researcher then draws the implications of the results of these tests for theory (see Chapter 1). Research that advances theory, by contrast, is usually described as having an *inductive* quality. On the basis of new evidence, the researcher develops a new theoretical concept or new relationship or advances understanding of existing ones.

Not only does the researcher use data to illustrate the new concept, he or she may also elucidate the relation of the new concept to existing concepts. One researcher, for example, developed the concept of *edgework* based on his studies of people who skydive and from related research on people who seek out other dangerous situations (Lyng 1990). When developing a new concept, it is necessary to distinguish it from related concepts and to explain its logical and causal connections to others (see also Wieviorka 1988, 1992).

Many theoretical advances come from detailed, in-depth examination of cases. Exploring diversity, for example, may lead to the discovery of new social arrangements and practices. The study of behavior of the groupies who surround certain kinds of rock bands, for example, might lead to new insights about the importance of rituals in contemporary social life. The mere existence of novel phenomena also may challenge conventional thinking. Existing theories may argue that certain ways of doing things or certain behaviors are incompatible, that it has to be either one or the other. The discovery that "incompatible" elements can coexist calls such theories into question and may force researchers to theorize about how such logically incompatible things can coexist.

Research that gives voice also may lead to theoretical advances because such research often leaves existing theories behind in its attempt to see social worlds through the eyes of their members. This openness to the viewpoints of low-status and low-visibility people may expose the inadequacies of existing theoretical perspectives. Finally, work that seeks to interpret cultural or historical significance may also advance theory because it too is based on detailed analyses of cases. For example, in-depth research on the Iranian revolution could lead to new insights on the importance of the interplay of religious ideology and political organization in large-scale political change.

Research that seeks to identify general patterns across many cases is usually associated with the goal of testing theory (via hypotheses), and less often with the goal of advancing theory, even though, as already noted, testing theory does refine it. However, the analysis of broad patterns can lead to theoretical advances (see, for example, Paige 1975; Rokkan 1970, 1975; Tilly 1984; Rueschemeyer et al. 1992). Sometimes hypotheses fail or are only partially supported, and researchers generally want to know why. They may study additional patterns in their data to find out why the theory they are testing does not fit the data well.

For example, using a generally accepted theory as a starting point, a researcher might test the hypothesis that richer countries tend to have a more equal distribution of income (that is, within their own borders) than poorer countries. Analysis of relevant data might show that while this pattern holds for most countries, among the richest fifteen or so it does not—they might all have roughly the same degree of equality. This finding might lead the researcher to speculate about the newly discovered pattern: Why is it that greater national wealth does not lead to greater equality once a certain level of economic development is reached? A variety of factors might be examined in the effort to account for this pattern. This search might lead to the identification of causal factors that suggest fundamental revision of the theory used to generate the initial hypothesis about patterns of income inequality.

While the deduction-versus-induction distinction is a simple and appealing way to differentiate kinds of social research, most research includes elements of both (see Stinchcombe 1968). For this reason some philosophers of science (for example, Hanson 1958) argue that all research involves **retroduction**—the interplay of induction and deduction. It is impossible to do research without some initial ideas, even if the goal is to give voice to research subjects. Thus, almost all research has at least an element of deduction. Similarly, almost all research can be used to advance theory in some way. After all, social theories are vague and imprecise. Every test of a theory refines it, whether or not the test is supportive. Research involves retroduction because there is typically a dialogue of ideas and evidence in social research. The interaction of ideas and evidence culminates in theoretically based descriptions of social life (that is, in social scientific representations) and in evidence-based elaborations of social theory.

The Link between Goals and Strategies

It is clear that no researcher can tackle all seven goals at once, at least not in the same study. A classic view of science says that it is a violation of the scientific method to try to advance theory (goal 7) and test theory (goal 2) in the same study. Data used to generate a new theory should not also be used to test it. Most of the tensions between goals, however, revolve around practical issues.

It is difficult, for example, to both examine *many* cases so that a general pattern can be identified (goal 1) and study *one* case in depth so that its specific character can be understood (goal 6). Even when it is possible to do both, they don't always mix well. What if the findings from the in-depth study of one or a small number of cases contradict the results of the analysis of broad patterns across many cases? Which finding should the social researcher trust? However, both kinds of research are important because both help social researchers find order in complexity, order that they can represent in their reports. The first type of research helps social researchers identify what is general across many cases—to discern the underlying order that exists amid great variation; the other helps them comprehend the complexity of specific situations directly.

