

Problems with  
Positivist Research  
and application of science -  
methods to Social Context  
- Social Darwinism?

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# SOCIAL RESEARCH METHODS

## QUALITATIVE AND QUANTITATIVE APPROACHES

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FIFTH EDITION

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## CHAPTER 4

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*The confusion in the social sciences—it should now be obvious—is wrapped up with the long-continuing controversy about the nature of Science.*

—C. Wright Mills, *The Sociological Imagination*, p. 119

### INTRODUCTION

Many people, including professionals outside the social sciences, ask: Are sociology and related social sciences real science? They think only of the natural sciences (e.g., physics, chemistry, and biology). In this chapter, we examine the meaning of *science* in the social sciences. We build on the ideas about the scientific community and the varieties of social research and theory discussed in the previous three chapters. This chapter is concerned more with the method of inquiry—how we know—than with specific techniques for gathering and examining data. It looks at the questions: What are researchers trying to do when they conduct research? How do researchers conduct research?

The question “Where is science in social science?” is relevant to anyone wishing to learn social research methods, because the answer is found in

the methods used by researchers. Research methodology is what makes social science scientific. The question is an important one, with a long history of debate. It has been asked repeatedly since the social sciences originated. Classical social theorists such as Auguste Comte, Emile Durkheim, Karl Marx, John Stuart Mill, and Max Weber pondered this question. Despite two centuries of discussion and debate, the question remains with us today. Obviously, it does not have a simple answer.

A question for which there are multiple answers does not mean that anything goes; it means that social researchers choose from *alternative approaches* to science. Each approach has its own set of philosophical assumptions and principles and its own stance on how to do research. The approaches are rarely declared explicitly in research reports, and

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many researchers have only a vague awareness of them. Yet, the approaches play an important role and are found across the social sciences and their related applied fields.<sup>1</sup>

Collins (1989:134) argued that the debate over whether the social sciences are scientific comes from an overly rigid definition of *science*. He remarked, "Modern philosophy of science does not destroy sociological science: it does not say that science is impossible, but gives us a more flexible picture of what science is." The approaches in this chapter help link abstract issues in philosophy to concrete research techniques. They proscribe what good social research involves, justify why one should do research, relate values to research, and guide ethical behavior. They are broad frameworks within which researchers conduct studies. Couch (1987:106) summarized it as follows:

*The ontological and epistemological positions of these . . . research traditions provide the foundation of one of the more bitter quarrels in contemporary sociology. . . . Each side claims that the frame of thought they promote provides a means for acquiring knowledge about social phenomena, and each regards the efforts of the other as at best misguided. . . . They differ on what phenomena should be attended to, how one is to approach phenomena, and how the phenomena are to be analyzed.*

By the end of this chapter, you should have three answers to the question: What is scientific about social scientific research? One answer will be for each of the three approaches to be discussed. You may find the pluralism of approaches confusing at first, but once you learn them, you will find that other aspects of research and theory become clearer. Specific research techniques are based on the general approaches discussed in this chapter. The techniques (e.g., experiments and participant observation) will make more sense to you and will be learned faster if you are aware of the logic and assumptions on which they are based. In addition, the approaches presented here will help you understand the diverse perspectives you may encounter as you read social research studies. Equally important, the three approaches give you an opportunity to make an informed choice among alternatives for the type of research you may

want to pursue. You might feel more comfortable with one approach or another.

### THE THREE APPROACHES

We need to begin by recognizing that the meaning of science was not written in stone or handed down as a sacred text; it has been an evolving human creation. Until the early 1800s, only philosophers and religious scholars who engaged in armchair speculation studied or wrote about human behavior. The classical theorists made a major contribution to modern civilization when they argued that the social world could be studied using science. They contended that rigorous, systematic observation of the social world, combined with careful, logical thinking, could provide a new and valuable type of knowledge about human relations. In modern times, science has become the accepted way to gain knowledge.

Once the idea of a science of the social world gained acceptance, the issue became: What does such a science look like, and how is it conducted? Some people went to the already accepted natural sciences (e.g., physics, biology, and chemistry) and copied their methods. Their argument was simple: The legitimacy of the natural sciences rests on the scientific method, so social scientists should adopt the same approach.

Many researchers accepted this answer, but it poses certain difficulties. First, there is a debate over what *science* means, even in the natural sciences. The scientific method is only a loose set of abstract, vague principles that provide little guidance. Scholars who specialize in the history and philosophy of science have explored multiple ways to do scientific research and have found that scientists use several methods. Second, some scholars say that human beings are qualitatively different from the objects of study in the natural sciences (stars, rocks, plants, chemical compounds, etc.). Humans think and learn, have an awareness of themselves and their past, and possess motives and reasons. These unique human characteristics mean that a special science is needed to study the social life of people.

Social researchers did not stop while the philosophers debated. Practicing researchers developed ways to do research based on their informal

notions of science. This added to the confusion. Leading researchers used techniques to conduct social research that sometimes deviated from the philosopher's ideal model of good science.

The three approaches in this chapter are based on a major reevaluation of social science that began in the 1960s.<sup>2</sup> The three alternatives to social science are the core ideas distilled from many specific arguments. They are ideal types or idealized, simplified models of more complex arguments. In practice, few social researchers agree with all parts of an approach. Often, they mix elements from each. Yet, these approaches represent fundamental differences in outlook and alternative assumptions about social science research.<sup>3</sup> The approaches are different ways of looking at the world—ways to observe, measure, and understand social reality. They begin from very different positions, even when all end up looking at the same thing or saying the same thing.

To simplify the discussion, I have organized the assumptions and ideas of the approaches into answers to the following eight questions:

1. Why should one conduct social scientific research?
2. What is the fundamental nature of social reality? (the ontological question)
3. What is the basic nature of human beings?
4. What is the relationship between science and common sense?
5. What constitutes an explanation or theory of social reality?
6. How does one determine whether an explanation is true or false?
7. What does good evidence or factual information look like?
8. Where do sociopolitical values enter into science?

The three approaches are *positivism*, *interpretive social science*, and *critical social science*. Most ongoing social research is based on the first two. Positivism is the oldest and the most widely used approach. Miller (1987:4), a philosopher of science, observed, "Positivism is the most common philosophical outlook on science. Yet there are current alternatives to it with extremely broad appeal." The interpretive approach has held a strong minority

position in debates for over a century. Critical social science is less commonly seen in scholarly journals. It is included to give you the full range of debate over the meaning of social science and because it criticizes the other approaches and tries to move beyond them.

Each approach is associated with different traditions in social theory and diverse research techniques. The linkage among the broad approaches to science, social theories, and research techniques is not strict. The approaches are similar to a research program, research tradition, or scientific paradigm. A *paradigm*, an idea made famous by Kuhn (1970), another philosopher of science, means a basic orientation to theory and research. There are many definitions of *paradigm*. In general, a scientific paradigm is a whole system of thinking. It includes basic assumptions, the important questions to be answered or puzzles to be solved, the research techniques to be used, and examples of what good scientific research looks like. For example, sociology is called a multiparadigm science because no single paradigm is all-powerful; instead, several compete with each other.<sup>4</sup>

### POSITIVIST SOCIAL SCIENCE

*Positivist social science* is used widely, and *positivism*, broadly defined, is the approach of the natural sciences. In fact, most people never hear of alternative approaches. They assume that the positivist approach *is* science. There are many versions of positivism, and it has a long history within the philosophy of science and among researchers.<sup>5</sup> Yet, for many researchers, it has come to be a pejorative label to be avoided. Turner (1992:1511) observed, "*Positivism* no longer has a clear referent, but it is evident that, for many, being a positivist is not a good thing." The answers to the eight questions give you a picture of what a positivist approach sees as constituting social science. Varieties of positivism go by names such as logical empiricism, the accepted or conventional view, postpositivism, naturalism, the covering law model, and behaviorism.

Positivism arose from a nineteenth-century school of thought by the Frenchman who founded sociology—Auguste Comte (1798–1857). Comte's

major work in six volumes, *Cours de Philosophie Positivistic (The Course of Positive Philosophy)* (1830–1842), outlined many principles of positivism still used today. British philosopher John Stuart Mill (1806–1873) elaborated and modified the principles in his *A System of Logic* (1843). Classical French sociologist Emile Durkheim (1858–1917) outlined a version of positivism in his *Rules of the Sociological Method* (1895), which became a key textbook for positivist social researchers.

Positivism is associated with many specific social theories. Best known is its linkage to the structural-functional, rational choice, and exchange-theory frameworks. Positivist researchers prefer precise quantitative data and often use experiments, surveys, and statistics. They seek rigorous, exact measures and “objective” research, and they test hypotheses by carefully analyzing numbers from the measures. Many applied researchers (administrators, criminologists, market researchers, policy analysts, program evaluators, and planners) embrace positivism. Critics charge that positivism reduces people to numbers and that its concerns with abstract laws or formulas are not relevant to the actual lives of real people.

A positivist approach dominated the articles of major sociology journals in Britain, Canada, Scandinavia, and the United States during the 1960s and 1970s. By the 1980 and 1990s, it had declined sharply in European journals but the approach remained in position of dominance in North American journals.<sup>6</sup>

Positivism says that “there is only *one* logic of science, to which any intellectual activity aspiring to the title of ‘science’ must conform” (Keat and Urry, 1975:25, emphasis in original). Thus, the social sciences and the natural sciences must use the same method. In this view, differences between the natural and social sciences are due to the immaturity or youth of the social sciences and their subject matter. Eventually, all science, including the social sciences, will be like the most advanced science, physics. Differences among the sciences may exist as to their subject matter (e.g., geology requires techniques different from astrophysics or microbiology because of the objects being studied), but all sciences share a common set of principles and logic.

