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Sociology, psychology, criminology, business administration, education, political science, nursing, social work, communications, health studies, human ecology, and the rest of the social and health sciences each have a designated academic "turf." But this book deals with something these otherwise diverse disciplines have in common—a belief in the desirability of trying to obtain the best possible answers to research questions that involve exploring, describing, understanding, explaining, and sometimes bringing about change through the systematic study and analysis of attitudes, beliefs, behaviors, and artifacts, i.e., research.

You may be one of those students who is interested in research, enrolled eagerly in your research methods courses, and is simply interested in learning something about how it's done. If you fall into this category, then no problem; this book is written by two "keeners" who love doing, teaching, and talking about research and are eager to share what we know.

But we've also taught enough research methods courses to know that there are students at the other end of the spectrum as well, i.e., those who have been dragged kicking and screaming into a required course (as research methods courses often are) and wondering what they might have done in a previous life to have been sentenced to this semester of pain. What we have found among this latter group is that they are often people who are not interested in research as a career, are more interested in what they see as a more applied or professional vocation, and, because of that, write off "research" as an esoteric or arcane pursuit that is only of interest to academics and has nothing of relevance to offer them.

We suggest quite the opposite is true, i.e., that "research" is one of the most fundamental things you can learn about, and that it is relevant to absolutely any walk of life you might wish to enter. Surely there is no more basic human process than (1) being curious about something we want to understand or having a question we want to answer; (2) identifying and gathering the information we have decided is "relevant" to our question or concern; (3) making sense of the information; and (4) forming some tentative conclusions on the basis of it. Who doesn't do that? Your physician does that when you go in to complain about the pain in your side and they start asking questions and poking around to try and diagnose the source of the problem. The courts do that when they interview witnesses and examine forensic evidence to try to determine guilt or innocence. Your mechanic does that when they try to figure out why your car is making that pinging sound whenever you accelerate. Journalists do it when they gather information to write stories and engage in analysis about events in the news. You did that when you tried to figure out what university or

college to attend and what program of study to pursue. It's also one of the reasons that Google has become one of the largest companies on the planet.

Asking questions and trying to figure out what is going on and why things happen the way they do is a fundamental part of being human; there seems to be no end to the questions we pose and the information we wish to access. We may not always call these activities "research" or the processes we follow "research methods"—in fact, most of the time we don't—but people and events engage our curiosity, and we try to understand. In doing so, we gather information, decide who and which parts of it we believe, form conclusions, and act on them. The main difference is thus not in what we do—because we all do "research" every day in our own particular way—but in the extent to which we reflect on how we know what we know and on the rules or principles we use to determine whether what we believe is a "fact" or something else, e.g., a rumor, speculation, hearsay, guess, or simply wrong.

NO ROYAL ROAD TO TRUTH

There are many misconceptions people have about research as a way of understanding the world. One of the biggest is the idea that there is only one "right" method of research. Those who subscribe to this view include all those researchers who only learn one method in the first place. We have a hard time understanding that approach; it makes as much sense to us as a carpenter who refuses to use any tool but a hammer. When all you have is a hammer, you are immediately limited only to jobs that require hammering; it makes far more sense to us to decide first what you would like to build and then use tools appropriate to the task.

Similarly, contemporary researchers require a full range of observational and analytic strategies in order to arrive at the best answers to their questions about the world, not because they will necessarily use them all on any given job but because it is the job that should dictate what tools are used to complete it. Although we understand that some students become interested in research because they love to do statistical analysis with large databases or can't wait to immerse themselves in an ethnography of some interesting cultural group, limiting your research to only one method will severely limit what you do and what you find because of the artificial limits it imposes on what you *can* find.

The beginning point for us is always the research question you want to ask; research design then involves deciding what information and method will best help you answer that question. Accordingly, our job in this book is to acquaint you with some of the range of methods and approaches that are available to allow you to make those

decisions. We begin by outlining two very broad perspectives involving **quantitative approaches** and **qualitative approaches**. Although much has been written in years past about which of these approaches is "best" or why one or the other tradition is most deserving of the title "science," this book goes beyond those debates.

While the two perspectives can be distinguished on many different dimensions, there also are many similarities to which both these grand traditions subscribe. In the next two sections, we examine quantitative traditions and qualitative traditions separately to understand the internal logic of each approach and to highlight the unique strengths that each perspective brings to research. We then conclude the chapter by looking at the common ground that both approaches share and discuss how employing the two in combination can act symbiotically to produce research that is more than the sum of its parts.

QUANTITATIVE TRADITIONS

Although quantitative approaches have a long philosophical lineage, their contemporary forms are often traced to the mid to late 19th century. Individuals such as Auguste Comte (in sociology and social psychology) and Wilhelm Wundt (in psychology) noted the tremendous theoretical and technological advances that had occurred in the natural sciences and believed that natural science methods could be of service to the social sciences as well. The metaphors they used to describe the challenge to social scientists were permeated with natural science imagery. For Comte, for example, "societies and groups [are] organisms—analogous to biological or physical organisms—that exist and behave in accordance with objective and external laws" (Faulconer & Williams, 1985, p. 1181).

A Positivist Epistemology

Comte, Wundt, and others embraced an **epistemological** tradition known as **positivism**, which championed the view that the only way to truly understand the world and develop dependable knowledge was to avoid philosophical reflection and rely solely on observation of concrete phenomena. Within the social and health sciences, this would mean focusing on observable behavior and avoiding references to anything we cannot see, such as thoughts and perceptions.

A Realist Perspective

An attribute strongly associated with positivism is its **realist perspective**. Most vigorously applied in the context of positivism, realism's more extreme version of

direct or naïve realism subscribes to the view that there is a (i.e., one) reality out there that exists independent of the researcher that can be understood and awaits our discovery (e.g., Chakravartty, 2011; Filstead, 1979). Naïve realists thus aim to uncover *the* facts and to understand *the* laws or principles that account for those facts. The challenge is to think of the "right" theoretical concepts and develop techniques that are sufficiently precise to measure and test them. For Donald T. Campbell, a noted methodologist you will be hearing about more than once in this book, realism was the foundation for his notion of evolutionary epistemology, which posited that, as long as we commit ourselves to constantly subjecting our theories to empirical test, successive generations of scholars will bring us ever closer to knowing those ultimate laws that govern human behavior (see Campbell, 1974; Palys, 1990).

