**INTRODUCTION**

Due to differing philosophical assumptions, not everyone agrees about how best to do science. Be-cause one feature of scientific inquiry is that there should be no sacred cows and that everything should be open to question, some scholars have been ques-tioning and sometimes rejecting certain features of the scientifi c method that have long been cherished by most scientists. An ongoing debate rages over which arguments make more sense. A key issue in that debate concerns philosophical notions about the nature of reality and the pursuit of objectivity. On one side of the debate are those who emphasize the pursuit of objectivity in our quest to observe and understand reality. On the other side are those who believe that because it is impossible to be completely objective, it is not worth even trying to maximize objectivity. Some scholars go further and argue that an objective reality does not exist—that all we can do is examine each individual’s own subjective real-ity. At the end of Chapter 2, for example, we noted that some scholars object to evidence-based practice because it emphasizes objectivity in the appraisal of evidence.

As we review the debate about objectivity in sci-ence, you may want to keep in mind that the scientifi c method would contradict itself if its features were depicted as sacred cows that themselves were not per-mitted to be questioned. If the scientifi c method were a closed system of beliefs that itself was not open to questioning, then it would be called an *ideology.* Let’s therefore briefl y examine the nature of ideologies as a basis for viewing philosophical debates about the scientific method.

[**IDEOLOGY**](#page6)

An ideology is a closed system of beliefs and values that shapes the understanding and behavior of those who believe in it. Its assumptions are fi xed and strong and not open to questioning. To their believers, who may be called *ideologues*, ideologies offer absolute certainty and are immune to contradictory evidence. Ideologues “know” they are right and don’t want to be confused with the facts. To protect their belief systems from contradictory evidence, they will com-monly commit some of the errors we discussed in Chapter 1 such as overgeneralization, selective obser-vation, ex post facto hypothesizing, and prematurely closing inquiry. You will have difficulty changing the closed mind of an ideologue, no matter how sharp your critical thinking and no matter how solid your evidence base.

Ideologies come in many different forms. If you watch some political talk shows on cable TV, for example, you might see political ideologues attempt-ing to shout each other down with their opposing po-litical ideologies. You might also see proponents or opponents of ethical issues such as abortion or stem cell research whose fixed and strong feminist or reli-gious convictions leave no room for considering the possible correctness of opposing points of view. You can also observe ideologues in scholarly debates or in discussions of social work. If we were to tell you that the scientifi c method should never be questioned or modifi ed, then we would be ideologues. If two social policy professors, one a Marxist and the other a con-servative, fiercely criticized or espoused socially con-servative welfare reform policies and did not permit students to cite evidence questioning their views on the issue (perhaps lowering the grades of students who did), then they might be ideologues. If a direct-practice professor taught only a psychoanalytic approach to practice and refused to consider evidence showing that other approaches might be more effective for many of the problems social workers deal with, he might be an ideologue. If your classmate refuses on religious grounds to even question her convictions that homosexuality is a sin and that social workers should try to persuade gays and lesbians to become heterosexual, then she might be an ideologue.

We can be ideological in some of our beliefs, but not in others. The psychoanalytic professor and your evangelically conservative classmate might not be at all ideological in their open-minded approach to studying the benefi cial or harmful effects of welfare reform. When scholars debate certain aspects of the scientific method or evidence-based practice, their positions can at times seem ideological, even though they tend not to be ideologues regarding other matters. Let’s now examine that debate.

[**PARADIGMS**](#page6)

Debates about the scientifi c method commonly are based on competing paradigms. A **paradigm** is a fundamental model or scheme that organizes our observations and makes sense of them. Although it doesn’t necessarily answer important questions, it can tell us where to look for the answers. As we’ll see repeatedly, where you look largely determines the answers you’ll fi nd. Although paradigms share some similarities with ideologies, and although some folks can sound rather ideological about the particular paradigms they espouse, paradigms can be viewed as being more open to question and modification than ideologies.