Positivism sees social science as an *organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human activity.*

### The Questions

#### 1. Why should one conduct social scientific research?

The ultimate purpose of research is scientific explanation—to discover and document universal laws of human behavior. Another important reason is to learn about how the world works so that people can control or predict events. This latter idea is sometimes called an *instrumental orientation*. It is a technical interest that assumes knowledge can be used as a tool or instrument to satisfy human wants and to control the physical and social environment. Once people discover the laws that govern human life, we can use them to alter social relations, to improve how things are done, and to predict what will happen. For example, a positivist uses a theory of how we learn to identify key factors of an educational system (e.g., class size, student body habits, teacher education, etc.) that predict increased student learning. He or she conducts a study and precisely measures factors to verify causal laws in the theory. The positivist then builds knowledge that is used by an education official to change a school environment in ways that will improve learning by students. This view is summarized by Turner (1985:39), a defender of the positivist approach who stated that the “social universe is amenable to the development of abstract laws that can be tested through the careful collection of data” and that researchers need to “develop abstract principles and models about invariant and timeless properties of the social universe.”

Positivists say that scientists are engaged in a never-ending quest for knowledge. As more is learned, new complexities are discovered and there is still more to learn. Early versions of positivism maintained that humans can never know everything because only God possesses such knowledge; however, as creatures placed on this planet with great

capacity for knowledge, humans have a duty to discover as much as they can.

2. *What is the fundamental nature of social reality?*

Modern positivists hold an essentialist view: Reality is real; it exists "out there" and is waiting to be discovered. This idea notes that human perception and intellect may be flawed, and reality may be difficult to pin down, but it does exist. Moreover, social reality is not random; it is patterned and has order. Without this assumption (i.e., if the world were chaotic and without regularity), logic and prediction would be impossible. Science lets humans discover this order and the laws of nature. "The basic, observational laws of science are considered to be true, primary and certain, because they are built into the fabric of the natural world. Discovering a law is like discovering America, in the sense that both are already waiting to be revealed" (Mulkay, 1979:21).

Two other assumptions are that basic patterns of social reality are stable and knowledge of them is additive. The regularity in social reality does not change over time, and laws discovered today will hold in the future. We can study many parts of reality one at a time, then add the fragments together to get a picture of the whole. Some early versions of this assumption said that the order in nature was created by and is evidence of the existence of God or a supreme being.

3. *What is the basic nature of human beings?*

In positivism, humans are assumed to be self-interested, pleasure-seeking, rational individuals. People operate on the basis of external causes, with the same cause having the same effect on everyone. We can learn about people by observing their behavior, what we see in external reality. This is more important than what happens in internal, subjective reality. Sometimes, this is called a *mechanical model of man* or a behaviorist approach. It means people respond to external forces that are as real as physical forces on objects. Durkheim (1938:27) stated, "Social phenomena are things and ought to be studied as things." External reality suggests that researchers may not have to examine unseen, internal motivations of an individual's behavior.

Positivists say that human behavior or social institutions do not just happen because of what a person wants. Human events can be explained with reference to *causal laws*, which describe causes and effects. They identify forces that operate in a manner similar to natural laws in the hard sciences. This suggests that the idea of free will is largely fiction and describes only aspects of human behavior that science has not yet conquered.

Few positivists believe in absolute determinism, wherein people are mere robots or puppets who must always respond exactly the same. Rather, the causal laws are probabilistic. Laws hold for large groups of people or occur in many situations. Researchers can estimate the odds of a predicted behavior. In other words, the laws permit us to make accurate predictions of how often a social behavior will occur within a large group. The causal laws cannot predict the specific behavior of a specific person in each situation. However, they can say that under conditions *X, Y, and Z*, there is a 95 percent probability that one-half of the people will engage in a specified behavior. For example, researchers cannot predict how John Smith will vote in the next election. However, after learning dozens of facts about John Smith and using laws of political behavior, researchers can accurately state that there is an 85 percent chance that he (and people like him) will vote for candidate C. This does not mean that Mr. Smith cannot vote for whomever he wants. Rather, his voting behavior is patterned and shaped by outside social forces.

4. *What is the relationship between science and common sense?*

Positivists see a clear separation between science and nonscience. Of the many ways to seek truth, science is special—the "best" way. Scientific knowledge is better than and will eventually replace the inferior ways of gaining knowledge (e.g., magic, religion, astrology, personal experience, and tradition). Science borrows some ideas from common sense, but it replaces the parts of common sense that are sloppy, logically inconsistent, unsystematic, and full of bias. The scientific community—with its special norms, scientific attitudes, and techniques—can regularly produce

"Truth," whereas common sense does so only rarely and inconsistently.

A researcher working in a positivist tradition often creates a whole new vocabulary—a set of scientific ideas and associated terms. He or she wants to use ideas that are more logically consistent and carefully thought out and refined than the ideas found in everyday common sense. The positivist researcher "should formulate new concepts at the outset and not rely on lay notions. . . . There is a preference for the precision which is believed possible in a discipline-based language rather than the vague and imprecise language of everyday life" (Blaikie, 1993:206). In his *Rules of the Sociological Method*, Durkheim warned the researcher to "resolutely deny himself the use of those concepts formed outside of science" and to "free himself from those fallacious notions which hold sway over the mind of the ordinary person" (quoted in Gilbert, 1992:4).

5. *What constitutes an explanation or theory of social reality?*

Positivist scientific explanation is *nomothetic* (*nomos* means law in Greek); it is based on a system of general laws. Science explains why social life is the way it is by discovering causal laws. Explanation takes the form: *Y* is caused by *X* because *Y* and *X* are specific instances of a causal law. In other words, a positivist explanation states the general causal law that applies to or covers specific observations about social life. This is why positivism is said to use a *covering law model* of explanation.

Positivism assumes that the laws operate according to strict, logical reasoning. Researchers connect causal laws and the specific facts observed about social life with deductive logic. Positivists believe that eventually laws and theories of social science will be expressed in formal symbolic systems, with axioms, corollaries, postulates, and theorems. Someday, social science theories will look similar to those in mathematics and the natural sciences.

The laws of human behavior should be universally valid, holding in all historical eras and in all cultures. As noted before, the laws are stated in a probabilistic form for aggregates of people. For ex-

ample, a positivist explanation of a rise in the crime rate in Toronto in the 1990s refers to factors (e.g., rising divorce rate, declining commitment to traditional moral values, etc.) that could be found any where at any time: in Buenos Aires in the 1890s, Chicago in the 1940s, or Singapore in the 2010s. The factors logically obey a general law (e.g., the breakdown of a traditional moral order causes an increase in the rate of criminal behavior).

Nobel Prize-winner Steven Weinberg (2001:50) expressed the nomothetic outlook in positivism and how it is connected to positivist thinking when he said,

*We hope that in the future we will have achieved an understanding of all the regularities that we see in nature, based on a few simple principles, laws of nature, from which all other regularities can be deduced. These laws will be the explanation of whatever principles . . . can be deduced directly from them, and those directly deduced principles will be the explanations of whatever principles can be deduced from them, and so on. . . . Perhaps our best hope for a final explanation is to discover a set of final laws of nature and show that this is the only logically consistent, rich theory. . . . This may happen in a century or two.*

6. *How does one determine whether an explanation is true or false?*

Positivism developed during the Enlightenment (post-Middle Ages) period of Western thinking.<sup>7</sup> It includes an important Enlightenment idea: People can recognize truth and distinguish it from falsehood by applying reason, and, in the long run, over centuries, the human condition can improve through the use of reason and the pursuit of truth. As knowledge grows and ignorance declines, conditions will improve. This optimistic belief that knowledge accumulates over time plays a role in how positivists sort out true from false explanations.

In positivism, to be seriously considered, explanations must meet two conditions: they must (1) have no logical contradictions and (2) be consistent with observed facts. Yet, this is not sufficient. *Replication* is also needed.<sup>8</sup> Any researcher can replicate or reproduce the results of others. This puts

a check on the whole system for creating knowledge. It ensures honesty because it repeatedly tests explanations against hard, objective facts. An open competition exists among opposing explanations, impartial rules are used, neutral facts are accurately observed, and logic is rigorously followed. Over time, scientific knowledge accumulates as different researchers conduct independent tests of a theory and add up the findings. For example, a researcher finds that rising unemployment is associated with increased child abuse in San Diego, California. A causal relationship between unemployment and child abuse is not demonstrated with just one study, however. Confirming a causal law depends on finding the same relationship in other cities with other researchers conducting independent tests using careful measures of unemployment and child abuse.

7. *What does good evidence or factual information look like?*

Positivism is dualist; it assumes that the cold, observable facts are fundamentally distinct from ideas, values, or theories. Empirical facts exist apart from personal ideas or thoughts. We can observe them by using our sense organs (eyesight, smell, hearing, and touch) or special instruments that extend the senses (e.g., telescopes, microscopes, and Geiger counters). Some researchers express this idea as a language of empirical fact and a language of abstract theory. If people disagree over facts, it must be due to the improper use of measurement instruments or to sloppy or inadequate observation. "Scientific explanation involves the accurate and precise measurement of phenomena" (Derksen and Gartrell, 1992:1714). Knowledge of observable reality obtained using our senses is superior to other knowledge (e.g., intuition, emotional feelings, etc.); it allows us to separate true from false ideas about social life.