Just Another Organism

As you might expect from the emphasis on humans as biological organisms, references to Charles Darwin's evolutionary theory were frequent among turn-of-the-20th-century positivists. Psychologist John B. Watson (1913), for example, was clearly impressed by Darwin's work and its impact on the biological sciences. A prime reason for this advance, said Watson, was that Darwin resisted the temptation to treat humans as a special entity and instead saw them as just another biological organism, subject to the same scientific principles as any other.

We can see this as an example of a principle in the sciences known as Occam's razor, which expresses the idea that any theorizing we do should be as simple as possible: if two theories both explain some phenomenon but one does so more simply (involving fewer concepts and/or less complex mechanisms) than another, then the theory that does so more simply is preferred. According to that view, if human behavior can be explained using the same principles that govern the behavior of other organisms and without resorting to abstract notions like "consciousness" or "attitudes" or "alienation," then so much the better.

Inputs and Outcomes

Positivism's mechanistic purity also was sought with respect to the variables that were to be included in any analysis. The world was seen to be made up of causes (or predictors) and effects (or outcomes) like billiard balls being knocked around a table. We see the causes (e.g., the white cue ball hits a red ball), observe the effects (e.g., the red ball moves and falls into a pocket), and can develop principles to describe that action (e.g., the angle of incidence equals the angle of reflection, as any physicist or pool player knows) without worrying about what is going on "inside" either ball.

Similarly, early positivists felt that organisms could be treated as "black boxes": any invisible processes that might go on inside (such as thinking in humans) were deemed irrelevant; all that *really* counts is what goes in (the predictors or causes) and what comes out (the effects or outcomes). Only those causes external to individuals were deemed "legitimate" to scrutinize, largely because such forces and processes are most amenable to observation and measurement. We can't see people's thoughts or motives, but we *can* see what people *do*. If we can understand the relation between causes and effects, who cares what happens in between?

Don't Get Too Close

Natural science perspectives on "objectivity" also were adapted to the quantitative cause. Positivists suggest that the route to objectivity requires investigators to depersonalize the research situation, like the proverbial Martian who naively investigates these strange beings called humans (see Lofland, Snow, Anderson, & Lofland, 2006). "Good" data are thought to be dispassionate data, far removed from their source. The closer one comes to dealing with people on a one-to-one basis, the more dangerous the situation becomes, since one might be tempted to resort to metaphysical concepts such as thoughts, perceptions, attitudes, and values.

Indeed, many quantitatively oriented research textbooks suggested that the worst fate that can befall anyone who engages in field research is for them to "go native" or overidentify with those being studied. This is said to occur when researchers become so attuned and sensitive to the culture or group they're investigating that they take on the perspective of the group's members, leaving their ostensibly more appropriate detached, analytical perspective behind. Hagan (1989) makes the common argument that the appropriate attitude for researchers is studied neutrality; we should neither love nor hate the groups we study and should always maintain some social distance.

Social Facts

The idea of detachment also is consistent with the quantitative preference for aggregated data, where you compile responses from many persons so that general trends or patterns across people are made visible. The desirability of aggregated data also can be seen in the quantitative attachment to **social facts**. According to Durkheim (1968 [1938]), the important social facts of life, and hence the appropriate causal variables to study, were social practices and institutions such as education, religion, the law, and the economic system. We clearly did not cause them; they existed before we did. They influence us all, although the nature of their effects may

vary. And even had we not been born, they still would exist and still would influence whoever happened to be here. For example, if you were born in the United States, you were born into a capitalist economic system; the United States still would be capitalist even if you had not been born here. That system is a social fact of your life; it has affected you in ways that differ from the effects of being born in, say, a communist state such as the People's Republic of China or Russia.

Thus, for Durkheim, social facts are the most appropriate causal factors for social scientists to investigate because they exert their influence coercively and do so even when we try to resist:

A social fact is to be recognized by the power of external coercion which it exercises or is capable of exercising over individuals, and the presence of this power may be recognized in its turn either by the existence of some specific sanction or by the resistance offered against every individual effort that tends to violate it. (1968 [1938], p. 250)

He continued,

The most important characteristic of a thing is the impossibility of its modification by a simple effort of the will ... Social facts have this characteristic. Far from being a product of the will, they determine it from without; they are like molds in which our actions are inevitably shaped. (Durkheim, 1968 [1938], p. 253)

To measure the effects of social facts, Durkheim recommended relying on official **rate data** (e.g., birth rates, divorce rates, suicide rates, crime rates). Such data deal with matters relevant to and affected by "social facts," are outside the influence of researchers or of the individuals the data described, and describe "reality."

A Deductive Approach

For classic positivists, the ability to predict is the acid test of understanding: if you truly understand a phenomenon (e.g., hurricanes, depression, birth rates, sexual safety), you should be able to predict its presence and absence or rise and fall. Not surprisingly, therefore, quantitative researchers prefer the **hypothetico-deductive method** (often referred to more simply as **deduction** or the **deductive method**), which involves making predictions and assessing their success in an ongoing process of theory refinement.

Chapter 2 discusses this approach in greater detail; here we need only note that it involves beginning with a **theory**; deducing a hypothesis (prediction) from the theory; gathering data to test the prediction (and hence also the theory that gave rise to it); and then either looking for another situation in which to test the theory (if the prediction is borne out) or revising or discarding the theory (if the prediction proves inaccurate). In the ideal situation, the effects of certain variables can be assessed with all other influences held constant, making the classic experiment a method of choice (see Chapter 5).

Researcher-Centered

You should see from all the above that, for strict quantitative approaches, the researcher is the star of the show. The emphasis on taking a deductive approach brings with it the idea that it is theory that tells you what the important variables are to consider. It is the researcher who will determine which theory to test, pick the situation to test it in, design the study, and do the research to see whether the theory is supported empirically or not. Research participants—often referred to as "human subjects" in quantitative publications—have a minimal role beyond responding to whatever stimuli are presented to them. Subjects' thoughts about what they do are of little interest because their motives and perspectives are suspect; they are too close to the situation to view it with the detached objectivity the researcher seeks. Any interaction beyond the standardized set of procedures that comprise the research is considered problematic because it introduces error and thereby contaminates the results. Many quantitative methods—the classic experiment being the foremost example—sometimes even require that subjects be kept completely in the dark as to what hypotheses are being tested or even to deceive them about what the "real" purpose of the study is, ostensibly to ensure that subjects' behavior is "natural" and not a reflection of their desire to respond in a socially desirable fashion because someone is watching what they do.

