

CHAPTER SUMMARY

1. What does the scientific method involve?

Research in sociology begins when a sociologist wants to know why a particular social phenomenon occurs. Durkheim was an early French sociologist who wanted to know why people committed suicide. He was not satisfied with psychological explanations of suicide and decided to explore various sociological explanations. Using government statistics, he concluded that suicide is dependent on social circumstances. He identified four basic types of suicide. *Egoistic suicide* relates to social isolation and individualism: it occurs when people have weak ties with a community. Conversely, *altruistic suicide* occurs when people whose ties to their social groups are so strong that they commit suicide for the good of the group. *Anomic suicide* occurs when social normlessness occurs in times of stress and disruption. Finally, *fatalistic suicide* sometimes occurs when people face an inevitably bleak and depressing fate. Durkheim applied a sociological perspective to a phenomenon that was considered to be strongly psychological in origin. He also used empirical methods. Both approaches reflect his contribution to the development of sociology.

The first step in the model research process is defining the problem in a precise way. It is often difficult to determine clearly and precisely how to measure a particular phenomenon. Scientists study *variables*, factors capable of change. A *dependent variable* is a factor that is influenced by other factors, known as *independent variables*. A review of the literature enables us to determine what is known about a particular issue. It also helps us to resolve differences of opinion and to identify relationships among the factors as precisely as possible.

Sociologists frequently form hypotheses in their quest for explanations. A *hypothesis* is a tentative statement that predicts how two or more variables relate to one another. Researchers develop *operational definitions* to help define a concept in a measurable way. They use *indicators* in this process, something that can be measured empirically to get information about a more abstract variable related to the indicator but difficult to measure directly. To test hypotheses, researchers need data and employ statistics to analyze the data. The type of data required influences the choice of method that sociologists use to test their hypotheses. They need to gather enough information so they can understand the problem and test their hypotheses. Doing so is often difficult because researchers encounter problems in collecting data. Also, a given set of data is sometimes open to various interpretations. Once the data have been gathered, the next step is to analyze this information. Sociologists then form conclusions based on the results of the analysis.

2. What are some of the difficulties in sociological research?

Most of the difficulties in sociological research emerge because people are studying other people. Researchers strive to make findings that others can repeat and that achieve widespread acceptance.

Validity and reliability are the two key benchmarks employed. *Validity* is the degree to which a scientific study measures what it attempts to measure. *Reliability* is the degree to which a study yields the same results when repeated.

The specification of the relationships between variables is also difficult. Sociologists focus on identifying cause-and-effect relationships, relationships in which a change in a dependent variable is caused by a change in an independent variable. This goal is not easy to accomplish, however. There may be many factors at work, making it difficult to identify the key causal factors. In addition, a *correlation* between two variables (in which one changes as the other changes) may not always indicate a causal connection. A *spurious correlation* occurs when two variables are correlated but are not necessarily linked causally. Distinguishing meaningful from spurious correlations is central to sociological analysis.

People are not reducible to simple cause-and-effect equations, a fact that makes establishing causal relationships difficult. Furthermore, social variables may not remain constant over time or from place to place. The research process is not a one-step process but a developmental sequence in which theory spurs research. Research, in turn, generates new theories, which themselves produce more research.

3. What are the basic designs in sociological research?

Sociologists engage in quantitative and qualitative research. Those using *quantitative research* test for causal relationships by using statistics. Those using *qualitative research* examine some social phenomenon in detail and look for general patterns of social life, usually in nonstatistical ways.

The three basic designs in sociological research are surveys, experiments, and ethnography. *Surveys* involve systematically gathering answers to standardized questions from a specified sample of respondents. Respondents may be asked to answer questions by mail, over the phone, or in face-to-face interviews. Surveys are particularly useful for gathering information about events that cannot be measured directly.

One must clearly understand the sample and population employed in a survey. The *population* is the total number of people who share a characteristic that the sociologist wishes to study. For example, students at both public and private high schools may constitute a population. A *sample* is a limited but representative subset of a population. For example, we might take a random sample of all students at private and public high schools in the United States at a particular point in time. In a random sample, everyone within the population has an equal chance of being selected. A random sample is far more important than a large sample; small random samples almost always give more accurate results than large but nonrandom samples. In assessing published research, one must determine the nature of the sample employed. Frequently magazine surveys involve large numbers of respondents, but the samples tend to be nonrandom and include only those who subscribe to or purchase the magazine.