Naturally, we can usually organize or make sense of things in more than one way. Different points of view are likely to yield different explanations. Imag-ine two people who begin working with emotion-ally abused wives: one a feminist and the other a fi rm believer in a right-wing conservative Christian view of traditional family values. The two are likely to develop different explanations or select different practice models in their work, particularly in regard to whether the wives should be encouraged to leave their husbands or participate with their husbands in a treatment approach that attempts to preserve the marriage while working on resolving the abuse.

No one ever starts with a completely clean slate to create a practice model or a theory. The concepts that are the building blocks of theory are not created out of nothing. If we suggest juvenile delinquency as an example of a topic to research, you may already have implicit ideas about it. If we ask you to list con-cepts that would be relevant to a theory of juvenile delinquency, you may be able to make suggestions. We might say that you already have a general point of view or frame of reference.

Thomas Kuhn (1970) referred to paradigms as the fundamental points of view that characterize a sci-ence in its search for meaning. Although we some-times think of science as developing gradually over time and marked by important discoveries and in-ventions, Kuhn said it is typical for one paradigm to become entrenched, resisting any substantial change. Eventually, however, as the shortcomings of that paradigm become obvious, a new paradigm emerges to supplant the old one. Thus, the view that the sun revolved around the Earth was supplanted by the view that the Earth revolved around the sun. Kuhn’s classic book on the subject is appropriately titled *The* *Structure of Scientific Revolutions.*

Social scientists have developed several paradigms for use in understanding social behavior. Supplanted paradigms in the social sciences, however, have had a different fate than what Kuhn observed for the natu-ral sciences. Natural scientists generally believe that the succession from one paradigm to another repre-sents progress from a false view to a true view. No modern astronomer, for example, believes that the sun revolves around the Earth.

In the social sciences, on the other hand, paradigms may gain or lose popularity but are seldom discarded altogether. Similar to social work practice models, the paradigms of the social sciences offer a variety of views, each with insights that others lack but also ignoring aspects of social life that other paradigms reveal. The different paradigms in the social sciences sometimes refl ect competing philosophical stances about the na-ture of reality and how to observe it. Let’s begin our examination of competing paradigms with one that questions the traditional scientific method’s basic assumptions about the nature of reality.

**Contemporary Positivism**

The recognition that we all have our own subjective realities poses a critical dilemma for researchers who subscribe to the traditional scientific method. Al-though their task is to observe and understand what is “really” happening, we are all human; as such, we bring along personal orientations that will color what we observe and how we explain it. Ultimately, there is no way we can totally step outside our humanness to see and understand the world as it “really” is.

Applying this dilemma to social work practice, suppose you encounter a case in which wife batter-ing has been reported, but the spouses now deny it. (“I/She just slipped and fell down the stairs. That’s what caused all the facial and other bruises.”) Perhaps each spouse fears the ramifi cations of incarceration. Perhaps the wife initially reported the abuse but now fears for her life since her husband threatened her with retaliation if she does not retract her accusation.

Taking the postmodern view, you might conclude that there is no objective answer to the question of what really happened. Nevertheless, you could func-tion within agreed-upon standards of proof to reach a workable conclusion and course of action, such as moving the wife to a shelter. Taking the traditional scientific view, however, you would acknowledge that although each spouse has his or her own subjective view of reality, although the wife changed her report of her view, and although your investigation into the situation might be infl uenced by your own prior experiences, it might be possible to ascertain objec-tively whether wife battering occurred and whether the wife needs to be protected—perhaps in a shelter.

The latter view refl ects the paradigm of **contempo-rary positivism**. Taking the contemporary positivistview, you might agree with the postmodern view that it is virtually impossible to be completely objective and know for sure exactly what happened, but you would nevertheless believe that there is an objective answer to the question of what really happened and that it is worth trying to investigate things as objec-tively as possible to attempt to maximize the accu-racy of your answer to the question. Thus, though the positivistic view and the postmodern one are fundamentally different in terms of ultimate reality, they do not necessarily produce different actions in immediate human affairs.