QUALITATIVE TRADITIONS

Qualitative approaches follow their own logic that departs in several key respects from the choices made within quantitative traditions. Schutz (1970), who was writing in German in the 1930s and whose works were not translated into English until the 1960s and 1970s, is illustrative. He disagreed with positivists' choice to investigate a mechanistic world from the aloof stance of the knowledgeable social scientist, but his disagreement wasn't based on a belief that such a science would necessarily give "wrong" information. Rather, he felt that in the long run, such an approach was

inherently incomplete and thus inevitably would fall short of a comprehensive understanding of human action.

His position is reminiscent of a story known as "the drunkard's search" (e.g., Farris, 1969). The story involves a researcher who is walking down the street one night when he comes across a rather intoxicated individual who is down on his hands and knees, looking for his house keys on the ground under a street lamp. The researcher joins in to help, but after another 15 minutes, neither has been able to find the keys. "Are you sure this is where you lost them?" asks the researcher.

"Actually ... I lost them over there ... closer to the house," says the fellow who lost his keys, pointing to a dark spot close to the house, about 50 feet away.

The researcher's jaw drops when he recognizes the futility of what they have been doing. Exasperated, he asks, "Then why are we looking over here?"

The response: "Because this is where the light is."

Analogously, Schutz argued that the first trick to gaining an understanding about humans and human behavior is to look in the right place and not to choose methods simply because a certain approach is easier, is associated with some prestigious field of inquiry, or is expedient to adopt in the short term. The choice should be made on the basis of what is, over the long haul, the right thing to do.

A Human-Centered Approach

The methodological "right thing to do" for Schutz was to acknowledge that social scientists, in trying to understand *human* behavior, face challenges fundamentally different from those faced by the natural scientist:

The world of nature, as explored by the natural scientist, does not "mean" anything to the molecules, atoms and electrons therein. The observational field of the social scientist, however, ... has a specific meaning and relevance structure for the human beings living, acting, and thinking therein. By a series of commonsense constructs they have preselected and pre-interpreted this world which they experience as the reality of their daily lives. It is these thought objects of theirs which determine their behavior by motivating it. (Schutz, 1970, pp. 272–273)

And while the complexity this cognitive life creates might be challenging, it also creates great opportunity because, unlike gall wasps or the chemicals in a test tube, we can talk to humans, they can consider our questions, and we can learn from what

they say. Schutz and others working within the qualitative tradition believe that when we study humans we must view them as thinking, motivated actors, while also acknowledging the challenges that arise because, as humans, social and health scientists are part of the very entity they seek to understand. A philosophy that expresses this view is known as **phenomenologism**.

Phenomenologism

Phenomenologists maintain that any effort to understand human behavior must take into account that humans are cognitive beings who actively perceive and make sense of the world around them, have the capacity to abstract from their experience, ascribe meaning to their behavior and the world around them, and are affected by those meanings. W. I. Thomas (1928) stated that "perceptions are real because they are real in their consequences"; that is, in many situations the influence of "reality" (if indeed such a thing exists independently of our experience of it) pales in comparison to the influence of our perceptions of the situation—indeed, those perceptions define our "reality."

As an example, many Americans these days seem deeply concerned about violent crime. Consistent with these concerns, many citizens and their elected representatives call for more punitive sentencing, more caution in the granting of parole, and "special measures" that would give courts greater leeway to incarcerate particularly nasty people and habitual offenders for a long, long time. Yet the "reality" of the situation in the United States is that, at least as measured by the rates reported by the FBI, violent crime in the United States has been dropping steadily for more than 20 years. Which is more important in accounting for Americans' behavior regarding violent crime: the "reality" of the situation or people's perceptions of it?

Phenomenologists argue that any science of human behavior is destined to be trivial and/or incomplete unless it takes people's perceptions into account. Any approach that defines itself as phenomenological makes understanding human perceptions its major research focus: if perceptions are real in their consequences, and if they are a major determinant of what we do, then clearly they are what we must set out to understand.

Numbers Create Distance

The shift to phenomenologism affected many other aspects of theory and method. For example, a central aim of positivism was to establish functional relations among

¹Tables showing data back to 1996 can be seen at https://ucr.fbi.gov/crime-in-the-u.s/2015/crime-in-the-u.s.-2015/offenses-known-to-law-enforcement/offenses-known-to-law-enforcement.

explanatory concepts, expressed, ideally, in mathematical (quantitative) form. In contrast, many phenomenologists believe that imposing a quantitative measurement just removes researchers further from directly understanding human experience. The more we listen to people explaining, in their own words, the nature of their experiences, the better our understanding.

Understanding Equals Verstehen

In contrast to quantitative researchers who emphasize the ability to predict as the acid test of understanding, researchers who adopt a phenomenological approach embrace Max Weber's concept of *verstehen*, which involves the more intimate and empathic understanding of human action in terms of its interpretive meaning to the participant. While researchers who embrace strict positivism seek general principles of behavior, Weber argued that, in themselves, such principles can't account for action in context:

An "objective" analysis of cultural events, which proceeds according to the thesis that the ideal of science is the reduction of empirical reality to "laws," is meaningless ... The knowledge of social laws is not knowledge of social reality but is rather one of the various aids used by our minds for attaining this end ... Knowledge of cultural events is inconceivable except on a basis of the significance which the concrete constellations of reality have for us in individual concrete situations. (Weber, 1968a [1949], p. 91)

Weber didn't completely dismiss quantitative research or the theories associated with it; he just felt that we had to go beyond blanket assertions made by strict positivists to account for action in context.

Validity Comes From Closeness

Researchers who adopt qualitative approaches believe that understanding people requires getting close to "research participants" or "informants" or "collaborators." You must spend time with them, get to know them, be able to empathize with their concerns, and perhaps even be one of them, if you hope to *truly* understand. Key here is the notion of **rapport**—the development of a bond of mutual trust between researcher and participant that is considered to be the foundation upon which access is given and valid data are built.

