

2 PARADIGMS, THEORY, AND RESEARCH



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What You'll Learn in This Chapter

Here we'll examine some of the theoretical points of view that structure social scientific inquiry. This lays the groundwork for understanding the specific research techniques discussed throughout the rest of the book.

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AN OPENING QUANDARY

Scholars such as George Herbert Mead make a powerful argument that social life is really a matter of interactions and their residue. You and I meet each other for the first time, feel each other out, and mutually create rules for dealing with each other. The next time we meet, we'll probably fall back on these rules, which tend to stay with us. Think about your first encounters with a new professor or making a new friend. Mead suggests that all the social patterns and structures that we experience are created in this fashion.

Other scholars, such as Karl Marx, argue that social life is fundamentally a struggle among individuals and among groups. According to Marx, society is a class struggle in which the “haves” and the “have-nots” are pitted against each other in an attempt to dominate others and to avoid being dominated. He claimed that, rather than being mutually created individuals, rules for behavior grow out of the economic structure of a society.

Which of these very different views of society is true? Or does the truth lie somewhere else?

INTRODUCTION

Some restaurants in the United States are fond of conducting political polls among their diners before an upcoming election. Some people take these polls very seriously because of their uncanny history of predicting winners. By the same token, some movie theaters have achieved similar suc-

cess by offering popcorn in bags picturing either donkeys or elephants. Years ago, granaries in the Midwest offered farmers a chance to indicate their political preferences through the bags of grain they selected.

Such oddities are of some interest. They all have the same pattern over time, however: They work for a while, but then they fail. Moreover, we can't predict when or why they will fail.

These unusual polling techniques point to the shortcoming of "research findings" based only on the observation of patterns. Unless we can offer logical explanations for such patterns, the regularities we've observed may be mere flukes, chance occurrences. If you flip coins long enough, you'll get ten heads in a row. Scientists might adapt a street expression to describe this situation: "Patterns happen."

Logical explanations are what theories seek to provide. Theory functions three ways in research. First, it prevents our being taken in by flukes. If we can't explain why Ma's Diner has been so successful in predicting elections, we run the risk of supporting a fluke. If we know why it has happened, we can anticipate whether it will work in the future.

Second, theories make sense of observed patterns in ways that can suggest other possibilities. If we understand the reasons why broken homes produce more juvenile delinquency than do intact homes—lack of supervision, for example—we can take effective action, such as after-school youth programs.

Finally, theories can shape and direct research efforts, pointing toward likely discoveries through empirical observation. If you were looking for your lost keys on a dark street, you could whip your flashlight around randomly—or you could use your memory of where you had been to limit your search to more likely areas. Theory, by analogy, directs researchers' flashlights where they are most likely to observe interesting patterns of social life.

This is not to say that all social science research is tightly intertwined with social theory. Sometimes social scientists undertake investigations simply to discover the state of affairs, such as an evaluation of whether an innovative social program is work-

ing or a poll to determine which candidate is winning a political race. Similarly, descriptive ethnographies, such as anthropological accounts of preliterate societies, produce valuable information and insights in and of themselves. However, even studies such as these often go beyond pure description to ask *why*? Theory is directly relevant to "why" questions.

This chapter explores some specific ways theory and research work hand in hand during the adventure of inquiry into social life. We'll begin by looking at several fundamental frames of reference, called *paradigms*, that underlie social theories and inquiry.

SOME SOCIAL SCIENCE PARADIGMS

There is usually more than one way to make sense of things. In daily life, for example, liberals and conservatives often explain the same phenomenon—teenagers using guns at school, for example—quite differently. So might the parents and teenagers themselves. But underlying these different explanations, or theories, are **paradigms**—the fundamental models or frames of reference we use to organize our observations and reasoning.

Paradigms are often difficult to recognize as such because they are so implicit, assumed, taken for granted. They seem more like "the way things are" than like one possible point of view among many. Here's an illustration of what I mean.

Where do you stand on the issue of human rights? Do you feel that individual human beings are sacred? Are they "endowed by their creator with certain inalienable rights," as asserted by the U.S. Declaration of Independence? Are there some things that no government should do to its citizens?

Let's get more concrete. In wartime, civilians are sometimes used as human shields to protect military targets. Sometimes they are pressed into slave labor or even used as mobile blood banks for military hospitals. How about organized programs of rape and murder in support of "ethnic cleansing"?

Those of us who are horrified and incensed by

such practices will probably find it difficult to see our individualistic paradigm as only one possible point of view among many. However, the Western (and particularly U.S.) commitment to the sanctity of the individual is regarded as bizarre by many other cultures in today's world. Historically, it is decidedly a minority viewpoint.

While many Asian countries, for example, now subscribe to some "rights" that belong to individuals, those are balanced against the "rights" of families, organizations, and the society at large. Criticized for violating human rights, Asian leaders often point to high crime rates and social disorganization in Western societies as the cost of what they see as our radical "cult of the individual."

I won't try to change your point of view on individual human dignity, nor have I given up my own. It's useful, however, to recognize that our views and feelings in this matter are the result of the paradigm we have been socialized into; they are not an objective fact of nature. All of us operate within many such paradigms. For example, the traditional Western view of the actual world as an objective reality distinct from our individual experiences of it is a deeply ingrained paradigm.

When we recognize that we are operating within a paradigm, two benefits accrue. First, we are better able to understand the seemingly bizarre views and actions of others who are operating from a different paradigm. Second, at times we can profit from stepping outside our paradigm. Suddenly we can see new ways of seeing and explaining things. We can't do that as long as we mistake our paradigm for reality.

Paradigms play a fundamental role in science, just as they do in daily life. Thomas Kuhn (1970) drew attention to the role of paradigms in the history of the natural sciences. Major scientific paradigms have included such fundamental viewpoints as Copernicus's conception of the earth moving around the sun (instead of the reverse), Darwin's theory of evolution, Newtonian mechanics, and Einstein's relativity. Which scientific theories "make sense" depends on which paradigm scientists are maintaining.

While we sometimes think of science as developing gradually over time, marked by important discoveries and inventions, Kuhn says it was typi-

cal for one paradigm to become entrenched, resisting substantial change. Eventually, however, as the shortcomings of that paradigm became obvious, a new paradigm would emerge and supplant the old one. Thus, the view that the sun revolves around the earth was supplanted by the view that the earth revolves around the sun. Kuhn's classic book on this subject is titled, appropriately enough, *The Structure of Scientific Revolutions*.

Social scientists have developed several paradigms for understanding social behavior. The fate of supplanted paradigms in the social sciences, however, has differed from what Kuhn has observed in the natural sciences. Natural scientists generally believe that the succession of paradigms represents progress from false views to true ones. No modern astronomer believes that the sun revolves around the earth, for example.

In the social sciences, on the other hand, theoretical paradigms may gain or lose popularity, but they're seldom discarded. Social science paradigms represent a variety of views, each of which offers insights the others lack while ignoring aspects of social life that the others reveal.

Each of the paradigms we're about to examine offers a different way of looking at human social life. Each makes certain assumptions about the nature of social reality. Ultimately, paradigms cannot be true or false; as ways of looking, they can only be more or less useful. Rather than deciding which paradigm is true or false, try to find ways they might be useful to you. As we shall see, each can open up new understandings, suggest different kinds of theories, and inspire different kinds of research.

Macrotheory and Microtheory

Let's begin with a discussion that encompasses many of the paradigms to be discussed. Some theorists focus their attention on society at large or at least on large portions of it. Topics of study for such **macrotheory** include the struggle among economic classes in a society, international relations, and the interrelations among major institutions in society, such as government, religion, and family. Macrotheory deals with large, aggregate entities of society or even whole societies.

Some scholars have taken a more intimate view of social life. **Microtheory** deals with issues of social life at the level of individuals and small groups. Dating behavior, jury deliberations, and student-faculty interactions are apt subjects for a microtheoretical perspective. Such studies often come close to the realm of psychology, but whereas psychologists typically focus on what goes on inside humans, social scientists study what goes on among them.

The distinction between macro- and micro-theory crosscuts the paradigms we'll examine next. While some of them, such as symbolic interactionism and ethnomethodology, often work best at the microlevel, others, such as the conflict paradigm, can be pursued at either the micro- or the macrolevel.

Early Positivism

When the French philosopher Auguste Comte (1798–1857) coined the term *sociologie* in 1822, he launched an intellectual adventure that is still unfolding today. Most important, Comte identified society as a phenomenon that can be studied scientifically. (Initially he wanted to label his enterprise “social physics,” but that term was taken over by another scholar.)

Prior to Comte's time, society simply *was*. To the extent that people recognized different kinds of societies or changes in society over time, religious paradigms predominantly explained these differences. The state of social affairs was often seen as a reflection of God's will. Alternatively, people were challenged to create a “City of God” on earth to replace sin and godlessness.

Comte separated his inquiry from religion, replacing religious belief with scientific objectivity. His “positive philosophy” postulated three stages of history. A “theological stage” predominated throughout the world until about 1300. During the next five hundred years, a “metaphysical stage” replaced God with ideas such as “nature” and “natural law.” Finally, Comte felt he was launching the third stage of history, in which science would replace religion and metaphysics; knowledge would be based on observations through the five senses rather than on belief. Again, Comte felt that society

could be studied and understood logically and rationally, that sociology could be as scientific as biology or physics.

Comte's view came to form the foundation for subsequent development of the social sciences. In his optimism for the future, he coined the term *positivism* to describe this scientific approach, in contrast to what he regarded as negative elements in the Enlightenment. Only in recent decades has the idea of positivism come under serious challenge, as we'll see later in this discussion.