Positivists combine this idea of the privileged status of empirical observation with the assumption that subjective understanding of the empirical world is shared. Factual knowledge is not based on just one person's observations and reasoning. It must be capable of being communicated and shared by others. Rational people who independently observe facts will agree on them. This is called *intersubjec-*

*tivity*, or the shared subjective acknowledgment of the facts. Many positivists accept a version of falsification doctrine outlined by the Anglo-Austrian philosopher Sir Karl Popper (1902–1991) in *The Logic of Scientific Discovery* (1934). Popper argued that claims to knowledge "can never be proven or fully justified, they can only be refused" (Phillips, 1987:3). Good evidence for a causal law involves more than piling up supporting facts: it involves looking for evidence that contradicts the causal law. In a classic example, if I want to test the claim that all swans are white, and I find 1,000 white swans, I have not totally confirmed a causal law or pattern. All it takes is locating one black swan to refute my claim—one piece of negative evidence. This means that researchers search for disconfirming evidence, and even then, the best they can say is, "Thus far, I have not been able to locate any, so the claim might be right."

8. *Where do sociopolitical values enter into science?*

Positivists argue for a *value-free science* that is objective. There are two meanings of the term *objective*: that observers agree on what they see and that science is not based on values, opinions, attitudes, or beliefs.<sup>9</sup> Positivists see science as a special, distinctive part of society that is free of personal, political, or religious values. It operates independently of the social and cultural forces affecting other human activity. It involves applying strict rational thinking and systematic observation in a manner that transcends personal prejudices, biases, and values. The norms and operation of the scientific community keep science objective. Researchers accept and internalize the norms as part of their membership in the scientific community. The scientific community has an elaborate system of checks and balances to guard against value bias. A researcher's proper role is to be a "disinterested scientist."<sup>10</sup> The positivist view on values has had an immense impact on how people see ethical issues and knowledge:

*To the degree that a positivist theory of scientific knowledge has become the criterion for all knowledge, moral insights and political commitments have been delegitimized as irrational or reduced*



*to mere subjective inclination. Ethical judgments are now thought of as personal opinion. (Brown, 1989:37)*

### Summary

You probably find many positivist assumptions familiar because the positivist approach is widely taught as being the same as science. Few people are aware of the origins of positivist assumptions. An early religious aspect exists in some assumptions because the scholars who developed them in western Europe during the eighteenth and nineteenth centuries had religious training and lived in a cultural-historical setting that assumed specific religious beliefs. Many positivist assumptions will reappear when you read about quantitative research techniques and measurement in later chapters. A positivist approach implies that a researcher begins with a general cause-effect relationship that he or she logically derives from a possible causal law in general theory. He or she logically links the abstract ideas of the relationship to precise measurements of the social world. The researcher remains detached, neutral, and objective as he or she measures aspects of social life, examines evidence, and replicates the research of others. These processes lead to an empirical test of and confirmation for the laws of social life as outlined in a theory.

When and why did positivist social science become dominant? The story is long and complicated. Many present it as a natural advance or the inevitable progress of pure knowledge. Positivist social science expanded largely due to changes in the larger political-social context. Positivism gained dominance in the United States and became the model for social research in many nations after World War II, once the United States became the leading world power. A thrust toward objectivism—a strong version of positivism—developed in U.S. sociology during the 1920s. Objectivism grew as researchers shifted away from social reform-oriented studies with less formal or precise techniques toward rigorous techniques in a “value-free” manner modeled on the natural sciences. They created careful measures of the external behavior of individuals to produce quantitative data that could be subjected to statistical analysis. Objectivism displaced locally based studies that

were action oriented and largely qualitative. It grew because competition among researchers for prestige and status combined with other pressures, including funds from private foundations (e.g., Ford Foundation, Rockefeller Foundation, etc.), university administrators who wanted to avoid unconventional politics, a desire by researchers for a public image of serious professionalism, and the information needs of expanding government and corporate bureaucracies. These pressures combined to redefine social research. The less technical, applied local studies conducted by social reformers (often women) were often overshadowed by apolitical, precise quantitative research by male professors in university departments.<sup>11</sup>

### INTERPRETIVE SOCIAL SCIENCE

*Interpretive social science* can be traced to German sociologist Max Weber (1864–1920) and German philosopher Wilhelm Dilthey (1833–1911). In his major work, *Einleitung in die Geisteswissenschaften (Introduction to the Human Sciences)* (1883), Dilthey argued that there were two fundamentally different types of science: *Naturwissenschaft* and *Geisteswissenschaft*. The former is based on *Erklärung*, or abstract explanation. The latter is rooted in an empathetic understanding, or *Verstehen*, of the everyday lived experience of people in specific historical settings. Weber argued that social science needed to study *meaningful social action*, or social action with a purpose. He embraced *Verstehen* and felt that we must learn the personal reasons or motives that shape a person's internal feelings and guide decisions to act in particular ways.

*We shall speak of “social action” wherever human action is subjectively related in meaning to the behavior of others. An unintended collision of two cyclists, for example, shall not be called social action. But we will define as such their possible prior attempts to dodge one another. . . . Social action is not the only kind of action significant for sociological causal explanation, but it is the primary object of an “interpretive sociology.” (Weber, 1981:159)*

Interpretive social science is related to *hermeneutics*, a theory of meaning that originated in

the nineteenth century. The term comes from a god in Greek mythology, Hermes, who had the job of communicating the desires of the gods to mortals. It "literally means making the obscure plain" (Blaikie, 1993:28). Hermeneutics is largely found in the humanities (philosophy, art history, religious studies, linguistics, and literary criticism). It emphasizes a detailed reading or examination of *text*, which could refer to a conversation, written words, or pictures. A researcher conducts "a reading" to discover meaning embedded within text. Each reader brings his or her subjective experience to a text. When studying the text, the researcher/reader tries to absorb or get inside the viewpoint it presents as a whole, and then develop a deep understanding of how its parts relate to the whole. In other words, true meaning is rarely simple or obvious on the surface; one reaches it only through a detailed study of the text, contemplating its many messages and seeking the connections among its parts.

There are several varieties of interpretive social science (ISS): hermeneutics, constructionism, ethnomethodology, cognitive, idealist, phenomenological, subjectivist, and qualitative sociology.<sup>12</sup> An interpretive approach is associated with the symbolic interactionist, or the 1920s–1930s Chicago school in sociology. It is often called a qualitative method of research.

Interpretive researchers often use participant observation and field research. These techniques require that researchers spend many hours in direct personal contact with those being studied. Other ISS researchers analyze transcripts of conversations or study videotapes of behavior in extraordinary detail, looking for subtle nonverbal communication, to understand details of interactions in their context. A positivist researcher will precisely measure selected quantitative details about thousands of people and use statistics, whereas an interpretive researcher may live a year with a dozen people to gather large quantities of detailed qualitative data to acquire an in-depth understanding of how they create meaning in everyday life.

In contrast to positivism's instrumental orientation, the interpretive approach adopts a *practical orientation*. It is concerned with how ordinary people manage their practical affairs in everyday life, or

how they get things done. Interpretive social science is concerned with how people interact and get along with each other. In general, the interpretive approach is *the systematic analysis of socially meaningful action through the direct detailed observation of people in natural settings in order to arrive at understandings and interpretations of how people create and maintain their social worlds.*

### The Questions

#### 1. Why should one conduct social scientific research?

For interpretive researchers, the goal of social research is to develop an understanding of social life and discover how people construct meaning in natural settings. An interpretive researcher wants to learn what is meaningful or relevant to the people being studied, or how individuals experience daily life. The researcher does this by getting to know a particular social setting and seeing it from the point of view of those in it. The researcher shares the feelings and interpretations of the people he or she studies and sees things through their eyes. Summarizing the goal of his 10-year study of Willie, a repair shop owner in a rural area, interpretive researcher Harper (1987:12) said, "The goal of the research was to share Willie's perspective."

Interpretive researchers study *meaningful social action*, not just the external or observable behavior of people. Social action is the action to which people attach subjective meaning; it is activity with a purpose or intent. Nonhuman species lack culture and the reasoning to plan out things and attach purpose to their behavior; therefore, social scientists should study what is unique to human social behavior. The researcher must take into account the social actor's reasons and the social context of action. For example, a physical reflex such as eye blinking is human behavior that is rarely an intentional social action (i.e., done for a reason or with human motivation), but in some situations, it can be such a social action (i.e., a wink). The activities of social actors need more than simply to have a purpose; they must also be social and "for action to be regarded as social and to be of interest to the social scientist, the actor must attach subjec-

tive meaning to it and it must be directed towards the activities of other people" (Blaikie, 1993:37).

The interpretive approach notes that human action has little inherent meaning. It acquires meaning among people who share a meaning system that permits them to interpret the action as a socially relevant sign or action. For example, raising one finger in a situation with other people can express social meaning; the specific meaning it expresses (e.g., a direction, an expression of friendship, a vulgar sign) depends on the cultural meaning system that the social actors share.

### 2. *What is the fundamental nature of social reality?*

The interpretive approach sees human social life as an accomplishment. It is intentionally created out of the purposeful actions of interacting social beings. In contrast to the realist idea (shared by positivist and critical social science) that social life is "out there," independent of human consciousness, ISS says social reality is not waiting to be discovered. Instead, the social world is largely what people perceive it to be. Social life exists as people experience it and give it meaning. It is fluid and fragile. People construct it by interacting with others in ongoing processes of communication and negotiation. They operate on the basis of untested assumptions and taken-for-granted knowledge about people and events around them.

The interpretive approach holds that social life is based on social interactions and socially constructed meaning systems. People possess an internally experienced sense of reality. This subjective sense of reality is crucial to grasp human social life. External human behavior is often an obscure indicator of true social meaning. In ISS, "access to other human beings is possible, however, only by indirect means: what we experience initially are gestures, sound, and actions and only in the process of understanding do we take the step from external signs to the underlying inner life" (Bleicher, 1980:9).

For interpretive researchers, social reality is based on people's definitions of it. A person's definition of a situation tells him or her how to assign meaning in constantly shifting conditions. For example, my social reality includes ways to act toward a female called *mother*. I hug her, give her gifts on

her birthday, and confide in her. I learned to do this through cultural role expectations and years of experience in a close social relationship. Yet, the social reality of the relationship is not fixed. The definition of the situation can change dramatically. The social reality would be shattered, for example, if the same woman became demented, no longer recognized me, and was institutionalized as insane.