Positivism, however, has not always been contem-porary. The term *positivism* was originally coined by French philosopher Auguste Comte (1798–1857)*.* Before Comte, society simply was. To the extent that people recognized different kinds of societies or changes in society over time, religious paradigms generally predominated to explain the differences. The state of social affairs was often seen as a refl ec-tion or expression of God’s will. Alternately, people were challenged to create a “city of God” on Earth to replace sin and godlessness.

Comte separated his inquiry from religion. He thought that society could be studied scientifi cally, replacing religious belief with scientifi c objectivity— basing knowledge on observations through the fi ve senses rather than on belief. He felt that society could be understood logically and rationally, and that it could be studied just as scientifi cally as biology or physics. Comte’s view was to form the basic founda-tion for the subsequent development of the social sci-ences. 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.

Since Comte’s time, the growth of science, the rel-ative decline of superstition, and the rise of bureau-cratic structures all seem to put rationality more and more in the center of social life. As fundamental as rationality is to most of us, however, some contem-porary positivists have raised questions about it. Humans, for example, do not always act rationally. We’re sure you can find ample evidence of this in your own experience. Many modern economic mod-els, however, fundamentally assume that people will make rational choices in the economic sector: They will choose the highest-paying job, pay the low-est price, and so on. This ignores the power of such matters as tradition, loyalty, image, and many other qualities that compete with reason in determining human behavior.

Contemporary positivists commonly use highly structured research methods, but they are also likely to employ fl exible methods, recognizing that we often are unable to determine in advance the best way to investigate some aspects of social reality. When they use fl exible methods, they tend to see their fi ndings as essentially tentative and exploratory in nature, gen-erating new ideas for further testing. (Later we will examine the terms *quantitative methods* and *quali-tative methods* and their connection with whethera research inquiry uses highly structured or flexible methods.)

Contemporary positivists are skeptical about the subjective impressions of researchers. Indeed, they tend to be skeptical of the conclusions of any indi-vidual research study. They see research as a never-ending and self-correcting quest for knowledge that requires the replication of fi ndings by different inves-tigators. Although contemporary positivists recog-nize that research is never entirely free from political and ideological values, they believe it is possible to use logical arrangements and observational tech-niques that reduce the influence of one’s values on fi- ndings.

They also assume that others can judge the va-lidity of one’s fi ndings in light of these mechanisms and can test them in later studies. Moreover, they assume that although social reality may remain elusive and that although no one study may be free of dis-tortions, we can continue over the long haul to inch closer to understanding a true objective social reality if many researchers independently conduct rigorous studies using diverse approaches and then commu-nicate about their findings and methodologies with open minds.

Contemporary positivism, thus, is a more sophis-ticated positivism. It asserts that we can rationally understand even irrational human behavior. Here’s an example. In the famous Asch Experiment (Asch, 1958), a group of subjects were presented with a set of lines on a screen and asked to identify the two equal-length lines. If you were a subject in such an experiment, you would find the correct answer pretty obvious in each set of lines. To your surprise, how-ever, you might find the other subjects all agreeing on a different answer!

As it turns out, you would be the only real subject in the experiment; all the others were working with the experimenter. The purpose of the experiment 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 his subjects did just that.

Giving in to public pressure like this would be an example of nonrational behavior. Nonetheless, notice that such behavior can still be studied scientifically and rationally. Experimenters have examined the var-ious circumstances that will lead more or fewer sub-jects to go along with the incorrect answer.

Contemporary positivists further recognize that scientists are not as objective as the ideal image of science assumes. Personal feelings can and do influ-ence the problems scientists choose to study, what they choose to observe, and the conclusions they draw from those observations. Although contem-porary positivists emphasize objectivity, precision, and generalizability in their inquiries, they recog-nize that observation and measurement cannot be as purely objective as implied by the ideal image of science. Nevertheless, they still attempt to anticipate and minimize the impact of potentially nonobjec-tive influences. They also seek to verify causality and attempt to sort out what really causes what. They believe an objective external reality exists, although they recognize its elusive nature. Instead of attempt-ing to verify universal laws, they examine the con-ditions under which particular ideas and hypotheses are and are not falsified.