To explore this topic in greater depth on the Web, search for “Auguste Comte,” “positivism,” or “positivist paradigm.”*

Conflict Paradigm

Karl Marx (1818–1883) suggested that social behavior could best be seen as the process of conflict: the attempt to dominate others and to avoid being dominated. Marx focused primarily on the struggle among economic classes. Specifically, he examined the way capitalism produced the oppression of workers by the owners of industry. Marx's interest in this topic did not end with analytical study: He was also ideologically committed to restructuring economic relations to end the oppression he observed.

The conflict paradigm is not limited to economic analyses. Georg Simmel (1858–1918) was particularly interested in small-scale conflict, in contrast to the class struggle that interested Marx. Simmel noted, for example, that conflicts among members of a tightly knit group tended to be more intense than those among people who did not share feelings of belonging and intimacy.

In a more recent application of the conflict paradigm, when Michel Chossudovsky's (1997) analysis of the International Monetary Fund (IMF) and World Bank suggested that these two international organizations were increasing global poverty rather than eradicating it, he directed his attention to the competing interests involved in the process.

* Each time the Internet icon appears, you'll be given helpful leads for searching the World Wide Web.

In theory, the chief interest being served should be the poor people of the world or perhaps the impoverished, Third-World nations. The researcher's inquiry, however, identified many other interested parties who benefited: the commercial lending institutions who made loans in conjunction with the IMF and World Bank and multinational corporations seeking cheap labor and markets for their goods, for example. Chossudovsky's analysis concluded that the interests of the banks and corporations tended to take precedence over those of the poor people, who were the intended beneficiaries. Moreover, he found many policies were weakening national economies in the Third World, as well as undermining democratic governments.

Whereas the conflict paradigm often focuses on class, gender, and ethnic struggles, it would be appropriate to apply it whenever different groups have competing interests. For example, it could be fruitfully applied to understanding relations among different departments in an organization, fraternity and sorority rush weeks, or student-faculty-administrative relations, to name just a few.

These examples should illustrate some of the ways you might view social life if you were taking your lead from the conflict paradigm. To explore the applicability of this paradigm, you might take a minute to skim through a daily newspaper or news magazine and identify events you could interpret in terms of individuals and groups attempting to dominate each other and avoid being dominated. The theoretical concepts and premises of the conflict paradigm might help you make sense out of these events.



To explore this topic in greater depth on the Web, search for "conflict theory," "conflict paradigm," or "Karl Marx."

Symbolic Interactionism

Whereas Marx chiefly addressed macrotheoretical issues—large institutions and whole societies in their evolution through the course of history—Georg Simmel (1858–1918) was more interested in the ways individuals interacted with one another,

or the "micro" aspects of society. He began by examining dyads (groups of two people) and triads (groups of three), for example. Similarly, he wrote about "the web of group affiliations."

Simmel was one of the first European sociologists to influence the development of U.S. sociology. His focus on the nature of interactions particularly influenced George Herbert Mead (1863–1931), Charles Horton Cooley (1864–1929), and others who took up the cause and developed it into a powerful paradigm for research.

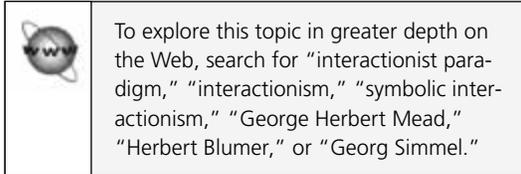
Cooley, for example, introduced the idea of the "primary group," those intimate associates with whom we share a sense of belonging, such as our family, friends, and so forth. Cooley also wrote of the "looking-glass self" we form by looking into the reactions of people around us. If everyone treats us as beautiful, for example, we conclude that we are. See how fundamentally this paradigm differs from the society-level concerns of Marx.

Similarly, Mead emphasized the importance of our human ability to "take the role of the other," imagining how others feel and how they might behave in certain circumstances. As we gain an idea of how people in general see things, we develop a sense of what Mead called the "generalized other." Mead also felt that most interactions revolved around the process of individuals reaching a common understanding through language and other symbolic systems, hence the term *symbolic interactionism*.

Here's one way you might apply this paradigm to an examination of your own life. The next time you meet someone new, watch how your knowledge of each other unfolds through the process of interaction. Notice also any attempts you make to manage the image you are creating in the other person's mind.

Clearly this paradigm can lend insights into the nature of interactions in ordinary social life, but it can also help us understand unusual forms of interaction, as in the following case. Emerson, Ferris, and Gardner (1998) set out to understand the nature of "stalking." Through interviews with numerous stalking victims, they came to identify different motivations among stalkers, stages in the development of a stalking scenario, how people can rec-

ognize if they are being stalked, and what they can do about it.



Ethnomethodology

While some social scientific paradigms emphasize the impact of social structure (such as norms, values, and control agents) on human behavior, other paradigms do not. Harold Garfinkel, a contemporary sociologist, takes the point of view that people are continually creating social structure through their actions and interactions—that they are, in fact, creating their realities. Thus, when you and your instructor meet to discuss your term paper, even though there are myriad expectations about how you should act, the conversation will somewhat differ from any of those that have occurred before, and how you both act will somewhat modify your future expectations. That is, discussing your term paper will impact your future interactions with other professors and students.

Given the tentativeness of reality in this view, Garfinkel suggests that people are continuously trying to make sense of the life they experience. In a way, he suggests that everyone is acting like a social scientist: hence the term *ethnomethodology*, or “methodology of the people.”

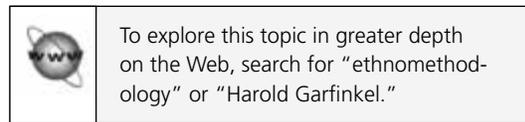
How would you go about learning about people’s expectations and how they make sense out of their world? One technique ethnomethodologists use is to break the rules, to violate people’s expectations. If you try to talk to me about your term paper, but I keep talking about football, any expectations you had for my behavior might come out. We might also see how you make sense out of my behavior. (“Maybe he’s using football as an analogy for understanding social systems theory.”)

In another example of ethnomethodology, John Heritage and David Greatbatch (1992) examined the role of applause in British political speeches:

How did the speakers evoke applause, and what function did it serve (for example, to complete a topic)? Research within the ethnomethodological paradigm often focuses on communication.

There’s no end to the opportunities you have for trying on the ethnomethodological paradigm. For instance, the next time you get on an elevator, don’t face front watching the floor numbers whip by (that’s the norm, or expected behavior). Instead, just stand quietly facing the rear of the elevator. See how others react to this behavior. Just as important, notice how you feel about it. If you do this experiment a few times, you should begin to develop a feel for the ethnomethodological paradigm.*

We’ll return to ethnomethodology in Chapter 10, when we discuss field research. For now, let’s turn to a very different paradigm.



Structural Functionalism

Structural functionalism, sometimes also known as “social systems theory,” grows out of a notion introduced by Comte and others: A social entity, such as an organization or a whole society, can be viewed as an organism. Like organisms, a social system is made up of parts, each of which contributes to the functioning of the whole.

By analogy, consider the human body. Each component—such as the heart, lungs, kidneys, skin, and brain—has a particular job to do. The body as a whole cannot survive unless each of these parts does its job, and none of the parts can survive except as a part of the whole body. Or consider an automobile, composed of tires, steering wheel, gas tank, spark plugs, and so forth. Each of the parts serves a function for the whole; taken together, that system can get us across town. None of

*I am grateful to my colleague, Bernard McGrane, for this experiment. Barney also has his students eat dinner with their hands, watch TV without turning it on, and engage in other strangely enlightening behavior (McGrane 1994).

the individual parts would be of much use to us by itself, however.

The view of society as a social system, then, looks for the “functions” served by its various components. We might consider a football team as a social system—one in which the quarterback, running backs, offensive linemen, and others have their own jobs to do for the team as a whole. Or, we could look at a symphony orchestra and examine the functions served by the conductor, the first violinist, and the other musicians.

Social scientists using the structural functional paradigm might note that the function of the police, for example, is to exercise social control—encouraging people to abide by the norms of society and bringing to justice those who do not. We could just as reasonably ask what functions criminals serve in society. Within the functionalist paradigm, we’d see that criminals serve as job security for the police. In a related observation, Emile Durkheim (1858–1917) suggested that crimes and their punishment provided an opportunity for the reaffirmation of a society’s values. By catching and punishing a thief, we reaffirm our collective respect for private property.

To get a sense of the structural-functional paradigm, thumb through your college or university catalog and assemble a list of the administrators (such as president, deans, registrar, campus security, maintenance personnel). Figure out what each of them does. To what extent do these roles relate to the chief functions of your college or university, such as teaching or research? Suppose you were studying some other kind of organization. How many of the school administrators’ functions would also be needed in, say, an insurance company?

In applying the functionalist paradigm to everyday life, people sometimes make the mistake of thinking that functionality, stability, and integration are necessarily good, or that the functionalist paradigm makes that assumption. However, when social researchers look for the “functions” served by poverty, racial discrimination, or the oppression of women, they are not justifying such things. Rather, they seek to understand the roles such things play

in the larger society as a way of understanding why they persist and how they could be eliminated.



To explore this topic in greater depth on the Web, search for “social systems theory,” “functionalism,” or “Talcott Parsons.” Parsons was the chief architect of the “social systems” paradigm and a leading U.S. sociologist.

Feminist Paradigms

When Ralph Linton concluded his anthropological classic, *The Study of Man* (1937:490), speaking of “a store of knowledge that promises to give man a better life than any he has known,” no one complained that he had left women out. Linton was using the linguistic conventions of his time; he implicitly included women in all his references to men. Or did he?

When feminists (of both genders) first began questioning the use of masculine nouns and pronouns whenever gender was ambiguous, their concerns were often viewed as petty. Many felt the issue was one of women having their feelings hurt, their egos bruised. But be honest: When you read Linton’s words, what did you picture? An amorphous, genderless human being, a hermaphrodite at once male and female, or a male persona?