Positivists assume that everyone shares the same meaning system and that we all experience the world in the same way. The interpretive approach says that people may or may not experience social or physical reality in the same way. Key questions for an interpretive researcher are: How do people experience the world? Do they create and share meaning? Interpretive social science points to numerous examples in which several people have seen, heard, or even touched the same physical object, yet come away with different meanings or interpretations of it. The interpretive researcher argues that positivists avoid important questions and impose one way of experiencing the world on others. By contrast, ISS assumes that multiple interpretations of human experience, or realities, are possible. In sum, the ISS approach sees social reality as consisting of people who construct meaning and create interpretations through their daily social interaction.

### 3. *What is the basic nature of human beings?*

Ordinary people are engaged in a process of creating flexible systems of meaning through social interaction. They then use such meanings to interpret their social world and make sense of their lives. Human behavior may be patterned and regular, but this is not due to preexisting laws waiting to be discovered. The patterns are created out of evolving meaning systems or social conventions that people generate as they socially interact. Important questions for the interpretive researcher are: What do people believe to be true? What do they hold to be relevant? How do they define what they are doing?

Interpretive researchers want to discover what actions mean to the people who engage in them. It makes little sense to try to deduce social life from abstract, logical theories that may not relate to the feelings and experiences of ordinary people. People have their own reasons for their

actions, and researchers need to learn the reasons people use. Individual motives are crucial to consider even if they are irrational, carry deep emotions, and contain false facts and prejudices.

Some interpretive researchers say that the laws sought by positivists may be found only after the scientific community understands how people create and use meaning systems, how common sense develops, and how people apply their common sense to situations. Other interpretive researchers say there are no such laws of human social life, so the search is futile. Schwandt (1994:130) noted, "Contemporary interpretivists and constructivists are not likely to hold that there are any unquestioned *foundations* for any interpretation" (emphasis in original). In other words, the creation of meaning and the sense of reality is only what people think it is, and no set of meanings are better or superior to others. For example, an interpretive researcher sees the desire to discover laws of human behavior in which unemployment causes child abuse as premature at best and dangerous at worst. Instead, he or she wants to understand how people subjectively experience unemployment and what the loss of a job means in their everyday lives. Likewise, the interpretive researcher wants to learn how child abusers account for their actions, what reasons they give for abuse, and how they feel about abusing a child. He or she explores the meaning of being unemployed and the reasons for abusing a child in order to understand what is happening to the people who are directly involved.

4. *What is the relationship between science and common sense?*

Positivists see common sense as inferior to science. By contrast, interpretive researchers argue that ordinary people use common sense to guide them in daily living; therefore, one must first grasp common sense. People use common sense all the time. It is a stockpile of everyday theories people use to organize and explain events in the world. It is critical to understand common sense because it contains the meanings that people use when they engage in routine social interactions.

An interpretive approach says that common sense and the positivist's laws are alternative ways

to interpret the world; that is, they are distinct meaning systems. Neither common sense nor scientific law has all the answers. Neither is inferior or superior to the other. Instead, interpretive researchers see each as important in its own domain: each is created in a different way for a different purpose.

Ordinary people could not function in daily life if they based their actions on science alone. For example, in order to boil an egg, people use unsystematic experiences, habits, and guesswork. A strict application of natural science would require one to know the laws of physics that determine heating the water and the chemical laws that govern the changes in the egg's internal composition. Even natural scientists use common sense when they are not "doing science" in their area of expertise.

The interpretive approach says that common sense is a vital source of information for understanding people. A person's common sense and sense of reality emerge from a pragmatic orientation and set of assumptions about the world. People do not know that common sense is true, but they must assume that it is true in order to get anything accomplished. The interpretive philosopher, Alfred Schutz (1899–1959), called this the *natural attitude*. It is the assumption that the world existed before you arrived and it will continue to exist after you depart. People develop ways to maintain or reproduce a sense of reality based on systems of meaning that they create in the course of social interactions with others.

5. *What constitutes an explanation or theory of social reality?*

Positivists believe that social theory should be similar to natural science theory with deductive axioms, theorems, and interconnected causal laws. Instead of a maze of interconnected laws and propositions, theory for ISS tells a story. Interpretive social science theory describes and interprets how people conduct their daily lives. It contains concepts and limited generalizations, but it does not dramatically depart from the experience and inner reality of the people being studied.

The interpretive approach is ideographic and inductive. *Idiographic* means the approach provides a symbolic representation or "thick" description of

something else. An interpretive research report may read more like a novel or a biography than like a mathematical proof. It is rich in detailed description and limited in abstraction. An interpretive analysis of a social setting, like the interpretation of a literary work, has internal coherence and is rooted in the text, which here refers to the meaningful everyday experiences of the people being studied.

Interpretive theory gives the reader a feel for another's social reality. The theory does this by revealing the meanings, values, interpretive schemes, and rules of living used by people in their daily lives. For example, it may describe major typifications people use in a setting to recognize and interpret their experiences. A *typification* is an informal model, scheme, or set of beliefs that people use to categorize and organize the flow of the daily events they experience.

Thus, interpretive theory resembles a map that outlines a social world or a tourist guidebook that describes local customs and informal norms. For example, an interpretive report on professional gamblers tells the reader about the careers and daily concerns of such people. It describes the specific individuals studied, the locations and activities observed, and the strategies used to gamble. The reader learns how professional gamblers speak, how they view others, and what their fears or ambitions are. The researcher gives a few generalizations and organizing concepts. The bulk of the report is a detailed description of the gambling world. The theory and evidence are interwoven to create a unified whole; the concepts and generalizations are wedded to their context.

6. *How does one determine whether an explanation is true or false?*

Positivists logically deduce from theory, collect data, and analyze facts in ways that other scientists can replicate. An explanation is considered to be true when it stands up to replication. For ISS, a theory is true if it makes sense to those being studied and if it allows others to understand deeply or enter the reality of those being studied. The theory or description is accurate if the researcher conveys a deep understanding of the way others reason, feel, and see things. Prediction may be possible, but it is a type of

prediction that occurs when two people are very close, as when they have been married for a long time. An interpretive explanation documents the actor's point of view and translates it into a form that is intelligible to readers. Smart (1976:100) calls this the *postulate of adequacy*:

*The postulate of adequacy asserts that if a scientific account of human action were to be presented to an individual actor as a script it must be understandable to that actor, translatable into action by the actor and furthermore comprehensible to his fellow actors in terms of a common sense interpretation of everyday life.*

An interpretive researcher's description of another person's meaning system is a *secondary account*. Like a traveler telling about a foreign land, the researcher is not a native. Such an outside view never equals a primary account given by those being studied, but the closer it is to the native's primary account, the better. For example, one way to test the truthfulness of an interpretive study of professional gambling is to have professional gamblers read it and verify its accuracy. A good report tells a reader enough about the world of professional gambling so that if the reader absorbed it and then met a professional gambler, the understanding of gambling jargon, outlook, and life-style might lead the gambler to ask whether the reader was also a professional gambler.

7. *What does good evidence or factual information look like?*

Good evidence in positivism is observable, precise, and independent of theory and values. By contrast, ISS sees the unique features of specific contexts and meanings as essential to understand social meaning. Evidence about social action cannot be isolated from the context in which it occurs or the meanings assigned to it by the social actors involved. As Weber (1978:5) said, "Empathic or appreciative accuracy is attained when, through sympathetic participation, we can adequately grasp the emotional context in which the action took place."

Interpretive social science sees facts as fluid and embedded within a meaning system in the interpretive approach; they are not impartial, objective, and neutral. Facts are context-specific actions

that depend on the interpretations of particular people in a social setting. What the positivist assumes—that neutral outsiders observe behavior and see unambiguous, objective facts—an ISS researcher takes as a question to be addressed: How do people observe ambiguities in social life and assign meaning? Interpretive researchers say that social situations contain a great deal of ambiguity. This makes it almost impossible to discover straightforward, objective facts. Most behaviors or statements can have several meanings and can be interpreted in multiple ways. In the flow of ambiguous social life, people are constantly “making sense” by reassessing clues in the situation and assigning meanings until they “know what’s going on.” For example, I see a woman holding her hand out, palm forward. Even this simple act carries multiple potential meanings: I do not know its meaning without knowing the social situation. It could mean that she is warding off a potential mugger, drying her nail polish, hailing a taxi, admiring a new ring, telling oncoming traffic to stop for her, or requesting five bagels at a deli counter.<sup>13</sup> People are able to assign appropriate meaning to an act or statement only if they take the social context in which it occurs into account.

Interpretive researchers rarely ask survey questions, aggregate the answers of many people, and claim to have something meaningful. Each person’s interpretation of the survey question must be placed in a context (e.g., the individual’s previous experiences or the survey interview situation), and the true meaning of a person’s answer will vary according to the interview or questioning context. Moreover, because each person assigns a somewhat different meaning to the question and answer, combining answers only produces nonsense.

When studying a setting or data, interpretive researchers of the ethnomethodological school often use bracketing. *Bracketing* is a mental exercise in which the researcher identifies then sets aside taken-for-granted assumptions used in a social scene. The researcher questions and reexamines ordinary events that have an “obvious” meaning to those involved. For example, at an office work setting, one male co-worker in his late 20s says to the male researcher, “We’re getting together for softball after work tonight. Do you want to join us?”

What is *not said* is that the researcher should know the rules of softball, own a softball glove, and change from a business suit into other clothing before the game. Bracketing reveals what “everyone knows”—what people assume but rarely say. It helps a researcher reveal key features of the social scene that make other events possible. It makes visible the underlying scaffolding of understandings on which actions are based.