What degree of closeness is "appropriate," however, is a matter of ongoing debate within the community of people engaged in qualitative research. For most researchers,

establishing rapport is possible as long as you are respectful, trustworthy, and spend a lot of time with the person or group that will be the focus of the research. Others question just how close you can get to people who are not like you, believing that you can never understand a group of which you are not a part—e.g., that male researchers can never truly understand what it means to be a woman or that Caucasian researchers can never know what it means to "grow up Black." By implication, therefore, for these researchers, only women should research women and only African American researchers should do research on issues of importance to Blacks.

We have some empathy for these views, particularly as they apply to subordinated or minority populations who are often misunderstood and miscast by those from the dominant group. We all should be aware of the limitations of our experience. That said, we would not impose predefined limits on what topics are "appropriate" for any given person to study. Both causing and grappling with ethical issues surrounding the nature of the relationship between researcher and researched are strong traditions among those who do field research. We discuss some of these in Chapter 4; choices as to the different roles that researchers may occupy in any given research project appear throughout the book.

An Inductive Approach

Associated with the view that closeness is desirable is the idea that researchers should *listen* to their participants/collaborators, aim to understand categories and theoretically important dimensions from the perspective of their experience, and incorporate those understandings into the analysis. Accordingly, more phenomenologically oriented researchers emphasize **inductive approaches** (where observation in the field *precedes* the generation of theoretical concepts; see Chapter 2).

Instead of beginning with theory and assuming that there's one theory that will eventually account for everything, a strict qualitative approach typically involves beginning with individual case studies trying to understand each situation on its own terms and leaving open, for the moment, the question of whether generalizable theoretical concepts can ever be drawn together in anything resembling a grand theory. For people engaged in qualitative research, theory isn't something you start with; it's something you build.

A Preference for Field Research

The qualitative preference for an inductive approach is accompanied by a priority being attached to doing research in "the field," i.e., where behavior can be examined in context. There are two main reasons for this. First is simply that, according to

qualitative perspectives, behavior only has meaning in context, and hence "in context" is the only place where behavior can legitimately be observed.

A second related reason for preferring field research is that if the reason we do research is to understand the behavior of people in the world, then field research is the most valid option because it is only in field-based research that we duplicate the contextual conditions that shape behavior and give it its meaning. As noted methodologist Howard Becker (1996) explained,

When we watch someone as they work in their usual work setting or go to a political meeting in their neighborhood or have dinner with their family—when we watch people do things in the places they usually do them with the people they usually do them with—we cannot insulate them from the consequences of their actions. On the contrary, they have to take the rap for what they do, just as they ordinarily do in everyday life. An example: when I was observing college undergraduates, I sometimes went to classes with them. On one occasion, an instructor announced a surprise quiz for which the student I was accompanying that day, a goofoff, was totally unprepared. Sitting nearby, I could easily see him leaning over and copying answers from someone he hoped knew more than he did. He was embarrassed by my seeing him, but the embarrassment didn't stop him copying, because the consequences of failing the test (this was at a time when flunking out of school could lead to being drafted, and maybe being killed in combat) were a lot worse than my potentially lowered opinion of him. He apologized and made excuses later, but he did it. What would he have said about cheating on a questionnaire or in an interview, out of the actual situation that had forced him to that expedient?

Constructionism

Recall that classic positivists embraced a philosophical perspective known as **realism**. Phenomenologists, in emphasizing the role of human perception in understanding human behavior, adopt a contrasting perspective or position known as **constructionism**. As described by Schwandt (1994),

[C]onstructivists are deeply committed to the view that what we take to be objective knowledge and truth is [actually] the result of perspective. Knowledge and truth are created, not discovered by mind. They emphasize the pluralistic and plastic character of reality—pluralistic in the sense that reality is expressible in a variety of symbol and language systems; plastic in the sense that reality is stretched and shaped to fit purposeful acts of intentional human agents. They endorse the claim

that, "contrary to common-sense, there is no unique 'real world' that preexists and is independent of human mental activity and human symbolic language." (p. 125; the last sentence quotes Bruner, 1986, p. 95)

To illustrate, suppose we follow Becker's illustration and decide to study the phenomenon of "cheating," known in some universities as "academic dishonesty." A realist approach to studying cheating would affirm that there are behaviors we consensually recognize as "cheating" and that some people are more or less likely to cheat than others. Given this perspective, our attention might turn to trying to measure either "frequency of cheating" or how likely a given person or group of persons is to cheat; investigating why some people are more likely to cheat than others; or why some situations result in more or less cheating than others.

In contrast, a constructionist looking at cheating wouldn't deny the usefulness of any of these approaches. But they also would encourage us to take a step back and look at "cheating" as a socially constructed concept. Why do we consider "cheating" something worth asking about? Why do we consider some behaviors where one person seeks the help of another "cheating" (e.g., looking over another person's shoulder to see what answers they put down in an examination) but not others (e.g., hiring a tutor or studying together)? We also might want to interview people who have been identified as cheaters about how they perceived their actions: Did *they* consider it "cheating" or did they call it something else? How did they come to engage in that behavior?

The realist, then, takes the existence of certain behavior categories as a given, being prepared to assume that there are such things as "cheating," "aggression," and "crime," along with other supposed givens such as "birth," "death," and "taxes." Constructionists, on the other hand, are at least as interested in why these categories interest us, whom or where we decide to sample in order to investigate the phenomenon firsthand, where the boundaries of the phenomenon are, what meanings the terms have for us, and how those boundaries and meanings change over time. To be a constructionist is not to deny that certain phenomena exist, but to insist that their existence cannot be completely understood unless you understand why, how, and to whom they are applied.

One implication of this perspective is that many of the research results or "truths" we take at face value and perceive as enduring may be little more than transient relationships that reflect the prevailing social order. While realists may be content to try to assess *the* effects of race, poverty, daycare, being gay, winning the lottery, or taking illicit drugs, constructionists argue that we can understand such matters only if we also understand something about how they're construed and the context in which they occur.

Emphasizing Process

A distinct difference in emphasis also follows from either seeing the important elements of the world as essentially stable and awaiting discovery (the realist view) or seeing the world as something that is actively constructed, deconstructed, and reconstructed on an ongoing basis (the constructionist view). According to those who hold the latter view, our constructions of the world—and hence the world itself—are open to change.