In a similar way, researchers looking at the social world from a feminist paradigm have called attention to aspects of social life that are not revealed by other paradigms. In fact, feminism has established important theoretical paradigms for social research. In part it has focused on gender differences and how they relate to the rest of social organization. These paradigms have drawn attention to the oppression of women in many societies, which has in turn shed light on oppression in general.

Feminist paradigms have also challenged the prevailing notions concerning consensus in society. Most descriptions of the predominant beliefs, values, and norms of a society are written by people representing only portions of society. In the

United States, for example, such analyses have typically been written by middle-class white men—not surprisingly, they have written about the beliefs, values, and norms they themselves share. Though George Herbert Mead spoke of the “generalized other” that each of us becomes aware of and can “take the role of,” feminist paradigms question whether such a generalized other even exists.

Further, whereas Mead used the example of learning to play baseball to illustrate how we learn about the generalized other, Janet Lever’s research suggests that understanding the experience of boys may tell us little about girls.

Girls’ play and games are very different. They are mostly spontaneous, imaginative, and free of structure or rules. Turn-taking activities like jump rope may be played without setting explicit goals. Girls have far less experience with interpersonal competition. The style of their competition is indirect, rather than face to face, individual rather than team affiliated. Leadership roles are either missing or randomly filled. — (LEVER 1986:86)

Social researchers’ growing recognition of the intellectual differences between men and women led the psychologist Mary Field Belenky and her colleagues to speak of *Women’s Ways of Knowing* (1986). In-depth interviews with 45 women led the researchers to distinguish five perspectives on knowing that challenge the view of inquiry as obvious and straightforward:

- *Silence*: Some women, especially early in life, feel themselves isolated from the world of knowledge, their lives largely determined by external authorities.
- *Received knowledge*: From this perspective, women feel themselves capable of taking in and holding knowledge originating with external authorities.
- *Subjective knowledge*: This perspective opens up the possibility of personal, subjective knowledge, including intuition.
- *Procedural knowledge*: Some women feel they have mastered the ways of gaining knowledge through objective procedures.

- *Constructed knowledge*: The authors describe this perspective as “a position in which women view all knowledge as contextual, experience themselves as creators of knowledge, and value both subjective and objective strategies for knowing.”

— (BELENKY ET AL. 1986:15)

“Constructed knowledge” is particularly interesting in the context of our previous discussions. The positivistic paradigm of Comte would have a place neither for “subjective knowledge” nor for the idea that truth might vary according to its context. The ethnomethodological paradigm, on the other hand, would accommodate these ideas.

To try out feminist paradigms, you might want to look into the possibility of discrimination against women at your college or university. Are the top administrative positions held equally by men and women? How about secretarial and clerical positions? Are men’s and women’s sports supported equally? Read through the official history of your school; is it a history that includes men and women equally? (If you attend an all-male or all-female school, of course, some of these questions won’t apply.)



To explore this topic in greater depth on the Web, search for “feminist paradigm,” “feminist sociology,” “feminist theory,” and don’t miss <http://www.cddc.vt.edu/feminism/>

Rational Objectivity Reconsidered

We began with Comte’s assertion that we can study society rationally and objectively. Since his time, the growth of science, the decline of superstition, and the rise of bureaucratic structures have put rationality more and more at the center of social life. As fundamental as rationality is to most of us, however, some contemporary scholars have raised questions about it.

For example, positivistic social scientists have sometimes erred in assuming that humans will always act rationally. I’m sure your own experience

offers ample evidence to the contrary. Many modern economic models also assume that people will make rational choices in the economic sector: They will choose the highest-paying job, pay the lowest price, and so forth. This assumption, however, ignores the power of such matters as tradition, loyalty, and image that compete with reason in determining human behavior.

A more sophisticated positivism would assert that we can rationally understand even nonrational human behavior. Here's an example. In the famous "Asch Experiment" (Asch 1958), a group of subjects is presented with a set of lines on a screen and asked to identify the two lines of equal length.

Imagine yourself a subject in such an experiment. You're sitting in the front row of a classroom in a group of six subjects. A set of lines (see Figure 2-1) is projected on the wall in front of you. The experimenter asks you, one at a time, to identify the line to the right (A, B, or C) that matches the length of line X. The correct answer (B) is pretty obvious to you. To your surprise, you find that all the other subjects agree on a different answer!

The experimenter announces that all but one of the group has gotten the correct answer; that is, you've gotten it wrong. Then a new set of lines is presented, and you have the same experience. The obviously correct answer is wrong, and everyone but you seems to understand that.

As it turns out, of course, you're the only *real* subject in the experiment—all the others are working with the experimenter. The purpose is to see whether you would be swayed by public pressure and go along with the incorrect answer. In one-third of the initial experiments, Asch found that his subjects did just that.

Choosing an obviously wrong answer in a simple experiment is an example of nonrational behavior. But as Asch went on to show, experimenters can examine the circumstances that lead more or fewer subjects to go along with the incorrect answer. For example, in subsequent studies, Asch varied the size of one group and the number of "dissenters" who chose the "wrong" (that is, the correct) answer. Thus, it is possible to study nonrational behavior rationally and scientifically.



FIGURE 2-1 The Asch Experiment

More radically, we can question whether social life abides by rational principles at all. In the physical sciences, developments such as chaos theory, fuzzy logic, and complexity have suggested that we may need to rethink fundamentally the orderliness of physical events.

The contemporary challenge to positivism, however, goes beyond the question of whether people behave rationally. In part, the criticism of positivism challenges the idea that scientists can be as objective as the scientific ideal assumes. Most scientists would agree that personal feelings can and do influence the problems scientists choose to study, their choice of what to observe, and the conclusions they draw from their observations.

As with rationality, there is a more radical critique of objectivity. Whereas scientific objectivity has long stood as an unquestionable ideal, some contemporary researchers suggest that subjectivity might actually be preferred in some situations, as we glimpsed in the discussions of feminism and ethnomethodology. Let's take a moment to return to the dialectic of subjectivity and objectivity.

To begin with, all our experiences are inescapably subjective. There is no way out. We can see only through our own eyes, and anything peculiar to our eyes will shape what we see. We can hear things only the way our particular ears and brain transmit and interpret sound waves. You and I, to some extent, hear and see different realities. And both of us experience quite different physical "realities" than do bats, for example. In what to us is to-

tal darkness, a bat “sees” things such as flying insects by emitting a sound we humans can’t hear. The reflection of the bat’s sound creates a “sound picture” precise enough for the bat to home in on the moving insect and snatch it up. In a similar vein, scientists on the planet Xandu might develop theories of the physical world based on a sensory apparatus that we humans can’t even imagine. Maybe they see X rays or hear colors.

Despite the inescapable subjectivity of our experience, we humans seem to be wired to seek an agreement on what is “really real,” what is *objectively* so. Objectivity is a conceptual attempt to get beyond our individual views. It is ultimately a matter of communication, as you and I attempt to find a common ground in our subjective experiences. Whenever we succeed in our search, we say we are dealing with objective reality. This is the agreement reality discussed in Chapter 1.

While our subjectivity is individual, our search for objectivity is social. This is true in all aspects of life, not just in science. While you and I prefer different foods, we must agree to some extent on what is fit to eat and what is not, or else there could be no restaurants, no grocery stores, no food industry. The same argument could be made regarding every other form of consumption. There could be no movies or television, no sports.

Social scientists as well have found benefits in the concept of objective reality. As people seek to impose order on their experience of life, they find it useful to pursue this goal as a collective venture. What are the causes and cures of prejudice? Working together, social researchers have uncovered some answers that hold up to intersubjective scrutiny. Whatever your subjective experience of things, for example, you can discover for yourself that as education increases, prejudice tends to decrease. Because each of us can discover this independently, we say it is objectively true.

From the seventeenth century through the middle of the twentieth, the belief in an objective reality that people could see ever more clearly predominated in science. For the most part, it was held not simply as a useful paradigm but as The Truth. The term *positivism* generally represents the

belief in a logically ordered, objective reality that we can come to know. This is the view challenged today by postmodernists and others.

Some say that the ideal of objectivity conceals as much as it reveals. As we saw earlier, much of what was regarded as scientific objectivity in years past was actually an agreement primarily among white, middle-class, European men. Experiences common to women, to ethnic minorities, or to the poor, for example, were not necessarily represented in that reality.

The early anthropologists are now criticized for often making modern, Westernized “sense” out of the beliefs and practices of nonliterate tribes around the world—sometimes portraying their subjects as superstitious savages. We often call orally transmitted beliefs about the distant past “creation myth,” whereas we speak of our own beliefs as “history.” Increasingly today, there is a demand to find the native logic by which various peoples make sense out of life.

Ultimately, we’ll never know whether there is an objective reality that we experience subjectively or whether our concepts of an objective reality are illusory. So desperate is our need to know just what is going on, however, that both the positivists and the postmodernists are sometimes drawn into the belief that their view is real and true. There is a dual irony in this. On the one hand, the positivist’s belief in the reality of the objective world must ultimately be based on faith; it cannot be proven by “objective” science, since that’s precisely what’s at issue. And the postmodernists, who say nothing is objectively so, do at least feel the absence of objective reality is *really* the way things are.

For social researchers, each approach brings special strengths, and each compensates for the weaknesses of the other. It’s often most useful to “work both sides of the street,” tapping into the rich variety of theoretical perspectives that can be brought to bear on the study of human social life.

The attempt to establish formal theories of society has been closely associated with the belief in a discoverable, objective reality. Even so, we’ll see next that the issues involved in theory construction are of interest and use to all social researchers,

from the positivists to the postmodernists—and all those in between.

TWO LOGICAL SYSTEMS REVISITED

In Chapter 1, I introduced deductive and inductive theory, with a promise that we would return to them later. It's later.

The Traditional Model of Science

Years of learning about “the scientific method,” especially in the physical sciences, tends to create in students' minds a particular picture of how science operates. Although this traditional model of science tells only a part of the story, it's helpful to understand its logic.