#### 8. *When do sociopolitical values enter into science?*

The positivist researcher calls for eliminating values and operating within an apolitical environment. The interpretive researcher, by contrast, argues that researchers should reflect on, reexamine, and analyze personal points of view and feelings as a part of the process of studying others. The interpretive researcher needs, at least temporarily, to empathize with and share in the social and political commitments or values of those he or she studies.

Interpretive research does not try to be value free. Indeed, ISS questions the possibility of achieving it. This is because interpretive research sees values and meaning infused everywhere in everything. What the positivist calls value freedom is just another meaning system and value—the value of positivist science. The interpretive researcher urges making values explicit and does not assume that any one set of values is better or worse. The researcher’s proper role is to be a “passionate participant” (Guba and Lincoln, 1994:115), involved with those being studied.

#### Summary

The interpretive approach existed for many years as the loyal opposition to positivism. Although some positivist social researchers accept the interpretive approach as useful in exploratory research (see Chapter 2), few positivists consider it to be scientific. You will read again about the interpretive outlook when you examine field research and, to a lesser degree, historical-comparative research in later chapters. The interpretive approach is the foundation of social research techniques that are sensitive to context, that use various methods to get inside the ways others see the world, and that are more

concerned with achieving an empathic understanding than with testing laws of human behavior.

### CRITICAL SOCIAL SCIENCE

*Critical social science (CSS)* offers a third alternative to the meaning of methodology. Versions of this approach are called dialectical materialism, class analysis, and structuralism.<sup>14</sup> Critical social science mixes nomothetic and ideographic approaches. It agrees with many of the criticisms the interpretive approach directs at positivism, but it adds some of its own and disagrees with ISS on some points. This approach is traced to Karl Marx (1818–1883) and Sigmund Freud (1856–1939), and was elaborated on by Theodor Adorno (1903–1969), Erich Fromm (1900–1980), and Herbert Marcuse (1898–1979). Often, CSS is associated with conflict theory, feminist analysis, and radical psychotherapy. It is also tied to critical theory, first developed by the Frankfurt School in Germany in the 1930s.<sup>15</sup> Critical social science criticized positivist science as being narrow, antidemocratic and nonhumanist in its use of reason. This was outlined in Adorno's essays, "Sociology and Empirical Research" (1976a) and "The Logic of the Social Sciences" (1976b). The well-known living representative of the school, Jurgen Habermas (1929– ), advanced critical social science in his *Knowledge and Human Interests* (1971). In the field of education, Freire's *Pedagogy of the Oppressed* (1970) also falls within the CSS approach.

Another example is the French sociologist Pierre Bourdieu.<sup>16</sup> Bourdieu advocates a distinct approach to theory and research. The basic approach is antipositivist and antiinterpretive. He rejects both the objective, lawlike quantitative empirical approach of positivists and the subjective, voluntarist approach of ISS. Bourdieu argues that social research must be reflexive (i.e., study and criticize itself as well as its subject matter) and it is necessarily political. He also believes that a goal of research is to uncover and demystify ordinary events. Recently, a philosophical approach called *realism* has been integrated into critical social science.<sup>17</sup>

Interpretive social science criticizes positivism for failing to deal with the meanings of real people and their capacity to feel and think. It also believes

positivism ignores the social context and is antihumanist. Critical social science agrees with these criticisms of positivism. It also believes that positivism defends the status quo because it assumes an unchanging social order instead of seeing current society as a particular stage in an ongoing process.

Critical researchers criticize the interpretive approach for being too subjective and relativist. The critical researcher says that ISS sees all points of view as equal. The interpretive approach treats people's ideas as more important than actual conditions and focuses on localized, micro-level, short-term settings while ignoring the broader and long-term context. Interpretive social science is overly concerned with subjective reality. To critical researchers, ISS is amoral and passive. It does not take a strong value position or actively help people to see false illusions around them so that they can improve their lives. In general, CSS defines social science as a *critical process of inquiry that goes beyond surface illusions to uncover the real structures in the material world in order to help people change conditions and build a better world for themselves.*

### The Questions

#### 1. Why should one conduct social scientific research?

The purpose of critical research is to change the world. Critical researchers conduct research to critique and transform social relations. They do this by revealing the underlying sources of social relations and empowering people, especially less powerful people. More specifically, they uncover myths, reveal hidden truths, and help people to change the world for themselves. In CSS, the purpose is "to explain a social order in such a way that it becomes itself the catalyst which leads to the transformation of this social order" (Fay, 1987:27).

The critical social researcher is action oriented. He or she is dissatisfied with the way things are and seeks dramatic improvements. A positivist researcher usually tries to solve problems as they are defined by government or corporate elites, without "rocking the boat." By contrast, the critical researcher may create problems by "intentionally raising and identifying more problems than the ruling elites in



politics and administration are able to accommodate, much less to 'solve' " (Offe, 1981:34-35). The critical researcher asks embarrassing questions, exposes hypocrisy, and investigates conditions in order to encourage dramatic grass-roots action. "The point of all science, indeed all learning, is to change and develop out of our understandings and reduce illusion. . . . Learning is the reducing of illusion and ignorance: it can help free us from domination by hitherto unacknowledged constraints, dogmas and falsehoods" (Sayer, 1992:252).

For example, a critical researcher conducts a study showing that there is racial discrimination in rental housing. White landlords refuse to rent to minority tenants. A critical researcher would not just publish a report and then wait for the fair housing office of the city government to act. The researcher gives the report to newspapers and meets with grass-roots organizations to discuss the results of the study. He or she works with activists to mobilize political action in the name of social justice. When grass-roots people picket the landlords' offices, flood the landlords with racial minority applicants for apartments, or organize a march on city hall demanding action, the critical researcher predicts that the landlords will be forced to rent to minorities. The goal of research is to empower. Kincheloe and McLaren (1994:140) stated:

*Critical research can be best understood in the context of the empowerment of individuals. Inquiry that aspires to the name critical must be connected to an attempt to confront the injustice of a particular society or sphere within the society. Research thus becomes a transformative endeavor unembarrassed by the label "political" and unafraid to consummate a relationship with an emancipatory consciousness.*

2. *What is the fundamental nature of social reality?*

Like positivism, CSS adopts a realist position (i.e., social reality is "out there" to be discovered). It differs from positivism in that it is historical realism in which reality is seen as constantly shaped by social, political, cultural, and similar factors. Social reality evolves over time. It may be misleading on the surface and have unobservable enduring

real structures of power underneath. In CSS, it is assumed that social reality always changes and the change is rooted in the tensions, conflicts, or contradictions of social relations or institutions. It focuses on change and conflict, especially paradoxes or conflicts that are inherent in the very way social relations are organized. Such paradoxes or inner conflicts reveal much about the true nature of social reality.

A biological analogy illustrates such paradoxes. Death and birth appear to be opposites, yet death begins with birth. We begin to die the day we are born. This sounds strange at first, but our bodies begin to age and decay as we live. There is an inner contradiction. Birth necessarily brings about its negation, death. Thus, the inner-tension between living and aging goes on all the time. In order to live, our bodies must age, or move toward death. Death and birth are less the opposites they appear to be than the interlocked parts of a single larger process of change. Sometimes, this idea of a paradoxical inner conflict or contradiction that brings about change is called the *dialectic*.

Change can be uneven—extremely slow for long periods, then suddenly speed up. The critical researcher studies the past or different societies in order to better see change or to discover alternative ways to organize social life. Critical social science is interested in the development of new social relations, the evolution of social institutions or societies, and the causes of major social change.

A critical approach notes that social change and conflict are not always apparent or observable. The social world is full of illusion, myth, and distortion. Initial observations of the world are only partial and often misleading because the human senses are limited. The appearances in surface reality do not have to be based on conscious deception. The immediately perceived characteristics of objects, events, or social relations rarely reveal everything. These illusions allow some groups in society to hold power and exploit others. Karl Marx, German sociologist and political thinker, stated this forcefully (Marx and Engels, 1947:39):

*The ideas of the ruling class are in every epoch the ruling ideas: . . . The class which has the means of*



*material production at its disposal, has control at the same time over the means of mental production, so that . . . the ideas of those who lack the means of mental production are subject to it.*

The critical science approach argues that social reality has multiple layers. Behind the immediately observable surface reality lie deep structures or unobservable mechanisms. The events and relations of superficial social reality are based on deep structures beneath the surface of casual observation. We can uncover or expose such structures with effort. Intense and directed questioning, a good theory about where to look, a clear value position, and a historical orientation help the critical researcher probe below the surface reality and discover the deep structures.

Both ISS and CSS see social reality as changing and subject to socially created meanings. The critical science approach disagrees with the ISS emphasis on micro-level interpersonal interactions and its acceptance of any meaning system. By contrast, CSS says that although subjective meaning is important, there are real, objective relations that shape social relations. The critical researcher questions social situations and places them in a larger, macro-level historical context.

For example, an interpretive researcher studies the interactions of a male boss and his female secretary and provides a colorful account of their rules of behavior, interpretive mechanisms, and systems of meaning. By contrast, the critical researcher begins with a point of view (e.g., feminist) and notes issues ignored in an interpretive description: Why are bosses male and secretaries female? Why do the roles of boss and secretary have unequal power? Why are such roles created in large organizations throughout our society? How did the unequal power come about historically, and were secretaries always female? How do sex roles in society affect the relationship? Why can the boss make off-color jokes that humiliate the secretary? How are the roles of boss and secretary in conflict based on the everyday conditions faced by the boss (large salary, country club membership, new car, large home, retirement plan, stock investments, etc.) and those of the secretary (low hourly pay, children to care for, concerns about

how to pay bills, television as her only recreation, etc.)? Can the secretary join with others to challenge the power of her boss and similar bosses?