As we've seen, positivist researchers working quantitatively tend to emphasize the measurement of *outcomes* in their research. This is consistent with the positivist division of the world into causes and effects and with the view that there are real, monolithic forces that rule our lives. But constructionists consider the world a more ephemeral, transient place whose dynamics are more directly contingent on the meanings and understandings we use to negotiate our world. Accordingly, constructionist-oriented qualitative approaches are also characterized by greater attention to *processes*, particularly the processes by which constructions arise and, by implication, the processes by which constructions can be changed.

Participant-Centered

All of these objectives are well-served by more collaborative approaches in which, ideally, the researcher will begin the research with an open mind and without preconceived theory, will spend much time with participants in the field, and will look to participants to guide them in the identification of important questions that will focus the research and possibly assist in interpretation. How far this goes will depend on the individual researcher. Some see the researcher as no more than an instrument whose job is to represent the views of participants in their own words. Others believe that researchers have a role to play because while any given participant has a unique history and experience that the researcher does not, the researcher's social position makes it likely that, at the end of the research, they will be the only one in the setting who has systematically learned from *all* of the participants in a setting and thus should have the broadest and most comprehensive view.

BRIDGING APPROACHES

Thus far, we've seen that numerous differences traditionally have characterized quantitative and qualitative approaches to research. Table 1.1 outlines these differences—at least as they've been associated with each approach historically.

TABLE 1.1 Comparin	g Quantitative and Qualitative Appro	paches
	Quantitative Approach	Qualitative Approach
Philosophical considerations	Positivist epistemology	Phenomenological epistemology
	Natural science model: humans are just another organism	Human-centered approach: people's ability to think and abstract requires special consideration
	Realist perspective	Constructionist perspective
Epistemological priorities	Preference for a deductive approach: start with theory and create situations in which to test hypotheses	Preference for an inductive approach: start with observation and allow theory to emerge
	Human behavior can be extracted from its context to be studied	You must look at behavior in situ; behavior only has meaning in context
Role of researcher	Researcher and theory decide what is important to study and how results will be interpreted	Often more collaborative approach where research participants can help identify research focus and aid interpretation
	Objectivity is achieved through social distance and a detached, analytical stance	Valid data come from closeness and extended contact with research participants
Implications for methods	Emphasis on observable variables that are external to the individual; social facts	No variables ruled out; internal, perceptual variables expressly considered
	Quantitative measures are preferred for their precision and amenability to mathematical analysis	Direct, qualitative verbal reports are preferred; quantifying responses is a step removed from people's words and perceptions
Ŏ,	Preference for larger samples looking for patterns across many cases; paying more attention to "the forest"	Preference for case study analysis; paying more attention to "the trees" and trying to figure out what forest they are a part of
	Emphasis on causes and effects: what goes in and how it comes out; predictors, outcomes	Emphasis on processes: perceptions and their meanings and how these emerge and change
How do you define success?	The criteria for understanding is the ability to predict what will happen in any given situation	The criterion for understanding is verstehen: understanding behavior in context in terms meaningful to the actor

Each element in the table has been discussed in the preceding pages, so you should now be able to define and explain them and understand why and how each is characteristic of one or the other of the extremes of the two perspectives discussed in this chapter. In addition to looking at the dimensions along each row of the table, have a look down each column as well, and try to get the sense of each set of approaches as an internally consistent package where each element makes sense in relation to all the other components.

The two columns of Table 1.1 show how the two traditions *can* be very different, and the fact we have given each one its own space for pedagogical reasons may seem to magnify the differences between them. But there are no rigid borders dividing them. No rule says a researcher doing a more quantitative study cannot take an inductive approach, or that someone undertaking a more qualitative project cannot be motivated by a desire to answer theoretically specific research questions and collect aggregate data across numerous respondents. Indeed, methodological mixtures involving aspects of both approaches are becoming more and more commonplace.

And although Table 1.1 highlights some of the differences between qualitative and quantitative approaches, difference does not have to imply disagreement, inconsistency, or incompatibility. In fact it is quite the opposite: notwithstanding superficial differences between the two approaches, they actually share a similar underlying logic and, when used together, can complement one another very well. Probably most important among these is that both traditions are committed to an empirical approach to the generation of knowledge, i.e., affirming that our understanding of the world should come not from philosophizing or speculation, but from data that comes from interacting with and observing the world we seek to understand. Both approaches also value theory and data, even though they differ in their preferences of which comes first. The two traditions also share a desire to explore, describe, and understand the world, both for its own sake and because of a shared belief that the moral and political debates we engage in about what policies and laws should be enacted to improve the social condition should be based on evidence and not on misinformation, stereotype, or blind dogma.

In the next portion of this chapter, we revisit Table 1.1 in order to ask what a third column of entries might look like if we were to think of the two traditions not as separate entities requiring a choice of one or the other, but rather as alternatives that can be pursued individually or in combination. We do so under five broad themes—(1) philosophical stance; (2) epistemological priorities; (3) the role of the researcher in relation to participants; (4) implications for particular methods; and (5) criteria for determining success.

Philosophical Stance

We introduced you earlier to the epistemological traditions of positivism and phenomenologism and the related **dichotomy** of realism and constructionism. Researchers who are open to mixing methodological approaches reject the idea that researchers must proclaim allegiance to one tradition or the other. They feel that social and health-related phenomena are often better studied using both qualitative and quantitative methods and have sought to ground their approach in an epistemological position that is capable of seeing a middle ground between direct realism and constructivism.

Philosophically, the limits of positivism and phenomenologism are subsumed in **mixed methods** approaches as **pragmatism**. This philosophical tradition, with roots in the late 19th century through the works of Charles Sanders Pierce, John Dewy, and William James, played a major role in the emergence of symbolic interactionism (e.g., Cooley, 1902; Mead, 1934). Pragmatism is not committed to any single system of philosophy or view of reality. The central position advanced within pragmatism is the rejection of traditional dualisms of realism *versus* constructivism, free-will *versus* determinism, subjectivism *versus* objectivism, and **induction** *versus* deduction in favor of taking whatever position works best in a particular situation (Johnson & Onwuegbuzie, 2004).