There are three main elements in the traditional model of science, typically presented in the order in which they are implemented: theory, operationalization, and observation. Let's look at each in turn.

Theory At this point we're already well acquainted with the idea of theory. According to the traditional model of science, scientists begin with a theory, from which they derive hypotheses that they can test. So, for example, as social scientists we might have a theory about the causes of juvenile delinquency. Let's assume that we have arrived at the hypothesis that delinquency is inversely related to social class. That is, as social class goes up, delinquency goes down.

Operationalization To test any **hypothesis**, we must specify the meanings of all the variables involved in it: *social class* and *delinquency* in the present case. For example, *delinquency* might be specified as “being arrested for a crime,” or “being convicted of a crime,” and so forth. *Social class* might be specified as family income for this particular study.

Next, we need to specify how we'll measure the variables we have defined. **Operationalization** literally means the operations involved in measuring a variable. There are many ways we can pursue

this topic, each of which allows for different ways of measuring our variables.

For simplicity, let's assume we're planning to conduct a survey of high school students. We might operationalize delinquency in the form of the question: “Have you ever stolen anything?” Those who answer “yes” will be classified as delinquents in our study; those who say “no” will be classified as nondelinquents. Similarly, we might operationalize family income by asking respondents, “What was your family's income last year?” and providing them with a set of family income categories: under \$10,000; \$10,000–\$24,999; \$25,000–\$49,999; and \$50,000 and above.

At this point someone might object that “delinquency” can mean something more or different from having stolen something at one time or another, or that social class isn't necessarily exactly the same as family income. Some parents might think body piercing is a sign of delinquency even if their children don't steal, and to some “social class” might include an element of prestige or community standing as well as how much money a family has. For the researcher testing a hypothesis, however, the meaning of variables is exactly and only what the **operational definition** specifies.

In this respect, scientists are very much like Humpty Dumpty in Lewis Carroll's *Through the Looking Glass*. “When I use a word,” Humpty Dumpty tells Alice, “it means just what I choose it to mean—neither more nor less.”

“The question is,” Alice replies, “whether you *can* make words mean so many different things.” To which Humpty Dumpty responds, “The question is, which is to be master—that's all.”

Scientists have to be “masters” of their operational definitions for the sake of precision in observation, measurement, and communication. Otherwise, we would never know whether a study that contradicted ours did so only because it used a different set of procedures to measure one of the variables and thus changed the meaning of the hypothesis being tested. Of course, this also means that to evaluate a study's conclusions about juvenile delinquency and social class, or any other variables, we need to know how those variables were operationalized.

The way we have operationalized the variables in our imaginary study could be open to other problems, however. Perhaps some respondents will lie about having stolen anything, in which cases we'll misclassify them as nondelinquent. Some respondents will not know their family incomes and will give mistaken answers; others may be embarrassed and lie. We'll consider such issues in detail in Part 2.

Our operationalized hypothesis now is that the highest incidence of delinquents will be found among respondents who select the lowest family income category (under \$10,000); a lower percentage of delinquents will be found in the \$10,000–\$24,999 category; still fewer delinquents will be found in the \$25,000–\$49,999 category; and the lowest percentage of delinquents will be found in the \$50,000 and above category.

Observation The final step in the traditional model of science involves actual observation, looking at the world and making measurements of what is seen. Having developed theoretical clarity and expectations and having created a strategy for looking, all that remains is to look at the way things actually appear.

Let's suppose our survey produced the following data:

	<i>Percentage delinquent</i>
Under \$10,000	20
\$10,000–\$24,999	15
\$25,000–\$49,999	10
\$50,000 and above	25

Observations producing such data would confirm our hypothesis. But suppose our findings were as follows:

	<i>Percentage delinquent</i>
Under \$10,000	15
\$10,000–\$24,999	15
\$25,000–\$49,999	15
\$50,000 and above	15

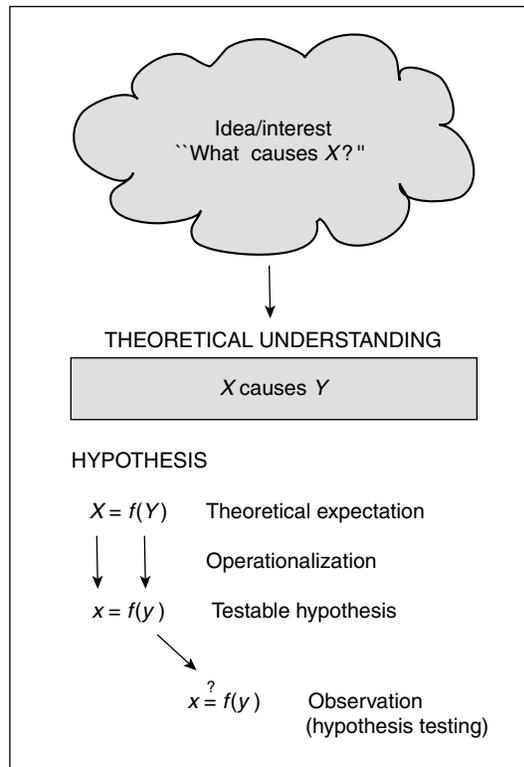


FIGURE 2-2 The Traditional Image of Science

These findings would disconfirm our hypothesis regarding family income and delinquency. *Disconfirmability* is an essential quality in any hypothesis. In other words, if there is no chance that our hypothesis will be disconfirmed, it hasn't said anything meaningful.

For example, the hypothesis that "juvenile delinquents" commit more crimes than do "nondelinquents" do cannot possibly be disconfirmed, because criminal behavior is intrinsic to the notion of delinquency. Even if we recognize that some young people commit crimes without being caught and labeled as delinquents, they couldn't threaten our hypothesis, since our observations would lead us to conclude they were law-abiding nondelinquents.

Figure 2-2 provides a schematic diagram of the traditional model of scientific inquiry. In it we see the researcher beginning with an interest in

something or an idea about it. Next comes the development of a theoretical understanding. The theoretical considerations result in a hypothesis, or an expectation about the way things ought to be in the world if the theoretical expectations are correct. The notation $Y = f(X)$ is a conventional way of saying that Y (for example, delinquency) is a function of (is in some way caused by) X (for example, poverty). At that level, however, X and Y have general rather than specific meanings.

In the operationalization process, general concepts are translated into specific indicators and procedures. The lowercase x , for example, is a concrete indicator of capital X . Thus, while X is theoretical, x is something we could actually observe. If X stands for “poverty” in general, x might stand for “family income.” If Y is the theoretical variable “juvenile delinquency,” this could be measured as “self-reported crimes” on a survey.

This operationalization process results in the formation of a testable hypothesis: for example, increasing family income reduces self-reported theft. Observations aimed at finding out whether this is true are part of what is typically called hypothesis testing. (See the box “Hints for Stating Hypotheses” for more on this.)

	<p>The SPSS and MicroCase files on the disk available with this book allow you to skim data sets to learn the kinds of variables that might be operationalized in social research. Chapter 14, on quantitative analysis, will provide in-depth instruction on how to do this.*</p>
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Deduction and Induction Compared

The traditional model of science uses deductive logic (see Chapter 1). In this section, we’re going to see how deductive logic fits into social scientific research and contrast it with inductive logic. W. I. B. Beveridge, a philosopher of science, describes these two systems of logic as follows:

Logicians distinguish between inductive reasoning (from particular instances to general principles, from facts to theories) and deductive reasoning (from the general to the particular, applying a theory to a particular case). In induction one starts from observed data and develops a generalization which explains the relationships between the objects observed. On the other hand, in deductive reasoning one starts from some general law and applies it to a particular instance. — (BEVERIDGE 1950: 113)

The classical illustration of deductive logic is the familiar syllogism “All men are mortal; Socrates is a man; therefore Socrates is mortal.” This syllogism presents a theory and its operationalization. To prove it, you might then perform an empirical test of Socrates’ mortality. That is essentially the approach discussed as the traditional model.

Using inductive logic, you might begin by noting that Socrates is mortal and by observing several other men as well. You might then note that all the observed men were mortals, thereby arriving at the tentative conclusion that all men are mortal.

Let’s consider an actual research project as a vehicle for comparing the roles of deductive and inductive logic in theory and research.

A Case Illustration Years ago, Charles Glock, Benjamin Ringer, and I (1967) set out to discover what caused differing levels of church involvement among U.S. Episcopalians. Several theoretical or quasi-theoretical positions suggested possible answers. I’ll focus on only one here—what we came to call the “Comfort Hypothesis.”

In part, we took our lead from the Christian injunction to care for “the halt, the lame, and the blind” and those who are “weary and heavy laden.” At the same time, ironically, we noted the Marxist assertion that religion is an “opiate for the masses.” Given both, it made sense to expect the following, which was our hypothesis: “Parishioners whose life situations most deprive them of satisfaction and fulfillment in the secular society turn to the church for comfort and substitute rewards” (Glock et al. 1967: 107–8).

Having framed this general hypothesis, we set about testing it. Were those deprived of satisfaction

*Each time the SPSS and MicroCase icons appear, they indicate that the topic under discussion could be pursued through the use of these software programs.

in the secular society in fact more religious than those who got more satisfaction from the secular society? To answer this, we needed to distinguish who was deprived. Our questionnaire included items that intended to indicate whether parishioners were relatively deprived or gratified in secular society.

To start, we reasoned that men enjoyed more status than do women in our generally male-dominated society. It followed that, if our hypothesis were correct, women should appear more religious than men. Once the survey data had been collected and analyzed, our expectation about gender and religion was clearly confirmed. On three separate measures of religious involvement—*ritual* (for example, church attendance), *organizational* (for example, belonging to church organizations), and *intellectual* (for example, reading church publications)—women were more religious than men. On our overall measure, women scored 50 percent higher than men.