### 3. *What is the basic nature of human beings?*

Positivism views social forces almost as if they had a life of their own and operated regardless of people's personal wishes. Such social forces have power over and operate on people. The critical science approach rejects this idea as reification. *Reification* is giving the creations of your own activity a separate, alien existence. It is separating or removing yourself from what you have created, until you no longer recognize it as part of you or as something you helped to bring about. Once you no longer see your contributions and treat what you have helped to create as an outside force, you lose control over your destiny.

For example, two people meet, fall in love, marry, and set up a household. Within two years, the male feels helpless and trapped by unseen forces. He fights with his wife over child care and household chores. The man's social values say that it is wrong for him to change diapers or wash dishes. His agreement to marry and adopt a particular life-style are creations of his socialization and personal decisions. Thus, the unseen forces acting on him that make him feel trapped and helpless are his own social creations, although he forgets this. If he becomes aware of the forces that trap him (i.e., societal values, social roles, and his own decisions) and takes action to change them (i.e., modifies his life-style), he may be able to find a solution and to feel less trapped.

The critical researcher says that people have a great deal of unrealized potential. People are creative, changeable, and adaptive. Despite their creativity and potential for change, however, people can also be misled, mistreated, and exploited by others. They become trapped in a web of social meanings, obligations, and relationships. They fail to see how change is possible and thus lose their independence, freedom, and control over their lives. This happens when people allow themselves to become isolated and detached from others in similar situations. The potential of people can be realized if they dispel their illusions and join collectively to

change society. People can change the social world, but delusion, isolation, and oppressive conditions in everyday life often prevent them from realizing their dreams.

For example, for generations, most Americans believed the myth that women were inferior to men, that men had an inherent right to make major decisions, and that women were incapable of professional responsibilities. Before the 1960s, most people believed that women were less capable than men. By the 1980s, only a minority continued to hold such a belief. The dramatic change in belief and social relations resulted from a new consciousness and organized political action to destroy a myth that existed in laws, customs, and official policies, as well as—most importantly—in the everyday beliefs of most people.

4. *What is the relationship between science and common sense?*

The CSS position on common sense is based on the idea of *false consciousness*—that people are mistaken and act against their own true best interests as defined in objective reality. Objective reality lies behind myth and illusion. False consciousness is meaningless for ISS because it implies that a social actor uses a meaning system that is false or out of touch with objective reality. The interpretive approach says that people create and use such systems and that researchers can only describe such systems, not judge their value. The critical science approach says that social researchers should study subjective ideas and common sense because these shape human behavior. Yet, they are full of myth and illusion that mask an objective world in which there is unequal control over resources and power.

The structures that critical researchers talk about are not easy to see. Researchers must first demystify them and pull back the veil of their surface appearances. Careful observation is not enough. It does not tell what to observe, and observing an illusion does not dispel it. A researcher must use theory to dig beneath surface relations, to observe periods of crisis and intense conflict, to probe interconnections, to look at the past, and to consider future possibilities. Uncovering the deeper level of reality is difficult, but it is essential because surface

reality is full of ideology, myth, distortion, and false appearances. "Common sense tends to naturalize social phenomena and to assume that what is, must be. A social science which builds uncritically on common sense . . . reproduces these errors" (Sayer, 1992:43).

5. *What constitutes an explanation or theory of social reality?*

Positivism is based on the idea of *determinism*: Human behavior is determined by causal laws over which humans have little control. For instance, ISS assumes *voluntarism*: People have a large amount of free will to create social meanings. The critical science approach falls between the other two. It is partially deterministic and partially voluntaristic. By contrast, CSS says that people are constrained by the material conditions, cultural context, and historical conditions in which they find themselves. The world people live in limits their options and shapes their beliefs and behavior. Yet, people are not locked into an inevitable set of social structures, relationships, or laws. People can develop new understandings or ways of seeing that enable them to change these structures, relationships, and laws. They first must develop a vision of the future and work together for change, then they can overcome those who oppose them. In a nutshell, people do shape their destiny, but not under conditions of their own choosing.

A full critical science explanation demystifies illusion, describes the underlying structure of conditions, explains how change can be achieved, and provides a vision of a possible future. Critical theory does more than describe the unseen mechanisms that account for observable reality; it also critiques conditions and implies a plan of change.

The critical science approach focuses less on fixed laws of human behavior because the laws are changing. Human behavior is only partially governed by laws or constraints imposed by underlying social structures. People can change most of the apparent laws of society, although this is difficult and involves a long struggle. By identifying the causal mechanisms, the trigger or the levers of social relations, CSS explains how and why certain actions will bring about change.

6. *How does one determine whether an explanation is true or false?*

Positivists test theories by deducing hypotheses, testing hypotheses with replicated observations, and then combining results to support laws. Interpretive researchers support theories by seeing whether the meaning system and rules of behavior make sense to those being studied. Critical theory seeks to provide people with a resource that will help them understand and change their world. A researcher tests critical theory by accurately describing conditions generated by underlying structures then by applying that knowledge to change social relations. A good critical theory teaches people about their own experiences, helps them understand their historical role, and can be used to improve conditions.

Critical theory informs practical action or suggests what to do, but theory is modified on the basis of its use. A critical theory grows and interacts with the world it seeks to explain. Because a critical approach tries to explain and change the world by penetrating hidden structures that are in constant flux, the test of an explanation is not static. Testing theory is a dynamic, ongoing process of applying theory and modifying it. Knowledge grows by an ongoing process of eroding ignorance and enlarging insights through action.

The critical approach uses praxis to separate good from bad theory. It puts the theory into practice and uses the outcome of applications to reformulate theory. *Praxis* means that explanations are valued when they help people really understand the world and to take action that changes it. As Sayer (1992:13) argued, "Knowledge is primarily gained through activity both in attempting to change our environment (through labor or work) and through interaction with other people."

Critical research tries to eliminate the division between the researcher and those being researched, the distinction between science and everyday life. For example, a critical researcher develops an explanation for housing discrimination. He or she tests the explanation by using it to try to change conditions. If the explanation says that underlying economic relations cause discrimination and that landlords refuse to rent to minorities because it is

profitable to rent only to nonminorities, then political actions that make it profitable to rent to minorities should change the landlords' behavior. By contrast, if the explanation says that an underlying racial hatred causes landlords to discriminate, then actions based on profit will be unsuccessful. The critical researcher would then examine race hatred as the basis of landlord behavior through new studies combined with new political action.

7. *What does good evidence or factual information look like?*

Positivism assumes that there are incontestable neutral facts on which all rational people agree. Its dualist doctrine says that social facts are like objects. They exist separate from values or theories. The interpretive approach sees the social world as made up of created meaning, with people creating and negotiating meanings. It rejects positivism's dualism, but it substitutes an emphasis on the subject. Evidence is whatever resides in the subjective understandings of those involved. The critical approach tries to bridge the object-subject gap. It says that the facts of material conditions exist independent of subjective perceptions, but that facts are not theory neutral. Instead, facts require an interpretation from within a framework of values, theory, and meaning.

For example, it is a "fact" that the United States spends a much greater percentage of its gross national product (GNP) on health care than any other advanced industrial nation, and yet it ranks as the 29th lowest infant death rate (7 deaths per 1,000 live births). A critical researcher interprets the fact by noting that the United States has many people without health care and no system to cover everyone. The fact includes the way the health care is delivered to some through a complex system of for-profit insurance companies, pharmaceutical firms, hospitals, and others who benefit greatly from the current arrangement. Some powerful groups are getting rich while weaker or poor sectors of society are getting low quality or no health care. Critical researchers look at the facts and ask who benefits and who loses?

Theory helps a critical researcher find new facts and separate the important from the trivial ones. The

theory is a type of map telling researchers where to look for facts and how to interpret them once they are uncovered. The critical approach says that theory does this in the natural sciences, as well. For example, a biologist looks into a microscope and sees red blood cells—a “fact” based on a theory about blood and cells and a biologist’s education about microscopic phenomena. Without this theory and education, a biologist sees only meaningless spots. Clearly, then, facts and theories are interrelated.

For example, in *Inequality in Africa*, Nafziger (1988) used a critical perspective. He criticized “facts” on income inequality because they measured only money income in societies where money is not widely used. He also criticized interpretations of “facts” on issues such as land distribution and infant mortality rates. Such facts ignored the number of people living on a farm and ignored those outside one group in a nation (South African Whites) that has drastically lower infant mortality rates than others in the same nation. Instead, Nafziger looked for a wide variety of facts (e.g., birth rates, urban-rural gaps, ethnic divisions, international trade, political power) and went behind the surface facts to connect them to one another. He asked: Why is Africa the only region in the world to become more impoverished since World War II? His theory helped him identify a number of major social groups (e.g., government leaders) and classes (e.g., peasants). Nafziger also asked whether various trends or policies served the interests of each group.

All theories are not equally useful for finding and understanding key facts. Theories are based on beliefs and assumptions about what the world is like and on a set of moral-political values. Critical social science says that some values are better than others.<sup>18</sup> Thus, in order to interpret facts, one must understand history, adopt a set of values, and know where to look for underlying structures. Different versions of critical science offer different value positions (e.g., Marxism versus feminism).

#### 8. *When do sociopolitical values enter into science?*

The critical approach has an activist orientation. Social research is a moral-political activity that requires the researcher to commit to a value position. Critical social science rejects positivist value

freedom as a myth. It also attacks the interpretive approach for its *relativism* (the idea that everything is relative and nothing is absolute). In the interpretive approach, the reality of the genius and the reality of the idiot are equally valid and important. There is little, if any, basis for judging between alternative realities or conflicting viewpoints. For example, the interpretive researcher does not call a racist viewpoint wrong, because any viewpoint is true for those who believe in it. The critical approach says that there is only one, or a very few, correct points of view. Other viewpoints are plain wrong or misleading. All social research *necessarily* begins with a value or a moral point of view. For CSS, being objective is not being value free. Objectivity means a nondistorted, true picture of reality: “it challenges the belief that science must be protected from politics. It argues that some politics—the politics for emancipatory social change—can increase the objectivity of science” (Harding, 1986:162).