Pragmatism envisions a method of inquiry based on a dialectic relationship between the processes of discovery and action as opposed to the search for a single truth or correct answer. Pragmatists favor eclecticism and pluralism as opposed to dogmatism when it comes to theoretical, methodological, and analytical approaches to understanding the social world. Pragmatists are results- or outcome-oriented and less concerned with prior knowledges, laws, or rules governing what constitutes valid knowledge (Maxcy, 2003). They are concerned with finding the best or most complete answers to research questions through the best method or combination of methods and have a strong commitment to praxis (i.e., theory informing practice). To that extent, pragmatic traditions can be seen to favor the more human-centered approach that is more characteristic of qualitative traditions, not as a choice over a natural science model, but simply because it is more inclusive. At the same time, Occam's razor, a principle prioritized more highly within quantitative traditions, reminds us to be economical and efficient in our theorizing.

As for the realist-constructionist dichotomy, a philosophical position that appreciates the kernel of truth residing in both positions is **fallibilist realism** or **critical realism** (e.g., see Cook & Campbell, 1979; Manicas & Secord, 1983). This perspective

acknowledges that we cannot deal with reality directly, but only through our constructions of it. Yet the task of science is to construct theories that aim to represent the world. In doing so, certainly it is true, as the constructionists argue, that there are different ways we can describe the world that are all equally "correct"—for example, surely it is equally "correct" to say "humans are social organisms" or "humans are biological organisms" or "humans are economic organisms"—and which metaphor(s) we pursue will have implications for what kinds of research questions we pose, the theories we develop, and the actions that arise from the understandings we generate (e.g., what kinds of policies or laws or other interventions we implement). But not *all* explanations are equally correct. We also have to acknowledge there are statements we can make about humans that are clearly and demonstrably "wrong"—for example, surely it would be "wrong" to say that "humans are asexual" or "adult humans do not care for their young." But if it's possible for us to be wrong, then there must be something that we can be wrong about, i.e., there must be a reality that exists independent of our analysis of it (see Bhaskar, 1986).

Stated another way, although our constructions *are* social and historical products (i.e., knowledge at any given time is "produced" by a community of scientists and flavored by its historical context), it is *not* the case that "anything goes." We should indeed be able to develop rational criteria by which the adequacy, or at least the utility, of our formulations can be judged. And it is a reasonable endeavor to collect evidence through empirical inquiry; we need only remind ourselves that while "facts" may exist, their meaning and relative importance are negotiable—there are both realist and constructionist elements to knowledge.

Epistemological Priorities

Two different issues stand out in Table 1.1 with respect to epistemological priorities, by which we refer to broader issues about how one approaches the research process as opposed to the more detailed choices of specific methods that we consider below. The first of these involves the deductive-inductive dichotomy. Although we discuss those processes in more detail in Chapter 2, we'll note here that deductive approaches operate in the belief that research should begin with good theory, which researchers then go about testing by finding (in the world) or creating (e.g., in a lab) situations where the theory is supposed to apply, and then seeing whether predictions that arise from the theory find support. If so, the theory collects one gold star and the researcher goes on to the next test. Inductive approaches, in contrast, operate in the belief that good theory arises from observing behavior in context, so you begin by going into contexts that you are interested in for one reason or another

(see Chapter 2), observing the phenomenon of interest, and developing theoretical speculations on the basis of your direct observation in the field.

When we see that both approaches involve a perpetual interaction between theory and data and between observation and abstraction, identification of "where the process began" seems trivial. Nor do you have to proclaim allegiance to one or the other; mixed methods approaches encourage researchers to open the door to a more comprehensive understanding while benefitting from the often offsetting advantages and disadvantages that various methods entail. You should not be surprised, therefore, to hear that many mixed methods investigations are often simultaneously inductive and deductive, which allows the types of questions that researchers work on within this perspective to be more layered, nuanced, and comprehensive than those that inspire single-method studies. We will be giving you many examples of exactly that sort of boundary crossing throughout the book as we discuss particular methods.

Table 1.1 also notes the quantitative preference for extracting phenomena of interest from their context in order to study them under more controlled conditions, as well as the qualitative assertion that behavior must be observed in context in order to be understood. Far from seeing these in opposition, we see each setting as appropriate for the questions they seek to ask, part of a broader research repertoire, and hence note here simply that the two in combination contribute complementary information allowing for a more comprehensive understanding.

Decontextualizing social processes by looking across many cases in order to arrive at "overall" or "general" patterns or *ceteris paribus* ("all else being equal") truths through such methods as surveys and experiments is a mainstay of quantitative techniques. They are extremely useful for probing general theoretical issues where assertions about the strength of relationships or differences are being tested and when they involve gathering descriptive information about how different goods—and injustices—are distributed throughout society. In turn, the more qualitative emphasis on examining how phenomena of interest play out in the day-to-day world is not only itself a source of important data to spur understanding and subsequent theorizing but also offers sites in which theories can be tested and qualifications to general theories developed.

Role of Researchers

The two traditions have quite different emphases as outlined in Table 1.1 when it comes to the role of researchers in relation to those they study. Within quantitative traditions, the researcher is clearly the star of the show. Researchers decide what is

important to study, design the research, interpret the results, and write the reports. They are guided in these efforts by their colleagues and the literature and see "objectivity" as something that you accomplish by staying aloof from the people you are studying. The logic of this seems quite compelling; when the objective of your research is to find overall patterns across large numbers of cases, then the researcher brings the expertise to design that research, they and/or the literature (and theory) define what the important questions are to investigate, and unlike the participants, the researcher is the only one who gets to see the bird's eye view that aggregation across many cases allows. Qualitative traditions emphasize quite the opposite. When your interest is in doing case studies in the field to build theory inductively, then the research design and analytical skills the researcher brings address only half the challenge; determining what the important questions are to ask and understanding the implications of what you are observing is built by a more collaborative approach characterized by mutual trust that exposes the researcher to insights they, particularly as an "other," may not previously have considered.

Although the two types of relationship may seem to conflict, we suggest they are actually an accurate reflection of the multiple roles that researchers need to have in their repertoire, and that part of the complexity of research involves being able to go back and forth between those two roles. We see great value in both of them. Researchers bring research design expertise that provides an opportunity to produce valid and useful data that help achieve research objectives. However, ignoring participants is a foolhardy move, particularly when engaged in research that seeks to inform about some niche of life—many research injustices have arisen and much ill-will generated when researchers imposed their understanding on people who are not like them—and/or promote social change involving the group under study. You will see examples of these issues arising on numerous occasions during the book, as each method brings its own challenge to how to manage the researcher—participant relationship.