In another test of the Comfort Hypothesis, we reasoned that in a youth-oriented society, old people would be more deprived of secular gratification than the young would be. Once again, the data confirmed our expectation. The oldest parishioners were more religious than were the middle-aged, who were more religious than were the young adults.

Social class—measured by education and income—afforded another test, which was successful. Those with low social status were more involved in the church than were those with high social status.

The hypothesis was even confirmed in a test that went against everyone's commonsense expectations. Despite church posters showing worshipful young families and bearing the slogan, "The Family That Prays Together Stays Together," the Comfort Hypothesis suggested that parishioners who were married and had children—the clear U.S. ideal at that time—would enjoy secular gratification in that regard. As a consequence, they should be *less* religious than those who lacked one or both family components. Thus, we hypothesized that parishioners who were both single and childless should be the most religious; those with either spouse or child should be somewhat less religious;

and those married with children—representing the ideal pictured on all those posters—should be least religious of all. That's exactly what we found!

Finally, the Comfort Hypothesis suggested that the various kinds of secular deprivation should be cumulative: Those with all the characteristics associated with deprivation should be the most religious; those with none should be the least. When we combined the four individual measures of deprivation into a composite measure (see Chapter 6 for methods of doing this), the theoretical expectation was exactly confirmed. Comparing the two extremes, we found that single, childless, old, lower-class female parishioners scored more than three times as high on the measure of church involvement than did young, married, upper-class fathers.

This research example clearly illustrates the logic of the deductive model. Beginning with general, theoretical expectations about the impact of social deprivation on church involvement, we derived concrete hypotheses linking specific measurable variables, such as age and church attendance. We then analyzed the actual empirical data to determine whether the deductive expectations were supported by empirical reality. Sounds good, right?

Alas, I've been fibbing a little bit just now. To tell the truth, although we began with an interest in discovering what caused variations in church involvement among Episcopalians, we didn't actually begin with a Comfort Hypothesis, or any other hypothesis for that matter. (In the interest of further honesty, Glock and Ringer initiated the study, and I joined it years after the data had been collected.)

A questionnaire was designed to collect information from parishioners that *might* shed some light on why some participated in the church more than others, but questionnaire construction was not guided by any precise, deductive theory. Once the data were collected, the task of explaining differences in religiosity began with an analysis of variables that have a wide impact on people's lives, including *gender*, *age*, *social class*, and *family status*. Each of these four variables was found to relate strongly to church involvement in the ways already described. Rather than being good news, this presented a dilemma.

HINTS FOR STATING HYPOTHESES

by Riley E. Dunlap

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A hypothesis is the basic statement that is tested in research. Typically a hypothesis states a relationship between two variables. (Although it is possible to use more than two variables, you should stick to two for now.) Because a hypothesis makes a prediction about the relationship between the two variables, it must be testable so you can determine if the prediction is right or wrong when you examine the results obtained in your study. A hypothesis must be stated in an unambiguous manner to be clearly testable. What follows are suggestions for developing testable hypotheses.

Assume you have an interest in trying to predict some phenomenon such as “attitudes toward women’s liberation,” and that you can measure such attitudes on a continuum ranging from “opposed to women’s liberation” to “neutral” to “supportive of women’s liberation.” Also assume that, lacking a theory, you’ll rely on “hunches” to come up with variables that might be related to attitudes toward women’s liberation.

In a sense, you can think of hypothesis construction as a case of filling in the blank: “_____ is related to attitudes toward women’s liberation.” Your job is to think of a variable that might plausibly be related to such attitudes, and then to

word a hypothesis that states a relationship between the two variables (the one that fills in the “blank” and “attitudes toward women’s liberation”). You need to do so in a precise manner so that you can determine clearly whether the hypothesis is supported or not when you examine the results (in this case, most likely the results of a survey).

The key is to word the hypothesis carefully so that the prediction it makes is quite clear to you as well as others. If you use age, note that saying “Age is related to attitudes toward women’s liberation” does not say precisely how you think the two are related (in fact, the only way this hypothesis could be falsified is if you fail to find a statistically significant relationship of any type between age and attitudes toward women’s liberation). In this case a couple of steps are necessary. You have two options:

1. “Age is related to attitudes toward women’s liberation, with younger adults being more supportive than older adults.” (Or, you could state the opposite, if you believed older people are likely to be more supportive.)
2. “Age is negatively related to support for women’s liberation.” Note here that I specify “support” for women’s liberation (SWL) and then predict a negative relationship—that is, as age goes up, I predict that SWL will go down.

Glock recalls discussing his findings with colleagues over lunch at the Columbia faculty club. Once he had displayed the tables illustrating the impact of the variables and their cumulative effect, a colleague asked, “What does it all mean, Charlie?” Glock was at a loss. Why were those variables so strongly related to church involvement?

That question launched a process of reasoning about what the several variables had in common, aside from their impact on religiosity. (The composite index was originally labeled “Predisposition

to Church Involvement.”) Eventually we saw that each of the four variables also reflected differential status in the secular society, and then we had the thought that perhaps the issue of comfort was involved. Thus, the inductive process had moved from concrete observations to a general theoretical explanation.

A Graphic Contrast As the preceding case illustration shows, theory and research can usefully be done both inductively and deductively. Figure 2-3

In this hypothesis, note that both of the variables (*age*, the independent variable or likely “cause,” and *SWL*, the dependent variable or likely “effect”) range from low to high. This feature of the two variables is what allows you to use “negatively” (or “positively”) to describe the relationship.

Notice what happens if you hypothesize a relationship between gender and *SWL*. Since *gender* is a nominal variable (as you’ll learn in Chapter 5) it does not range from low to high—people are either male or female (the two attributes of the variable *gender*). Consequently, you must be careful in stating the hypothesis unambiguously:

1. “Gender is positively (or negatively) related to *SWL*” is not an adequate hypothesis, because it doesn’t specify how you expect gender to be related to *SWL*—that is, whether you think men or women will be more supportive of women’s liberation.
2. It is tempting to say something like “Women are positively related to *SWL*,” but this really doesn’t work because female is only an attribute, not a full variable (*gender* is the variable).
3. “Gender is related to *SWL*, with women being more supportive than men” would be my recommendation. Or, you could say, “with men being less supportive than women,” which

makes the identical prediction. (Of course, you could also make the opposite prediction, that men are more supportive than women are, if you wished.)

4. Equally legitimate would be “Women are more likely to support women’s liberation than are men.” (Note the need for the second “are,” or you could be construed as hypothesizing that women support women’s liberation more than they support men—not quite the same idea.)

The above examples hypothesized relationships between a “characteristic” (*age* or *gender*) and an “orientation” (attitudes toward women’s liberation). Because the causal order is pretty clear (obviously *age* and *gender* come before attitudes, and are less alterable), we could state the hypotheses as I’ve done, and everyone would assume that we were stating causal hypotheses.

Finally, you may run across references to the **null hypothesis**, especially in statistics. Such a hypothesis predicts no relationship (technically, no statistically significant relationship) between the two variables, and it is always implicit in testing hypotheses. Basically, if you have hypothesized a positive (or negative) relationship, you are hoping that the results will allow you to reject the null hypothesis and verify your hypothesized relationship.

shows a graphic comparison of the deductive and inductive methods. In both cases, we are interested in the relationship between the number of hours spent studying for an exam and the grade earned on that exam. Using the deductive method, we would begin by examining the matter logically. Doing well on an exam reflects a student’s ability to recall and manipulate information. Both of these abilities should be increased by exposure to the information before the exam. In this fashion, we would arrive at a hypothesis suggesting a *positive*

relationship between the number of hours spent studying and the grade earned on the exam. That is, we expect grades to increase as the hours of studying increase. If increased hours produced decreased grades, we would call it a *negative* relationship. The hypothesis is represented by the line in part 1(a) of Figure 2-3.

Our next step would be to make observations relevant to testing our hypothesis. The shaded area in part 1(b) of the figure represents perhaps hundreds of observations of different students, noting

APPLYING THE RESULTS

While many church leaders believe that the function of the churches is to shape members' behavior in the community, the Glock study suggests that church involvement primarily reflects a need for comfort by those who are denied gratification in the secular society. How might churches apply these research results?

On the one hand, churches might adjust their programs to the needs that were drawing their members to participation. They might study members' needs for gratification and develop more programs to satisfy them. On the other hand, churches could seek to remind members that the purpose of participation is to learn and practice proper behavior. Following that strategy would probably change participation patterns, attracting new participants in the church while driving away others.

how many hours they studied and what grades they got. Finally, in part 1(c), we compare the hypothesis and the observations. Because observations in the real world seldom if ever match our expectations perfectly, we must decide whether the match is close enough to confirm the hypothesis. Put differently, can we conclude that the hypothesis describes the general pattern that exists, granting some variations in real life?

Now let's address the same research question by using the inductive method. We would begin—as in part 2(a) of the figure—with a set of observations. Curious about the relationship between hours spent studying and grades earned, we might simply arrange to collect some relevant data. Then we'd look for a pattern that best represented or summarized our observations. In part 2(b) of the figure, the pattern is shown as a curved line running through the center of the curving mass of points.

The pattern found among the points in this case

suggests that with 1 to 15 hours of studying, each additional hour generally produces a higher grade on the exam. With 15 to about 25 hours, however, more study seems to slightly lower the grade. Studying more than 25 hours, on the other hand, results in a return to the initial pattern: More hours produce higher grades. Using the inductive method, then, we end up with a tentative conclusion about the pattern of the relationship between the two variables. The conclusion is tentative because the observations we have made cannot be taken as a test of the pattern—those observations are the source of the pattern we've created.

In actual practice, theory and research interact through a never ending alternation of deduction and induction. Walter Wallace (1971) has represented this process as a circle, which is presented in a modified form in Figure 2-4.