Critical social science says that to deny that a researcher has a point of view is itself a point of view. It is a technician’s point of view: Conduct research and ignore the moral questions; satisfy a sponsor and follow orders. Such a view says that science is a tool or instrument anyone can use. This view was strongly criticized when Nazi scientists committed inhumane experiments and then claimed that they were blameless because they “just followed orders” and were “just scientists.” Positivism adopts such an approach and produces technocratic knowledge—a form of knowledge best suited for use by the people in power to dominate or control other people.<sup>19</sup> For CSS, “the political use of behavioral science has made positivism into a legitimating ideology of dominant groups . . . value-freedom itself has come to provide an ethic for calculated bureaucratic control” (Brown, 1989:39).

The critical approach rejects positivism and ISS as being detached and concerned with studying the world instead of acting on it. Critical social science holds that knowledge is power. Social science knowledge can be used to control people, it can be hidden in ivory towers for intellectuals to play games with, or it can be given to people to help them take charge of and improve their lives. What a re-

the male-oriented perspective that has predominated in the development of social science. It is inspired by works such as *Women's Ways of Knowing* (Belenky et al., 1986) that argue that women learn and express themselves differently than men.

Feminist research is based on a heightened awareness that the subjective experience of women differs from an ordinary interpretative perspective.<sup>20</sup> Many feminist researchers see positivism as being a male point of view: it is objective, logical, task oriented, and instrumental. It reflects a male emphasis on individual competition, on dominating and controlling the environment, and on the hard facts and forces that act on the world. In contrast, women emphasize accommodation and gradually developing human bonds. They see the social world as a web of interconnected human relations, full of people linked together by feelings of trust and mutual obligation. Women tend to emphasize the subjective, empathetic, process-oriented, and inclusive sides of social life. Feminist research is also action oriented and seeks to advance feminist values (see Box 4.2).

Feminist researchers argue that much nonfeminist research is sexist, largely as a result of broader

#### Box 4.2

##### Characteristics of Feminist Social Research

- Advocacy of a feminist value position and perspective
- Rejection of sexism in assumptions, concepts, and research questions
- Creation of empathic connections between the researcher and those he or she studies
- Sensitivity to how relations of gender and power permeate all spheres of social life
- Incorporation of the researcher's personal feelings and experiences into the research process
- Flexibility in choosing research techniques and crossing boundaries between academic fields
- Recognition of the emotional and mutual-dependence dimensions in human experience
- Action-oriented research that seeks to facilitate personal and societal change

cultural beliefs and a preponderance of male researchers. The research overgeneralizes from the experience of men to all people, ignores gender as a fundamental social division, focuses on men's problems, uses males as points of reference, and assumes traditional gender roles. For example, a traditional researcher would say that a family has a problem of unemployment when the adult male in it cannot find stable work. When a woman in the same family cannot find stable work outside the home, it is not considered an equal family problem. Likewise, the concept *unwed mother* is widely used by traditional researchers, but is not a parallel of *unwed father*.

The feminist approach sees researchers as fundamentally gendered beings. Researchers necessarily have a gender that will shape how they experience reality, and therefore it affects their research. In addition to gender's impact on individual researchers, basic theoretical assumptions and the scientific community appear as gendered cultural contexts. Gender has a pervasive influence in culture and shapes basic beliefs and values that cannot be isolated and insulated in the social processes of scientific inquiry.<sup>21</sup>

Feminist researchers are not objective or detached; they interact and collaborate with the people they study. They fuse their personal and professional lives. For example, feminist researchers will attempt to comprehend an interviewee's experiences while sharing their own feelings and experiences. This process may give birth to a personal relationship between researcher and interviewee that might mature over time. Reinharz (1992:263) argued, "This blurring of the disconnection between formal and personal relations, just as the removal of the distinction . . . between the research project and the researcher's life, is a characteristic of much, if not all, feminist research."

The impact of a woman's perspective and her desire to gain an intimate relationship with what she studies occurs even in the biological sciences. Feminist researchers tend to avoid quantitative analysis and experiments. They use multiple methods, often qualitative research and case studies. Gorelick (1991) criticized the affinity of many feminist researchers for interpretive social science. She feels that ISS becomes limited to the consciousness of

those being studied and fails to reveal hidden structures. Gorelick wants feminist researchers to adopt a more critical approach and to advocate social change more assertively.

*Postmodern research* is part of the larger postmodern movement or evolving understanding of the contemporary world that includes art, music, literature, and cultural criticism. It began in the humanities and has roots in the philosophies of existentialism, nihilism, and anarchism and in the ideas of Heidegger, Nietzsche, Sartre, and Wittgenstein. Postmodernism is a rejection of modernism. *Modernism* refers to basic assumptions, beliefs, and values that arose in the Enlightenment era. Modernism relies on logical reasoning; it is optimistic about the future and believes in progress, it has confidence in technology and science, and it embraces humanist values (i.e., judging ideas based on their effect on human welfare). Modernism holds that there are standards of beauty, truth, and morality about which most people can agree.<sup>22</sup>

Postmodern research sees no separation between the arts or humanities and social sciences. It shares the critical social science goal of demystifying the social world. It seeks to deconstruct or tear apart surface appearances to reveal the internal hidden structure. Like extreme forms of ISS, postmodernism distrusts abstract explanation and holds that research can never do more than describe, with all descriptions equally valid. A researcher's description is neither superior nor inferior to anyone else's and only describes the researcher's personal experiences. Going beyond interpretive and critical social science, it attempts to transform or dismantle social science. Extreme postmodernists reject the possibility of a science of the social world, distrust all systematic empirical observation, and doubt that knowledge is generalizable or accumulates over time. They see knowledge as taking numerous forms and as unique to particular people or specific locales. Rosenau (1992:77) argued, "Almost all postmodernists reject truth as even a goal or ideal because it is the very epitome of modernity. . . . Truth makes reference to order, rules, and values; depends on logic, rationality and reason, all of which the postmodernists question."

Postmodernists object to presenting research results in a detached and neutral way. The researcher or author of a report should never be hidden when someone reads it; his or her presence needs to be unambiguously evident in the report. Thus, a postmodern research report is similar to a work of art. Its purpose is to stimulate others, to give pleasure, to evoke a response, or to arouse curiosity. Postmodern reports often have a theatrical, expressive, or dramatic style of presentation. They may be in the form of a work of fiction, a movie, or a play. The postmodernist argues that the knowledge about social life created by a researcher may be better communicated through a skit or musical piece than by a scholarly journal article. Its value lies in telling a story that may stimulate experiences within the people who read or encounter it. Postmodernism is antileitist and rejects the use of science to predict and to make policy decisions. Postmodernists oppose those who use positivist science to reinforce power relations and bureaucratic forms of control over people (see Box 4.3).

#### Box 4.3

##### Characteristics of Postmodern Social Research

- Rejection of all ideologies and organized belief systems, including all social theory
- Strong reliance on intuition, imagination, personal experience, and emotion
- Sense of meaninglessness and pessimism, belief that the world will never improve
- Extreme subjectivity in which there is no distinction between the mental and the external world
- Ardent relativism in which there are infinite interpretations, none superior to another
- Espousal of diversity, chaos, and complexity that is constantly changing
- Rejection of studying the past or different places since only the here and now is relevant
- Belief that causality cannot be studied because life is too complex and rapidly changing
- Assertion that research can never truly represent what occurs in the social world

### CONCLUSION

You have learned two important things in this chapter. First, there are competing approaches to social research based on different philosophical assumptions about the purpose of science and the nature of social reality. Second, the three ideal-type approaches to social science answer basic questions about research differently (see Table 4.1). Most researchers operate primarily within one approach, but many also combine elements from the others.

Remember that you can study the same topic from any of these approaches, but each approach implies going about it differently. This can be illustrated with the topic of discrimination and job competition between minority and majority groups in four countries: aborigines in the Australian outback, Asians in western Canada, African Americans in the mid-western United States, and Pakistanis in London.

A researcher who adopts a positivist approach first deduces hypotheses from a general theory about majority-minority relations. The theory is probably in the form of causal statements or predictions. For example, Stone (1985:56) cited one theory that "seeks to explain complex patterns in terms of a few key variables. This can be useful in attempts to predict the possible development of race and ethnic relations." The researcher next gathers data from existing government statistics or conducts a survey to precisely measure the factors that the theory identifies, such as the form of initial contact, the ratio of numbers in majority versus minority groups, or the visibility of racial differences. Finally, the researcher uses statistics to formally test the theory's predictions about the degree of discrimination and the intensity of job competition.

An interpretive researcher personally talks with and observes specific people from both the minority groups and the majority groups in each of the four countries. His or her conversations and observations are used to learn what each group feels to be its major problem and whether group members feel that discrimination or job competition are everyday concerns. The researcher puts what people say into the context of their daily affairs (e.g., paying rent, getting involved in family disputes, having run-ins with the law, getting sick, etc.). After he or she sees

what the minority or majority people thinks about discrimination, how they get jobs, how people in the other group get jobs, and what they actually do to get or keep jobs, he or she describes findings in terms that others can understand.