Implications for Methods

We saw how researchers working within quantitative traditions tend to emphasize the search for very general descriptions of human behavior in the hope of unearthing general laws while those working within qualitative traditions are more interested in understanding specific cases and how general principles play out in specific contexts. This often leads them to pose different research questions and to look in different places for answers and explanations. But are they not opposite sides of the same coin? General laws are of limited use if they cannot shed light on specific contexts; and

context-specific understandings are typically of limited interest unless they can be located within broader principles of human behavior. Each offers only a partial understanding of the world; any comprehensive understanding of a phenomenon will require us to be able to explain *all* the data that are relevant and not simply cherrypick that subset of information that serves a smaller purpose.

The general idea that propels this section is that more data, and more diverse data in terms of the ways it is collected and the sources it is collected from, is a desirable goal. While social and health researchers have been mixing multiple methods of data collection within a single study for well over a century (Maxwell & Loomis, 2003), Donald T. Campbell, with various collaborators, is widely regarded as one of the first to formally encourage their use in order to avoid becoming too method-bound since every method has both strengths and limitations, and relying on only one method means you have the benefit of its strengths, but are imprisoned by its limitations. Unobtrusive Measures: Nonreactive Research in the Social Sciences (Webb, Campbell, Schwartz, & Sechrest, 1966) expressly pointed out the benefits to be gained by encouraging and implementing methodological pluralism. In another classic article, Campbell (1969c) encouraged researchers of different disciplines to collaborate and enjoy the benefits that would accrue from the diversity of approaches they would bring, and his notion of the "experimenting society" and quasi-experimentation that we discuss in Chapters 6 and 7 was based in large part on the analytical power that could be mustered by strategically combining different types and sources of data (e.g., Campbell, 1969b; Cook & Campbell, 1979).

Denzin (1970, 1978) built upon these ideas when he coined the term **triangulation**, which is a research strategy that permits us to validate our observations by drawing upon multiple sources or perspectives within the same investigation. He suggested there were four distinct ways this triangulation could occur:

- 1. Theoretical triangulation involves employing multiple theories throughout the design, collection, and analysis process. Proceeding in this manner would involve a researcher or group of researchers developing research questions from different theoretical vantage points and thereby studying a phenomenon through multiple lenses.
- 2. **Investigator triangulation** refers to the practice of several different researchers contributing in the study to collect, analyze, and interpret data and observations. This practice is thought to improve both the credibility of the observations and the resulting interpretation of the research. One place you see investigator triangulation is in the progressively more common

practice of multi-, trans-, and interdisciplinary research collaboration that brings together teams of researchers from different disciplines in order to research a problem of common interest (e.g., see Campbell, 1969c; Leavy, 2011).

- 3. **Methodological triangulation** involves employing multiple methods to study a particular phenomenon in order to overcome the deficiencies and biases that may result from employing a single-method approach. Certainly this book, which extols the virtue of combining qualitative and quantitative approaches, exemplifies this approach.
- 4. **Data analysis triangulation** refers to the practice of employing several different methods of analyzing and interpreting data in order to improve the validity of the conclusions by ensuring the robustness of your results.

Early writings by Campbell and his colleagues in the more quantitative realm and Denzin in the qualitative realm set the stage for the emergence of what some (e.g., Johnson & Onwuegbuzie, 2004; Johnson, Onwuegbuzie, & Turner, 2007) have labeled a "third paradigm" of research—mixed methods. Johnson et al. (2007) define this as "the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" (p. 123). Researchers adopting this perspective encourage an eclectic approach to the research process that draws upon the complementary strengths of qualitative and quantitative techniques. Proponents believe that the best answers to any research problem or set of problems come when we consider multiple questions, viewpoints, perspectives, positions, and standpoints instead of one.

How Do You Spell S-u-c-c-e-s-s?

Although Table 1.1 focuses on how the two traditions differ in their definitions of success—with quantitative traditions emphasizing a statistical criterion and the ability to predict while the qualitative traditions have emphasized *verstehen*—there is an even more fundamental criterion that is common to both traditions. Both approaches share a similar underlying logic about how arguments about the validity of a particular conclusion will be evaluated, which is that any explanation will be accepted to the extent that it is the best one available, where "best" is defined as the one that does a more complete job of explanation than any **rival plausible explanation**. The way rival plausible explanations are handled will differ within the different

traditions—those working quantitatively are more likely to use either experimental or statistical techniques to rule out alternative explanations while those working qualitatively are more likely to go back and gather more data from the same or another context that will address the rival plausible explanation—but both traditions assert a "superior" explanation will be the one that explains the most, does so most simply, and leaves the fewest or least serious rival plausible explanations (see Palys, 1989) in its wake. Stated another way, both traditions subscribe to the view that no matter what methodological approach you employ, your job as a researcher is always to be your own best critic and to anticipate as much as possible what rival plausible explanations might be brought forth to critique your interpretation. If you don't, then someone else probably will.

A Third Way?

With our review of qualitative and quantitative traditions complete, we are ready to replace Table 1.1 with Table 1.2, which summarizes in tabular form all that we have explained above. As you can see, far from seeing the two as incompatible alternatives one must choose between, we appreciate the contributions of both traditions and see both as necessary parts of the contemporary researcher's repertoire. It is very much also giving you an indication of the kind of approach you will see in this book—a review of both qualitative and quantitative techniques that emphasizes each method's strengths and limitations, as well as many examples of mixed methods studies that seek to combine the two, whether in the context of any one study, or more broadly in a program of study. While you will in all likelihood make your own choices about which type of research you prefer to do, understanding that "other" research that you may not do will at the very least make you a more responsible reader of the literature and make you a better colleague because of your ability to contribute to and appreciate the contributions those other researchers make.

SUMMING UP AND LOOKING AHEAD

This chapter introduced you to qualitative and quantitative traditions in research, as well as the mixed methods approaches that are becoming more and more prevalent among social and health researchers working individually and in teams. If you haven't taken a course in research methods before, you might feel slightly overwhelmed by now. But fear not; these themes will crop up on several occasions in the rest of the book, giving you lots of chances to review and understand them.