When Emile Durkheim ([1897] 1951) pored through table after table of official statistics on suicide rates in different areas, he was struck by the fact that Protestant countries consistently had higher suicide rates than Catholic ones. Why should that be the case? His initial observations led him to create a theory of religion, social integration, anomie, and suicide. His theoretical explanations led to further hypotheses and further observations.

In summary, the scientific norm of logical reasoning provides a two-way bridge between theory and research. Scientific inquiry in practice typically involves an alternation between deduction and induction. During the deductive phase, we reason *toward* observations; during the inductive phase, we reason *from* observations. Both deduction and induction are routes to the construction of social theories, and both logic and observation are essential.

Although both inductive and deductive methods are valid in scientific inquiry, individuals may feel more comfortable with one approach than the other. Consider this exchange in Sir Arthur Conan Doyle's *A Scandal in Bohemia*, as Sherlock Holmes answers Dr. Watson's inquiry (Doyle [1891] 1892:13):

| “What do you imagine that it means?”

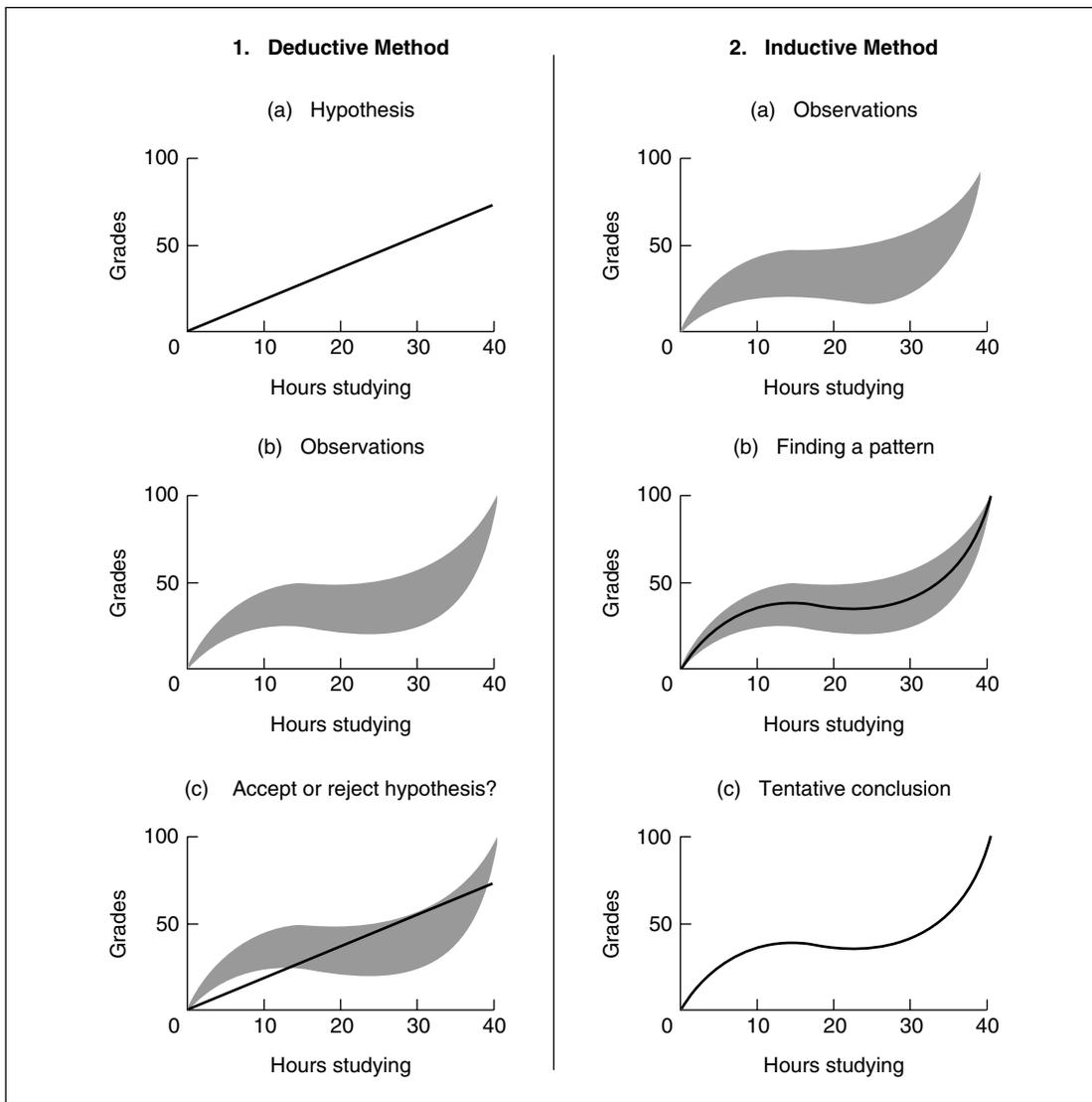


FIGURE 2-3 Deductive and Inductive Methods

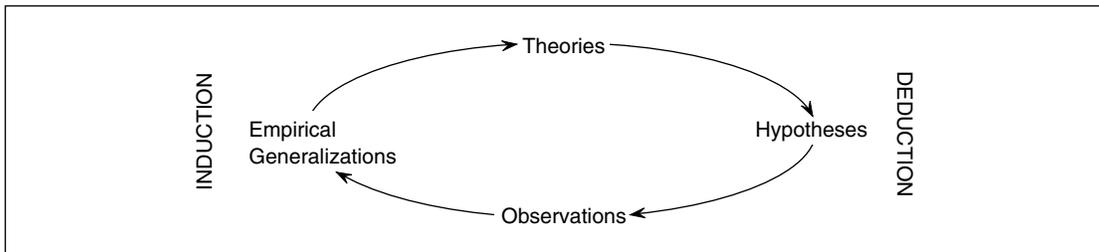


FIGURE 2-4 The Wheel of Science

“I have no data yet. It is a capital mistake to theorise before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.”

Some social scientists would rally behind this inductive position, while others would take a deductive stance. Most, however, concede the legitimacy of both. With this understanding of the deductive and inductive links between theory and research, let’s delve a little more deeply into how theories are constructed using these two different approaches.

DEDUCTIVE THEORY CONSTRUCTION

To see what is involved in deductive theory construction and hypothesis testing, let’s imagine that you are going to construct a deductive theory. How would you go about it?

Getting Started

The first step in deductive theory construction is to pick a topic that interests you. It can be broad, such as “What’s the structure of society?” or narrower, as in “Why do people support or oppose a woman’s right to an abortion?” Whatever the topic, it should be something you’re interested in understanding and explaining.

Once you’ve picked your topic, you then undertake an inventory of what is known or thought about it. In part, this means writing down your own observations and ideas about it. Beyond that, you need to learn what other scholars have said about it. You can do this by talking to other people and by reading what others have written about it. Appendix A provides guidelines for using the library—you’ll probably spend a lot of time there.

Your preliminary research will probably uncover consistent patterns discovered by prior scholars. For example, religious and political variables will stand out as important determinants of attitudes about abortion. Findings such as these will be quite useful to you in creating your own theory.

Throughout this process, introspection is helpful. If you can look at your own personal processes—including reactions, fears, and prejudices you aren’t especially proud of—you may be able to gain important insights into human behavior in general.

Constructing Your Theory

Although theory construction is not a lockstep affair, the following list of elements in theory construction should organize the activity for you.

1. Specify the topic.
2. Specify the range of phenomena your theory addresses. Will your theory apply to all of human social life, will it apply only to U.S. citizens, only to young people, or what?
3. Identify and specify your major concepts and variables.
4. Find out what is known (or what propositions have been demonstrated) about the relationships among those variables.
5. Reason logically from those propositions to the specific topic you are examining.

We’ve already discussed items (1) through (3), so let’s focus now on (4) and (5). As you identify the relevant concepts and discover what has already been learned about them, you can begin to create a propositional structure that explains the topic under study. For the most part, social scientists have not created formal, propositional theories. Still, it is useful to look at a well-reasoned example. Let’s look now at an example of how these building blocks fit together in actual deductive theory construction and empirical research.

An Example of Deductive Theory: Distributive Justice

A topic of central interest to scholars using the exchange paradigm (discussed earlier) is that of *distributive justice*, people’s perception of whether they’re being treated fairly by life, whether they’re getting “their share.” Guillermina Jasso describes the theory of distributive justice more formally, as follows:

The theory provides a mathematical description of the process whereby individuals, reflecting on their holdings of the goods they value (such as beauty, intelligence, or wealth), compare themselves to others, experiencing a fundamental instantaneous magnitude of the justice evaluation (J), which captures their sense of being fairly or unfairly treated in the distributions of natural and social goods. — (JASSO 1988:11)

Notice that Jasso has assigned a letter to her key variable: J will stand for distributive justice. She does this to support her intention of stating her theory in mathematical formulas. Though theories are often expressed mathematically, we'll not delve too deeply into that practice here.

Jasso indicates that there are three kinds of postulates in her theory. "The first makes explicit the fundamental axiom which represents the substantive point of departure for the theory." She elaborates as follows:

The theory begins with the received Axiom of Comparison, which formalizes the long-held view that a wide class of phenomena, including happiness, self-esteem, and the sense of distributive justice, may be understood as the product of a comparison process. — (JASSO 1988:11)

Thus, our sense of whether we are receiving a "fair" share of the good things of life comes from comparing ourselves with others. If this seems obvious to you, that's good. Remember, axioms are the taken-for-granted beginnings of theory.

Jasso continues to do the groundwork for her theory. First, she indicates that our sense of distributive justice is a function of "Actual Holding (A)" and "Comparison Holdings (C)" of some good. Let's consider money. My sense of justice in this regard is a function of how much I actually have, compared with how much others have. By specifying the two components of the comparison, Jasso can use them as variables in her theory.