A critical researcher begins by looking at the larger social and historical context. This includes factors such as the invasion of Australia by British colonists and the nation's history as a prison colony, the economic conditions in Asia that caused people to migrate to Canada, the legacy of slavery and civil rights struggles in the United States, and the rise and fall of Britain's colonial empire and the migration of people from its ex-colonies. He or she inquires from a moral-critical standpoint: Does the majority group discriminate against and economically exploit the minority? The researcher looks at many sources to document the underlying pattern of exploitation and to measure the amount of discrimination in each nation. He or she may examine statistical information on income differences between groups, personally examine living situations and go with people to job interviews, or conduct surveys to find out what people now think. Once the researcher finds out how discrimination keeps a minority group from getting jobs, he or she gives results to minority group organizations, gives public lectures on the findings, and publishes results in newspapers read by minority group members in order to expose the true conditions and to encourage political-social action.

What does all this about three approaches mean to you in a course on social research? First, it means that there is no single, absolutely correct approach to social science research. This does not mean that anything goes, nor that there is no ground for tentative agreement (see Box 4.4). Rather, it means that the basis for doing social research is not settled. In other words, more than one approach is currently "in the running." Perhaps this will always be the case. An awareness of the approaches will help you to read research reports. Often, researchers will rely on one approach, but rarely will they tell you which one they are using.

Second, it means that what you try to accomplish when you do research (i.e., discover laws, identify underlying structures, describe meaning systems) will vary with the approach you choose.



**TABLE 4.1** A Summary of Differences among the Three Approaches to Research

	POSITIVISM	INTERPRETIVE SOCIAL SCIENCE	CRITICAL SOCIAL SCIENCE	FEMINIST	POSTMODERN
1. Reason for research	To discover natural laws so people can predict and control events	To understand and describe meaningful social action	To smash myths and empower people to change society radically	To smash myths and empower people to advance values of nurturing others and equality	To express the subjective self, to be playful, and to entertain and stimulate other people
2. Nature of social reality	Stable preexisting patterns or order that can be discovered	Fluid definitions of a situation created by human interaction	Conflict filled and governed by hidden underlying structures	Conflict-filled, structured power relations that keep many people oppressed	Chaotic and fluid without any real patterns or master plan
3. Nature of human beings	Self-interested and rational individuals who are shaped by external forces	Social beings who create meaning and who constantly make sense of their worlds	Creative, adaptive people with unrealized potential, trapped by illusion and exploitation	Creative, gendered beings with unrealized potential who are often trapped by unseen forces	Creative, dynamic beings with unrealized potential
4. Role of common sense	Clearly distinct from and less valid than science	Powerful everyday theories used by ordinary people	False beliefs that hide power and objective conditions	False beliefs that hide power and objective conditions	The essence of social reality that is superior to scientific or bureaucratic forms of reasoning
5. Theory looks like	A logical, deductive system of interconnected definitions, axioms, and laws	A description of how a group's meaning system is generated and sustained	A critique that reveals true conditions and helps people see the way to a better world	A critique that reveals true conditions and helps people see the way to a better world	A performance or work of artistic expression that can amuse, shock, or stimulate others
6. An explanation that is true	Is logically connected to laws and based on facts	Resonates or feels right to those who are being studied	Supplies people with tools needed to change the world	Supplies ideas/tools to help liberate people from oppressive relations	No one explanation is more true; all are true for those who accept them
7. Good evidence	Is based on precise observations that others can repeat	Is embedded in the context of fluid social interactions	Is informed by a theory that unveils illusions	Is informed by theory that unveils illusions	Has aesthetic properties and resonates with people's inner feelings/emotions
8. Place for values	Science is value free, and values have no place except when choosing a topic	Values are an integral part of social life; no group's values are wrong, only different	All science must begin with a value position; some positions are right, some are wrong	Values are essential to research, and feminist ones are clearly preferred	Values are integral to research, but all value positions are equal



Box 4.4

**Common Features of the Three Major Approaches to Social Science**

1. *All are empirical.* Each is rooted in the observable reality of the sights, sounds, behaviors, situations, discussions, and actions of people. Research is never based on fabrication and imagination alone.
2. *All are systematic.* Each emphasizes meticulous and careful work. All reject haphazard, shoddy, or sloppy thinking and observation.
3. *All are theoretical.* The nature of theory varies, but all emphasize using ideas and seeing patterns. None holds that social life is chaos and disorder; all hold that explanation or understanding is possible.
4. *All are public.* All say a researcher's work must be candidly expressed to other researchers; it should be made explicit and shared. All oppose keeping the research processes hidden, private, or secret.
5. *All are self-reflective.* Each approach says researchers need to think about what they do and be

self-conscious. Research is never done in a blind or unthinking manner. It involves serious contemplation and requires self-awareness.

6. *All are open-end processes.* All see research as constantly moving, evolving, changing, asking new questions, and pursuing leads. None see it as static, fixed, or closed. Current knowledge or research procedures are not "set in stone" and settled. They involve continuous change and an openness to new ways of thinking and doing things.

Thus, despite their differences, all the approaches say that the social sciences strive to create systematically gathered, empirically based theoretical knowledge through public processes that are self-reflective and open ended.

The fit between the three approaches and types of research discussed in Chapter 2 is loose. For example, positivists are likely to conduct cost-benefit analysis, interpretive researchers are likely to do exploratory research, and critical researchers favor action-oriented research. By being aware of the approaches when you do social research, you can make an informed decision about the type of study to conduct.

Third, the various techniques used in social research (sampling, interviewing, participant observation, etc.) are ultimately based on the assumptions of the different approaches. Often, you will see a research technique presented without the background

reasoning on which it was originally based. By knowing about the approaches, you can better understand the principles on which the specific research techniques are based. For example, the precise measures and logic of experimental research flow directly from positivism, whereas field research is based on an interpretive approach.

So far, we have looked at the overall operation of the research process, different types of studies and theory, and the three fundamental approaches to social research. By now, you should have a grasp of the basic contours of social research. In the next chapter, you will see how to locate reports of specific research projects.

**KEY TERMS**

causal laws  
covering law model  
critical social science  
determinism  
dialectic  
false consciousness  
feminist research  
hermeneutics  
idiographic

instrumental orientation  
interpretive social science  
intersubjectivity  
meaningful social action  
mechanical model of man  
nomothetic  
paradigm  
positivist social science  
postmodern research

postulate of adequacy  
practical orientation  
praxis  
reification  
relativism  
typification  
value-free science  
*Verstehen*  
volunteerism

## REVIEW QUESTIONS

1. What is the purpose of social research according to each approach?
2. How does each approach define social reality?
3. What is the nature of human beings according to each approach?
4. How are science and common sense different in each approach?
5. What is social theory according to each approach?
6. How does each approach test a social theory?
7. What does each approach say about facts and how to collect them?
8. How is value-free science possible in each approach? Explain.
9. How are the criticisms of positivism by the interpretive and critical science approaches similar?
10. How does the model of science and the scientific community presented in Chapter 1 relate to each of the three approaches?

## NOTES

1. For educational research, see Bredo and Feinberg (1982) and Guba and Lincoln (1994); for psychology, see Harré and Secord (1979) and Rosnow (1981); for political science, see Sabia and Wallulis (1983); and for economics, see Hollis (1977) and Ward (1972). A general discussion of alternatives can be found in Nowotny and Rose (1979).
2. See especially Friedrichs (1970), Giddens (1976), Gouldner (1970), and Phillips (1971). General introductions are provided by Harré (1972), Suppe (1977), and Toulmin (1953).
3. Divisions of the philosophies of social science similar to the approaches discussed in this chapter can be found in Benton (1977), Blaikie (1993), Bredo and Feinberg (1982), Fay (1975), Fletcher (1974), Guba and Lincoln (1994), Keat and Urry (1975), Lloyd (1986), Mulkey (1979), Sabia and Wallulis (1983), Smart (1976), and Wilson (1970).
4. For discussions of paradigms, see Eckberg and Hill (1979), Kuhn (1970, 1979), Masterman (1970), Ritzer (1975), and Rosnow (1981).
5. In addition to the works listed in note 3, Halfpenny (1982) and Turner (1984) have provided overviews of positivism in sociology. Also see Giddens (1978). Lenzer (1975) is an excellent introduction to Auguste Comte.
6. See Gartell and Gartell (1996).
7. From Bernard (1988:12-21).
8. See Hegtvedt (1992).
9. For a discussion, see Derksen and Gartell (1992: 1715).

10. See Couch (1987). Also see Longino (1990:62-82) for an excellent analysis of objectivity in positivism and more broadly.

11. For a discussion, see Bannister (1987), Blumer (1991a, 1991b, 1992), Deegan (1988), Geiger (1986), Gillespie (1991), Lagemann (1989), Ross (1991), Schwendinger and Schwendinger (1974), Silva and Slaughter (1980), and Smith (1996).

12. In addition to the works in note 3, interpretive science approaches are discussed in Berger and Luckman (1967), Bleicher (1980), Cicourel (1973), Garfinkel (1967, 1974b), Geertz (1979), Glaser and Strauss (1967), Holstein and Gubrium (1994), Leiter (1980), Mehan and Wood (1975), Silverman (1972), and Weber (1974, 1981).

13. See Brown (1989:34) for more examples and explanation.

14. In addition to the works in note 3, critical science approaches are discussed in Burawoy (1990), Dickson (1984), Fay (1987), Glucksmann (1974), Harding (1986), Harvey (1990), Keat (1981), Lane (1970), Lemert (1981), Mayhew (1980, 1981), Sohn-Rethel (1978), Veltmeyer (1978), Wardell (1979), Warner (1971), and Wilson (1982).

15. For a discussion of the Frankfurt School, see Bottomore (1984), Held (1980), Martin (1973), and Slater (1977). For more on the works of Habermas, see Holub (1991), McCarthy (1978), Pusey (1987), and Roderick (1986).

16. See Swartz (1997) on Bourdieu.

17. For discussions of realism, see Bhaskar (1975), Miller (1987), and Sayer (1992).