach to field research.

Section 2: Causation In Science

Main Idea: Causation in science is the idea that one event leads to another event. Scientists assume that all events have causes, or determinants. Sociologists work to discover these causes. Three standards must be met before causation can be proved.

Section 3: Procedures and Ethics In Research

Main Idea: The research process is made up of several distinct steps. These steps represent an ideal. It is not always necessary or even possible that they be strictly followed. Researchers have an ethical obligation to protect participants' privacy and to avoid deceiving or harming them. Preserving the rights of subjects must be weighed against the value of the knowledge to be gained.

Chapter Overview
Visit the *Sociology and You* Web site at glencoe.com and click on **Chapter 2—Self-Check Quizzes** to prepare for the chapter test.

Reviewing Vocabulary

Complete each sentence using each term once.

a. causation
b. code of ethics
c. correlation
d. dependent variable
e. field research
f. independent variable
g. multiple causation
h. qualitative variable
i. quantitative variable
j. representative sample
k. scientific method
l. secondary analysis

1. A variable that can be measured and given a numerical value is called a _____ .
2. _____ states that an event occurs as a result of several factors working in combination.
3. The use of existing information as a method of collecting data best describes _____ .
4. A random sample that accurately reflects the whole population is called a _____ .
5. The _____ is a research principle that is concerned with achieving the greatest possible benefit with the least possible harm.
6. The idea that events occur in predictable ways, with one event leading to another, is called _____ .
7. _____ is a measure of how things are related to one another.
8. _____ is a variable identified by membership in a category.
9. The steps that include identifying a problem, reviewing the literature, and collecting data are part of the _____ .
10. _____ is used to investigate aspects of social life that cannot be measured quantitatively and are best understood in a natural setting.
11. _____ is a variable in which change has occurred.
12. A variable that causes something to occur is called _____ .

Chapter 2

Assessment

Reviewing the Facts

13. If a sociologist wanted to study high school cliques, what would be the best method for collecting data? Support your choice by giving two benefits of using this method.
14. Examine Figures 2.6 and 2.7 on page 49 showing median annual earnings by sex, race, and education. What is the scientific name given for this type of information?
15. Sociologist Elijah Anderson studied gangs in Philadelphia. In order to do that, he had to take off his shirt and tie and dress like the young men he was going to study. What is the name of the method of research that Anderson used here?
16. What are the seven steps in the scientific method?
17. Survey research is obtained through the use of questionnaires and interviews containing closed-ended questions and/or open-ended questions. Using a table like the one below, list the advantages and disadvantages of open-ended survey research.

Advantages	Disadvantages

Thinking Critically

18. Applying Concepts

In this chapter you read about positive and negative correlations. Give two examples each of relationships that you suspect may be positive and negative correlations. For example, you may propose that an increase in income is positively correlated to increased dining out.

ScienceCartoonsPlus.com

19. Analyzing Visuals

In this chapter you read about the problems sociologists face when they conduct research with human subjects. In the cartoon above, what position does the cartoonist take on this issue? Can you suggest who might be the employer of the figures in the background?

20. Identifying Alternatives

Identify the methods of research you would use if you wanted to study the effects of alcoholism on the work force. Explain why you would use this method. Briefly describe how you might conduct the research.

21. Drawing Conclusions

Figure 2.6 on page 49 indicates that males make more money on average than females. Some sociologists would tell you that pregnancy contributes to the variations in male vs. female earnings. What variables might explain this conclusion?

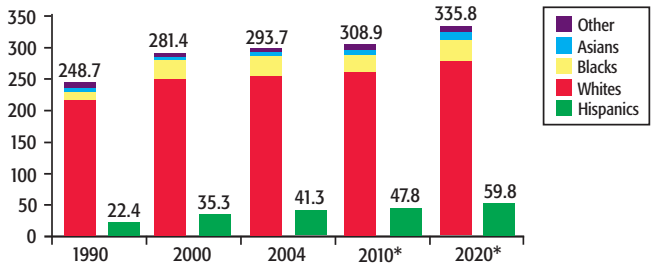
22. Interpreting Graphs

Use the graph below to answer the following questions.

a. According to the graph, in 2004, Hispanics represented about 14 percent of the American population. What percent are Hispanics expected to represent in 2010? In 2020?

b. Based on a visual or "eyeball" estimate of the graph, what percentage of the American population will be non-white in 2020?

U.S. Population Growth by Race and Hispanic Origin, 1990–2020



* Projected

Sociology Projects

23. Qualitative Research

In order to strengthen your skills in qualitative research, perform the following activity. Look around your classroom and select an object such as a blackboard eraser. Imagine that you have never seen this object before and have no idea what it is or what it is used for. Write a brief description of the object in terms of its physical nature, but do not try to determine its function. Compare your description with those of your classmates.

24. Conducting a Research Study

Write a proposal for a study that you would like to see conducted at your school. Will it be a survey, interview, or observation? Follow the standards set out in the textbook on pages 58–59, indicating variables, research design, hypothesis, and a review of the literature if possible. Include information on how you will identify your sample population. Also include sample questions (open or closed). Be prepared to present this study to your class "ethics board" for approval.