Jasso then offers a "measurement rule" that further specifies how the two variables, A and C , will be conceptualized. This step is needed because some of the goods to be examined are concrete and commonly measured (such as money),

whereas others are less tangible (such as respect). The former kind, she says, will be measured conventionally, whereas the latter will be measured "by the individual's relative rank . . . within a specially selected comparison group." The theory will provide a formula for making that measurement (Jasso 1988:13).

Jasso continues in this fashion to introduce additional elements, weaving them into mathematical formulas for deriving predictions about the workings of distributive justice in a variety of social settings. Here is a sampling of where her theorizing takes her (1988:14–15).

- Other things [being] the same, a person will prefer to steal from a fellow group member rather than from an outsider.
- The preference to steal from a fellow group member is more pronounced in poor groups than in rich groups.
- In the case of theft, informants arise only in cross-group theft, in which case they are members of the thief's group.
- Persons who arrive a week late at summer camp or for freshman year of college are more likely to become friends of persons who play games of chance than of persons who play games of skill.
- A society becomes more vulnerable to deficit spending as its wealth increases.
- Societies in which population growth is welcomed must be societies in which the set of valued goods includes at least one quantity-good, such as wealth.

Jasso's theory leads to many other propositions, but this sampling should provide a good sense of where deductive theorizing can take you. To get a feeling for how she reasons her way to these propositions, let's look briefly at the logic involved in two of the propositions that relate to theft within and outside one's group.

- Other things [being] the same, a person will prefer to steal from a fellow group member rather than from an outsider.

Beginning with the assumption that thieves want to maximize their relative wealth, ask your-

self whether that goal would be best served by stealing from those you compare yourself with or from outsiders. In each case, stealing will increase your Actual Holdings, but what about your Comparison Holdings?

A moment's thought should suggest that stealing from people in your comparison group will lower their holdings, further increasing your relative wealth. To simplify, imagine there are only two people in your comparison group: you and I. Suppose we each have \$100. If you steal \$50 from someone outside our group, you will have increased your relative wealth by 50 percent compared with me: \$150 versus \$100. But if you steal \$50 from me, you will have increased your relative wealth 200 percent: \$150 to my \$50. Your goal is best served by stealing from within the comparison group.

- In the case of theft, informants arise only in cross-group theft, in which case they are members of the thief's group.

Can you see why it would make sense for informants (1) to arise only in the case of cross-group theft and (2) to come from the thief's comparison group? This proposition again depends on the fundamental assumption that everyone wants to increase his or her relative standing. Suppose you and I are in the same comparison group, but this time the group contains additional people. If you steal from someone else within our comparison group, my relative standing in the group does not change. Although your wealth has increased, the average wealth in the group remains the same (because someone else's wealth has decreased by the same amount). So my relative standing remains the same. I have no incentive to inform on you.

If you steal from someone outside our comparison group, your nefarious income increases the total wealth in our group, so my own wealth relative to that total is diminished. Since my relative wealth has suffered, I'm more likely to bring an end to your stealing.

This last deduction also begins to explain why informants are more likely to arrive from within the thief's comparison group. We've just seen how my relative standing was decreased by your theft.

How about other members of the other group? Each of them would actually profit from the theft, since you would have reduced the total with which they compare themselves. Hence, the theory of distributive justice predicts that informants arise from the thief's comparison group.

This brief and selective peek into Jasso's derivations should give you some sense of the enterprise of deductive theory. Realize, of course, that the theory guarantees none of the given predictions. The role of research is to test each of them empirically to determine whether what makes sense (logic) occurs in practice (observation).

There are two important elements in science, then: logical integrity and empirical verification. Both are essential to scientific inquiry and discovery. Logic alone is not enough, but on the other hand, the mere observation and collection of empirical facts does not provide understanding—the telephone directory, for example, is not a scientific conclusion. Observation, however, can be the springboard for the construction of a social scientific theory, as we shall now see in the case of inductive theory.

INDUCTIVE THEORY CONSTRUCTION

Quite often, social scientists begin constructing a theory through the inductive method by first observing aspects of social life and then seeking to discover patterns that may point to relatively universal principles. Barney Glaser and Anselm Strauss (1967) coined the term *grounded theory* in reference to this method.

Field research—the direct observation of events in progress—is frequently used to develop theories through observation (see Chapter 10). A long and rich anthropological tradition has seen this method used to good advantage.

Among contemporary social scientists, no one was more adept at seeing the patterns of human behavior through observation than Erving Goffman (1974:5):

A game such as chess generates a habitable universe for those who can follow it, a plane of

being, a cast of characters with a seemingly unlimited number of different situations and acts through which to realize their natures and destinies. Yet much of this is reducible to a small set of interdependent rules and practices. If the meaningfulness of everyday activity is similarly dependent on a closed, finite set of rules, then explication of them would give one a powerful means of analyzing social life.

In a variety of research efforts, Goffman uncovered the rules of such diverse behaviors as living in a mental institution (1961) and managing the “spoiled identity” of disfiguration (1963). In each case, Goffman observed the phenomenon in depth and teased out the rules governing behavior. Goffman’s research provides an excellent example of qualitative field research as a source of grounded theory.

Our earlier discussion of the Comfort Hypothesis and church involvement shows that qualitative field research is not the only method of observation appropriate to the development of inductive theory. Here’s another detailed example to illustrate further the construction of inductive theory using quantitative methods.

An Example of Inductive Theory: Why Do People Smoke Marijuana?

During the 1960s and 1970s, marijuana use on U.S. college campuses was a subject of considerable discussion in the popular press. Some people were troubled by marijuana’s popularity; others welcomed it. What interests us here is why some students smoked marijuana and others didn’t. A survey of students at the University of Hawaii (Takeuchi 1974) provided the data to answer that question.

At the time of the study, countless explanations were being offered for drug use. People who opposed drug use, for example, often suggested that marijuana smokers were academic failures trying to avoid the rigors of college life. Those in favor of marijuana, on the other hand, often spoke of the search for new values: Marijuana smokers, they said, were people who had seen through the hypocrisy of middle-class values.

David Takeuchi’s (1974) analysis of the data gathered from University of Hawaii students, however, did not support any of the explanations being offered. Those who reported smoking marijuana had essentially the same academic records as those who didn’t smoke it, and both groups were equally involved in traditional “school spirit” activities. Both groups seemed to feel equally well integrated into campus life.

There were differences, however:

1. Women were less likely than men to smoke marijuana.
2. Asian students (a large proportion of the student body) were less likely than non-Asians to smoke marijuana.
3. Students living at home were less likely than those living in apartments to smoke marijuana.

As in the case of religiosity, the three variables independently affected the likelihood of a student’s smoking marijuana. About 10 percent of the Asian women living at home had smoked marijuana, as contrasted with about 80 percent of the non-Asian men living in apartments. And, as in the religiosity study, the researchers discovered a powerful pattern of drug use before they had an explanation for that pattern.

In this instance, the explanation took a peculiar turn. Instead of explaining why some students smoked marijuana, the researchers explained why some didn’t. Assuming that all students had some motivation for trying drugs, the researchers suggested that students differed in the degree of “social constraints” preventing them from following through on that motivation.

U.S. society is, on the whole, more permissive with men than with women when it comes to deviant behavior. Consider, for example, a group of men getting drunk and boisterous. We tend to dismiss such behavior with references to “camaraderie” and “having a good time,” whereas a group of women behaving similarly would probably be regarded with great disapproval. We have an idiom, “Boys will be boys,” but no comparable idiom for girls. The researchers reasoned, therefore, that women would have more to lose by smoking

marijuana than men would. Being female, then, provided a constraint against smoking marijuana.

Students living at home had obvious constraints against smoking marijuana, compared with students living on their own. Quite aside from differences in opportunity, those living at home were seen as being more dependent on their parents—hence more vulnerable to additional punishment for breaking the law.

Finally, the Asian subculture in Hawaii has traditionally placed a higher premium on obedience to the law than have other subcultures, so Asian students would have more to lose if they were caught violating the law by smoking marijuana.

Overall, then, a “social constraints” theory was offered as the explanation for observed differences in the likelihood of smoking marijuana. The more constraints a student had, the less likely he or she would be to smoke marijuana. It bears repeating that the researchers had no thoughts about such a theory when their research began. The theory came from an examination of the data.

THE LINKS BETWEEN THEORY AND RESEARCH

Throughout this chapter, we have seen various aspects of the links between theory and research in social scientific inquiry. In the deductive model, research is used to test theories. In the inductive model, theories are developed from the analysis of research data. This section looks more closely into the ways theory and research are related in actual social scientific inquiry.

Whereas we have discussed two idealized logical models for linking theory and research, social scientific inquiries have developed a great many variations on these themes. Sometimes theoretical issues are introduced merely as a background for empirical analyses. Other studies cite selected empirical data to bolster theoretical arguments. In neither case is there really an interaction between theory and research for the purpose of developing new explanations. Some studies make no use of theory at all, aiming specifically, for example, at an ethnographic description of a particular social sit-

uation, such as an anthropological account of food and dress in a particular society.

As you read social research reports, however, you will very often find that the authors are conscious of the implications of their research for social theories and vice versa. Here are a few examples to illustrate this point.

When W. Lawrence Neuman (1998) set out to examine the problem of monopolies (the “trust problem”) in U.S. history, he saw the relevance of theories about how social movements transform society (“state transformation”). He became convinced, however, that existing theories were inadequate for the task before him:

State transformation theory links social movements to state policy formation processes by focussing on the role of cultural meaning in organized political struggles. Despite a resemblance among concepts and concerns, constructionist ideas found in the social problems, social movements, and symbolic politics literatures have not been incorporated into the theory. In this paper, I draw on these three literatures to enhance state transformation theory.

— (NEUMAN 1998:315)

Having thus modified state transformation theory, Neuman had a theoretical tool that could guide his inquiry and analysis into the political maneuverings related to monopolies beginning in the 1880s and continuing until World War I. Thus, theory served as a resource for research and at the same time was modified by it.