The wording and sequence of the questions in a survey may affect the validity and reliability of the data obtained. Using different words to measure the same concept may sometimes yield different results. The order in which questions are asked may also affect the responses. Issues raised in earlier questions can affect how respondents think about later questions. The form of the response is also relevant. In a *closed response* question respondents must choose from the set of answers provided by the researcher. In an *open response* question respondents answer in their own words. Using both forms for the same topic may produce different results.

Questionnaires are efficient for studying a large number of geographically scattered people. For some types of research, however, sociologists need more information than a short questionnaire provides; they turn to interviews in such situations. An *interview* is a conversation in which a researcher asks a series of questions or discusses a topic with another person. Interviews can be conducted in person or by phone. Effective interviewers listen carefully, record the responses accurately, know when to probe for more information, and know that the validity and reliability of interviews depend on the interaction between the interviewer and the respondent. Some interviews are *semistructured*: the

general and specific issues to be covered are identified in advance, but the respondents are free to talk about each topic in terms most meaningful to them. *Structured interviews* are those in which the wording and sequence of questions are carefully planned in advance. In an unstructured interview, the questions and the topic are not predetermined; the interviewer and the subject engage in free-flowing conversation.

The experiment offers the most effective technique for establishing cause-and-effect relationships. *Experiments*, particularly laboratory experiments, provide greater control over the independent and dependent variables and over the grouping of subjects into experimental and control groups. Laboratory experiments generally involve an artificial situation that can be regulated carefully by the researcher. That is, many factors can be held constant while the potential independent variable is isolated.

Laboratory experiments sometimes raise ethical questions. For example, researchers must frequently deceive subjects regarding the purpose of the experiment. Critics have raised questions about the right to deceive people or to cause them anxiety or humiliation in the name of science. Most colleges and universities have established clear guidelines on ethical principles. Researchers must 1) explain the experiment to the subject, 2) minimize lying, 3) warn subjects about potential hazards, 4) describe the use of the data, 5) maintain confidentiality, and 6) inform subjects fully before seeking consent.

Field experiments occur in real-world settings. Manipulating potential independent variables is more difficult in these experiments because the controlled conditions of the laboratory are absent. As a result, sociologists sometimes use natural social settings and naturally occurring phenomena to answer research questions. Occasionally they are able to separate subjects into experimental and control groups; sometimes such groups are established after the fact. Such limitations, however, impose restrictions on the extent to which the researcher can make causal assertions. Ethical issues also emerge in field experiments. For example, experimental groups operating with the independent variable may benefit in a way that the control groups do not. Deception, privacy, and other ethical issues also enter the picture.

In ethnographies, sociologists do not attempt to influence or change people's behavior. An *ethnography* involves simply observing people in everyday settings, usually over a long period, and providing detailed descriptions and interpretations of social life as it happens. In *overt participant observation*, the researcher participates in the social life of those who are being studied, and his or her role is made known to those people. Occasionally, however, such knowledge may affect the subjects' behavior. *Covert participant observation* remedies this problem because sociologists do not identify themselves as researchers; instead they try to act like members of the group they are studying. This method, however, raises serious ethical questions. Is it ethical to deceive people deliberately by pretending to belong to their group when the true intent is to study them? Privacy issues also emerge. A variation on covert participant observation is *nonparticipant observation*, in which sociologists do not participate in the activities of the group under study. They simply observe the group in its everyday setting.

4. What other approaches do sociologists employ?

Sociologists employ *content analysis* to uncover information in both historical and contemporary materials. Content analysis involves various types of recorded communication, such as letters, diaries, laws, novels, and newspapers. It is especially useful in historical studies because it provides a way to organize and summarize systematically both the manifest and the latent content of the material. Content analysis may involve both qualitative research (research that depends on interpretations by the researcher) and quantitative research (research that employs statistics).

Comparative research enables comparisons between different societies, social groups, or social categories of people. It may involve any research method. The goal is comparison to help generate explanations. Comparative research applied to a society or social group other than our own is known

as *cross-cultural research*. Such studies can be large or small scale, and the incidence of these studies is increasing.

Historical studies enable sociologists to examine the changes that take place in institutions, groups, and societies over time. Such studies are particularly appropriate in studying phenomena that occur infrequently. They are also useful in studying events that unfold over a long period. Finally, historical research enables sociologists to draw on documents created for other purposes. Secondary analysis is the analysis of data that were originally collected for another reason. It helps shed new light on historical events.