25. Quantitative Research

Try this quantitative research project at home. Over the next few days or nights, watch three television shows, each at least thirty minutes long. The programs you select should be prime-time dramas for mature audiences. Record the number of times a person or animal is subjected to physical violence. Remember that physical violence is everything from shoving to shooting. Then create a graph that illustrates the number of violent acts for the shows. You have just done quantitative research and you will probably be amazed at the results.

26. Filtering

Some high schools are concerned about Internet use by high school students and are considering *filtering*, a process that blocks access to Web sites that have certain words or phrases in their text. Some teachers are concerned that this imposed censorship will hamper student research, since the filtering process looks for words only and generally does not evaluate the context in which the word is used. Choose a partner to debate this issue and develop arguments that support your position. Support your arguments with research.

Technology Activity

27. Visit an Internet site on a current events topic that interests you. Using the criteria for determining a valid Web site on pages 47–48, determine if your site qualifies. If not, keep searching until you find one that does. Bring your recommended URL to class to create a database of great current events sites.

Enrichment Reading

School Talk

by Donna Eder

This excerpt describes research methods and ethical issues in a well-known study of middle school culture.

- **extracurricular** after school; beyond the normal school courses

- **transcribed** made a written copy; put into written form

Collecting data on students' experiences. We used a variety of means to collect data on students' experiences with peers in school. All four researchers observed lunchtime interaction at least twice weekly for periods of time ranging from five months to twelve months. We never took notes openly during the lunch period, but sometimes recorded brief notes in the bathroom or hallway between lunch sessions. These notes were expanded upon and all notes were recorded fully immediately after leaving the setting.

Donna Eder and Steve Parker also attended male and female extracurricular activities twice weekly for an entire academic year. Given the importance of athletic activities and cheerleading, we focused primarily on them, going to athletic games and practices, pep rallies, and cheerleading practices and tryouts. In addition, we observed choir and band practices and concerts, talent shows, and the one school play that was performed during the three-year period of the study. We were able to take some notes during these events, since our roles were more those of observers than participants. Afterward, we expanded on these notes and recorded them fully.

Once we had been in the setting for several months, we began doing informal interviews with individuals or groups of students on issues that arose from our observations. They included questions about the meaning of popularity, attitudes toward other students in the school, and views on male-female relationships. While some were so informal they were simply recorded as *field notes,* ten of the more extensive interviews were tape-recorded and transcribed in full.

Finally, we tape-recorded conversations in most of the lunch groups which we observed. Typically, we sat with the group members for three to seven months prior to taping them, so they were already used to our presence. We got written permission from both the students and their parents before we made a recording. On the permission forms we assured them that no one who knew them would be able to listen to or watch the tapes. We also told them that their real names would not be used in any written report. To further insure the participants' privacy, we have also changed all names of identifying locations and modified discussions about particular people or events. Only one parent requested that her daughter not participate in the study. Since she could not be asked to separate from her group, we decided to omit the entire group from the study. . . .

Ethical issues. When we first began the study, we openly informed all of the students that we were from Indiana University and were doing a study of middle school students. We assured students of our concern

with protecting their privacy by not using their actual names or revealing private information to others who might know them. The only concern expressed by a few students was that they not get in trouble for swearing. Since we were not aware of a no-swearing rule and had not been asked to enforce it, they soon lost this concern. Several students again expressed a similar concern when they were first tape-recorded, asking us who would be allowed to hear the tapes. We assured them that the tapes would not be seen or heard by anyone who could identify them and that we would not use their names in papers or books about the study.

We were prepared in advance for these particular ethical issues and had ready responses that relieved people's concerns. Other ethical dilemmas arose during the course of the study for which we did not have clear solutions. [Two of the researchers] . . . witnessed several incidents of verbal harassment, and Steve witnessed one incident that included physical harassment. Since we had tried from the start to minimize our roles as authority figures in the school, neither of them intervened as adults to stop these incidents. Instead they relied on non-intrusive strategies such as not participating themselves, or drawing the attention of others away from the target of ridicule to some other activity.

non-intrusive
not obviously noticeable; non-threatening

These incidents raise challenging questions about the role of researchers as observers of naturally occurring behavior, as opposed to interventionists who try to change the behavior of others, especially if it appears to be cruel or abusive. Had we decided to intervene more directly, we would have been seen as authority figures, and it is likely that students would no longer have acted as naturally in our presence, thus limiting the extent to which we could gain information about peer interactions. On the other hand, it was deeply disturbing to the researchers to witness these events without intervening. We struggled with the question of whether nonintervention might convey an implicit message that such behavior is acceptable to adults.

interventionist
someone who gets involved to make a change

Source: Donna Eder, *School Talk,* New Brunswick, N.J.: Rutgers University Press, 1995, pp. 172–175.

Read and React

1. In the first paragraph, the author writes that the observers did not openly take notes. Wouldn't it make more sense to take notes while the events were happening? Why would the observers wait to record their observations?
2. What do you think the author means by the term *field notes* in the third paragraph?
3. What steps did the research team take to ensure that the students' privacy rights were not abused?
4. What ethical problems did the researchers face in the course of their observations? Would you have taken the same steps as the researchers? What other action could have been taken?