In a somewhat similar study, Alemseghed Kebede and J. David Knottnerus (1998) set out to investigate the rise of Rastafarianism in the Caribbean. However, they felt that recent theories on social movements had become too positivistic in focusing on the mobilization of resources. Resource mobilization theory, they felt, downplays

the motivation, perceptions, and behavior of movement participants . . . and concentrates instead on the whys and hows of mobilization. Typically theoretical and research problems include: How do emerging movement organizations seek to mobilize and routinize the flow of

resources and how does the existing political apparatus affect the organization of resources?
— (1998:500)

To study Rastafarianism more appropriately, the researchers felt the need to include several concepts from contemporary social psychology. In particular, they sought models to use in dealing with problems of meaning and collective thought.

Frederika E. Schmitt and Patricia Yancey Martin (1999) were particularly interested in discovering what produced successful rape crisis centers and how such centers dealt with the organizational and political environments within which they operated. The researchers found theoretical constructs appropriate to their inquiry:

This case study of unobtrusive mobilizing by [the] Southern California Rape Crisis Center uses archival, observational, and interview data to explore how a feminist organization worked to change police, schools, prosecutor[s], and some state and national organizations from 1974 to 1994. Mansbridge's concept of street theory and Katzenstein's concepts of unobtrusive mobilization and discursive politics guide the analysis.
— (1999:364)

In summary, there is no simple recipe for conducting social science research. It is far more open-ended than the traditional view of science suggests. Ultimately, science depends on two categories of activity: logic and observation. As you'll see throughout this book, they can be fit together in many patterns.

THE IMPORTANCE OF THEORY IN THE "REAL WORLD"

At this point you may be saying, "Sure, theory and research are OK, but what do they have to do with the real world?" As we'll see later in this book, there are many practical applications of social research, from psychology to social reform. Think, for instance, how someone could make use of David Takeuchi's research on marijuana use.

But how does theory work in such applications?

A QUANDARY REVISITED

As we've seen, many different paradigms have been suggested for the study of society. The Opening Quandary asked which was true. It should have become apparent in this chapter that the answer is "None of the above." However, none of the paradigms is false, either.

By their nature, paradigms are neither true or false. They are merely different ways of looking and seeking explanations. Thus, they may be judged as useful or not useful in a particular situation but not true or false. Imagine that you and some friends are in a totally darkened room. Each of you has a flashlight. When you yourself turn on your flashlight, you create a partial picture of what's in the room, whereby some things are revealed, but others remain concealed. Now imagine your friends taking turns turning on their flashlights. Every person's flashlight presents a different picture of what's in the room, both revealing and concealing. Paradigms are like the flashlights in this gripping tale. Each offers a particular point of view that may or may not be useful in a given circumstance. None reveals the full picture, or the "truth."

In some minds, theoretical and practical matters are virtual opposites. Social scientists committed to the use of science know differently, however.

Lester Ward, the first president of the American Sociological Association, was committed to the application of social research in practice, or the use of that research toward specific ends. Ward (1906:5) distinguished pure and applied sociology as follows:

Just as pure sociology aims to answer the questions What, Why, and How, so applied sociology aims to answer the question What for. The former deals with facts, causes, and principles, the latter with the object, end, or purpose.

No matter how practical and/or idealistic your aims, a theoretical understanding of the terrain may spell the difference between success and failure. As Ward saw it, “Reform may be defined as the desirable alteration of social structures. Any attempt to do this must be based on a full knowledge of the nature of such structures, otherwise its failure is certain” (1906:4).

Suppose you were concerned about poverty in the United States. The sociologist Herbert Gans (1971) suggests it is vital to understand the functions that poverty serves for people who are not poor. For example, the persistence of poverty means there will always be people willing to do the jobs no one else wants to do—and they’ll work for very little money. The availability of cheap labor provides a great many affordable comforts for the nonpoor.

By the same token, poverty provides many job opportunities for social workers, unemployment office workers, police, and so forth. If poverty were to disappear, what would happen to social work colleges, for example?

I don’t mean to suggest a conspiracy of people intent on keeping the poor in their place or that social workers secretly hope for poverty to persist. Nor do I want to suggest that the dark cloud of poverty has a silver lining. I merely want you to understand the point made by Ward, Gans, and many other sociologists: If you want to change society, you need to understand how it operates. As William White (1997) argued, “Theory helps create questions, shapes our research designs, helps us anticipate outcomes, helps us design interventions.”

Main Points

- A paradigm is a fundamental model or scheme that organizes our view of something.
- Social scientists use a variety of paradigms to organize how they understand and inquire into social life.
- A distinction between types of theories that cuts across various paradigms is macrotheory (theories about large-scale features of society) versus microtheory (theories about smaller units or features of society).
- The positivistic paradigm assumes we can scientifically discover the rules governing social life.
- The conflict paradigm focuses on the attempt of one person or group to dominate others and to avoid being dominated.
- The symbolic interactionist paradigm examines how shared meanings and social patterns are developed in the course of social interactions.
- Ethnomethodology focuses on the ways people make sense out of life in the process of living it, as though each were a researcher engaged in an inquiry.
- The structural functionalist (or social systems) paradigm seeks to discover what functions the many elements of society perform for the whole system—for example, the functions of mothers, labor unions, and radio talk shows.
- Feminist paradigms, in addition to drawing attention to the oppression of women in most societies, highlight how previous images of social reality have often come from and reinforced the experiences of men.
- Some contemporary theorists and researchers have challenged the long-standing belief in an objective reality that abides by rational rules. They point out that it is possible to agree on an “intersubjective” reality.
- In the traditional image of science, scientists proceed from theory to operationalization to observation. But this image is not an accurate picture of how scientific research is actually done.
- Social scientific theory and research are linked through two logical methods: Deduction

- involves the derivation of expectations or hypotheses from theories. Induction involves the development of generalizations from specific observations.
- Science is a process involving an alternation of deduction and induction.
 - Guillermina Jasso's theory of distributive justice illustrates how formal reasoning can lead to a variety of theoretical expectations that can be tested by observation.
 - David Takeuchi's study of factors influencing marijuana smoking among University of Hawaii students illustrates how collecting observations can lead to generalizations and an explanatory theory.
 - In practice, there are many possible links between theory and research and many ways of going about social inquiry.
 - Using theories to understand how society works is key to offering practical solutions to society's problems.

Key Terms

paradigms	operationalization
macrotheory	operational definition
microtheory	null hypothesis
hypothesis	

Review Questions

1. Consider the possible relationship between education and prejudice (mentioned in Chapter 1). How might that relationship be examined through (a) deductive and (b) inductive methods?
2. Select a social problem that concerns you, such as war, pollution, overpopulation, prejudice, or poverty. Then use one of the paradigms discussed in the chapter to address that problem. What would be the main variables involved in the study of that problem, including variables that may cause it or hold the key to its solution?
3. What, in your own words, is the difference between a paradigm and a theory?
4. You have been hired to evaluate how well a particular health maintenance organization (HMO) serves the needs of its clients. How might you implement this study using each of the following: (1) the interactionist paradigm, (2) the social systems or functionalist paradigm, (3) the conflict paradigm?

Additional Readings

- Berger, Joseph, Morris Zelditch, Jr., and Bo Anderson, eds. 1989. *Sociological Theories in Progress*. Newbury Park, CA: Sage. Several authors develop parts of a theory of social interaction, many of which focus on how we create expectations for each other's behavior.
- Denzin, Norman K., and Yvonna S. Lincoln. 1994. *Handbook of Qualitative Research*. Newbury Park, CA: Sage. Various authors discuss the process of qualitative research from the perspective of various paradigms, showing how they influence the nature of inquiry. The editors also critique positivism from a postmodern perspective.
- DeVault, Marjorie L. 1999. *Liberating Method: Feminism and Social Research*. Philadelphia: Temple University Press. This book elaborates on some of the methods associated with the feminist paradigm and is committed to both rigorous inquiry and the use of social research to combat oppression.
- Kuhn, Thomas. 1970. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press. In this exciting and innovative recasting of the nature of scientific development, Kuhn disputes the notion of gradual change and modification in science, arguing instead that established "paradigms" tend to persist until the weight of contradictory evidence brings their rejection and replacement by new paradigms. This short book is at once stimulating and informative.
- Lofland, John, and Lyn H. Lofland. 1995. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*, 3rd ed. Belmont, CA: Wadsworth. An excellent text on how to conduct qualitative inquiry with an eye toward discovering the rules of social life. Includes a critique of postmodernism.
- McGrane, Bernard. 1994. *The Un-TV and 10 mph Car: Experiments in Personal Freedom and Everyday Life*. Fort Bragg, CA: The Small Press. Some excellent and

imaginative examples of an ethnomethodological approach to society and to the craft of sociology. The book is useful for both students and faculty.

Reinharz, Shulamit. 1992. *Feminist Methods in Social Research*. New York: Oxford University Press. This book explores several social research techniques (such as interviewing, experiments, and content analysis) from a feminist perspective.

Ritzer, George. 1988. *Sociological Theory*. New York: Knopf. This is an excellent overview of the major theoretical traditions in sociology.

Sprague, Joey. 1997. "Holy Men and Big Guns: The Can[n]on in Social Theory." *Gender and Society* 11 (1): 88–107. This is an excellent analysis of the ways in which conventional social theory misses aspects of society that might be revealed in a feminist examination.

Turner, Jonathan H., ed. 1989. *Theory Building in Sociology: Assessing Theoretical Cumulation*. Newbury Park, CA: Sage. This collection of essays on sociological theory construction focuses specifically on the question posed by Turner's introductory chapter, "Can Sociology Be a Cumulative Science?"

Turner, Stephen Park, and Jonathan H. Turner. 1990. *The Impossible Science: An Institutional Analysis of American Sociology*. Newbury Park, CA: Sage. Two authors bring two very different points of view to the history of U.S. sociologists' attempt to establish a science of society.

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