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>	Quantitative Approach	Qualitative Approach	Bridging Approaches
mplications for methods	Emphasis on observable variables that are external to the individual; social facts	No variables ruled out; internal, perceptual variables expressly considered	Combined approaches maintain a broad conception of evidence with the emphasis on whatever will help answer the research question(s). All data need to be accounted for.
	Quantitative measures are preferred for their precision and amenability to mathematical analysis	Direct, qualitative verbal reports are preferred; quantifying responses is a step removed from people's words and perceptions	Encourages us to stay connected to what people say, while quantitative analysis offers analytical power in describing broader patterns. The two together often complement one another with each source helping interpret the other.
	Preference for larger samples looking for patterns across many cases; paying more attention to "the forest"	Preference for case study analysis; paying more attention to "the trees" and trying to figure out what forest they are a part of	Different but complementary; each implies the other. General patterns are not interesting unless they can help you understand particular cases; particular cases are less interesting when they cannot help you understand broader issues and implications.
	Emphasis on causes and effects: what goes in and how it comes out; predictors, outcomes	Emphasis on processes: perceptions and their meanings and how these emerge and change	Depends in part on interest, but they can also help inform each other. For example, in evaluation research, step 1 is to find out whether an intervention makes a difference; but step 2 is to look more closely to see how/why it happens.
How do you define success?	The criteria for understanding is the ability to predict what will happen in any given situation	The criterion for understanding is verstehen: understanding behavior in context in terms meaningful to the actor	The criteria for success will depend on the methods being used; both are important in their respective contexts. In both cases, however, researchers seek for explanations that are demonstrably superior to any rival plausible explanations that might be offered.

The chapter described how quantitative traditions have embraced a perspective known as positivism. This perspective borrows a direct realist epistemology or way of knowing from the natural sciences and posits that human beings can and should be scrutinized in the manner of any living organism because they are subject to and shaped by the same laws of nature. Along with this comes a preference for observable variables, which, in its most orthodox versions, eschewed unobservables like thoughts and perceptions. Much research focuses on the impacts of social facts—megavariables whose monolithic impact is felt by all of us—whose effects can be measured through rate data and where aggregate tendencies reveal social impacts unaffected by the idiosyncrasies of any single case. Emphasis is placed on being aloof and dispassionate in the interests of maintaining objectivity and independence of analysis. The hypothetico-deductive method is the foundation of this tradition: researchers specify a theory, deduce a hypothesis, and then gather data to test the hypothesis and, hence, also the theory. The trick is to be inventive in our theorizing and to look for general principles or laws that guide and shape human action. "Good" theory is thought to be simple, to be capable of being expressed in precise mathematical form, and to accurately reflect the relationship between causes and outcomes.

Qualitative traditions, in contrast, argued that people's perceptions not only should not be avoided, but rather should be the focus of analysis: "Perceptions are real because they are real in their consequences" (Thomas, 1928). We must understand those perceptions if we want to understand human behavior: what people think about the world influences how they act in it. Acknowledging that people construct reality implies that there are actually many "realities" and possible realities that exist, and that we negotiate on an ongoing basis. "Understanding" or *verstehen* involves being able to explain unique behavior in context, after investigating the ways in which reality is constructed and negotiated. You must get close to the people you study in order to understand them. "Good" theory is not imposed; rather, it emerges inductively from direct observation and contact with people in context.

Rather than seeing the two traditions as in conflict with one another because of their historically different foci and choices, we see them as two grand traditions, each of which sheds a partial light on the world we are interested in studying, and whose differences counterbalance and often complement each other in a broader empirical strategy. This approach is very much in keeping with the push for greater diversity of methods Donald Campbell and his colleagues affirmed in *Unobtrusive Measures* and that Norman Denzin encouraged in his discussions of triangulation. Mixed methods approaches encourage us to rise above the forced dichotomies that underlay and propelled qualitative—quantitative rivalries for many years and allow us to achieve

more comprehensive understandings that use the advantages each tradition brings to counterbalance the limitations of the others it is paired with. Future chapters will see us fleshing out the various ways such techniques can be combined and analyzed.

It is noteworthy how significant shifts in the academy also have helped propel these developments. One involves changes in academy personnel. As science slowly democratizes, with progressively greater representation from women, members of the LGBTQIA community, Indigenous peoples, Third World academics, and others, new voices are heard, and methodological models that embrace diverse voices and experiences are encouraged. Such research also has benefited from developments in digital technologies that facilitate data gathering and analysis involving a wide array of sources and allow members of research teams to communicate more easily in order to exchange views, monitor their collective progress, and write up and share the results of their research. While the lone researcher of yesteryear is still with us, research *teams* crossing disciplinary, institutional, and international boundaries are becoming more and more commonplace. Contemporary researchers do not need to duplicate all the different expertise around the table, but they do need to know how to talk to each other and contribute to each other's work. Our objective in this book is to show you how that can be done.

Key Concepts

Case study analysis 16
Constructionism 13
Critical realism 18

Data analysis triangulation 23

Deduction 7

Deductive approaches 7

Dichotomy 18

Direct or naïve realism 5

Epistemology 4

Evolutionary epistemology 5

Fallibilist realism 18

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Verstehen 11

STUDY QUESTIONS

- 1. Consider the dimensions of difference between the quantitative and qualitative approaches shown in Table 1.1; explain in your own words what each dimension entails.
- 2. Now go to Table 1.2 and explain in your own words how the final column resolves any apparent tensions between qualitative and quantitative traditions.
- 3. Outline the differences between realism and constructionism as ways of perceiving the world. Give an example of how a person's perspective on this issue might be evident in research. How does critical realism (also known as fallibilist realism) offer a resolution to the conflict between those two perspectives?
- 4. Outline some differences you see between positivism and phenomenologism.
- 5. Why have qualitative researchers preferred field-based case study research? Explain how this approach fits into qualitative perspectives.
- 6. What are "social facts," and what role do they play in positivist inquiry?
- 7. What is evolutionary epistemology, and why does it make sense within a realist epistemology but not a constructionist one?
- 8. Compare and contrast the approaches that might be taken by a realist and a constructionist if each set out to study the effects associated with being a child of divorce.
- 9. Table 1.1 outlines some of the differences between quantitative and qualitative approaches. But what are some of their similarities?

- 10. What four modes of triangulation were articulated by Denzin (1970)? Explain each one.
- 11. In what sense do mixed methods approaches reflect the philosophical tradition known as pragmatism?
- 12. What changes in the research enterprise have contributed to interest in and the ability to do multimethod, multidisciplinary, and multiperspectival research?