Many different strategies of social research have emerged to accommodate its multiple and competing goals. As already noted, a research strategy is best understood as a pairing of a general research objective and a specific research method. Each strategy constitutes a way of linking ideas and evidence to produce a representation of some aspect of social life. Research strategies structure how social researchers collect data and make sense of what they collect. Even though some strategies are clearly more popular than others, there is no single "correct" way of conducting social research.

While there are many different strategies of social research, three very broad approaches are emphasized here:

- the use of qualitative methods to study commonalities
- the use of comparative methods to study diversity
- the use of quantitative methods to study relationships among variables

These three strategies are discussed in detail in Part II of this book because they represent three very common but very different ways of carrying on a dialogue of ideas and evidence. The selection of these three strategies does not imply that other strategies are not important or do not exist. Indeed, there are plenty of qualitative researchers who study diversity, and there are many researchers who use comparative methods to study commonalities. The pairings emphasized here (qualitative methods with commonalities, comparative methods with diversity, and quantitative methods with covariation) have been selected because they offer the best illustration of the core features of different methods. They also provide strong testimony to the unity and diversity of social research.

**Qualitative researchers** interested in commonalities examine many aspects or features of a relatively small number of cases in depth. A study of how one becomes a marijuana user (Becker 1953) is an example of a qualitative study.

Comparative researchers interested in diversity study a moderate number of cases in a comprehensive manner, though in not as much detail as in most qualitative research. A study of the checkered history of democratic institutions in South American countries is an example of a comparative study (E. Stephens 1989).

Quantitative researchers interested in how variables covary across cases typically examine a relatively small number of features of cases (that is, variables) across many, many cases. A study of the correspondence between the intensity of party competition and the level of voter turnout across all counties in the United States is an example of a quantitative study.

These three strategies can be plotted in two dimensions showing the relation between the number of cases studied and the number of aspects of cases studied (see Figure 2.1). The figure illustrates the trade-off between studying cases and studying aspects of cases, or variables. Because the energies and capacities of researchers are limited, they often must

FIGURE 2.1

Cases, Aspects of Cases, and Research Strategies*
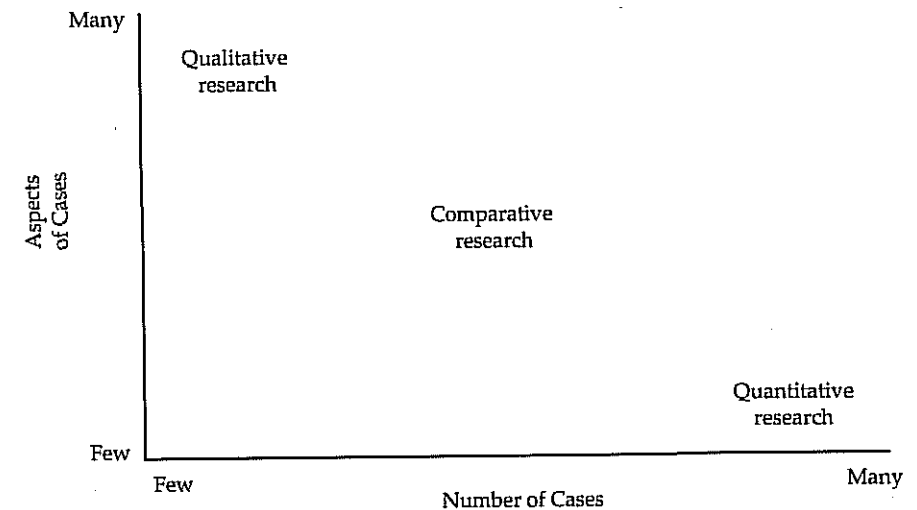
*The three research strategies are qualitative research on commonalities, comparative research on diversity, and quantitative research on relationships between variables.

choose between focusing on cases as wholes (qualitative research on commonalities), focusing on variables (quantitative research on relationships among variables), or balancing the two in some way (comparative research on diversity). It is possible to gain a detailed, in-depth knowledge of a small number of cases, to learn a moderate amount about an intermediate number of cases, or to focus on limited information from a large number of cases.

The trade-off between number of cases and number of features does not concern how much information social researchers can *collect*. After all, social researchers can collect volumes of information on each of thousands and thousands of cases (Davis and Smith 1988). The Internal Revenue Service collects detailed information on millions of people every year. The issue is how much information social researchers, or anyone else for that matter, can *study; how* the information is studied (for example, is each case examined individually?); and the *relevance* of the information to a particular research question.

Imagine trying to grasp the nature of informal interpersonal networks in each of the top 500 U.S. corporations. It might take years to unravel the informal networks of a single corporation. A social researcher can gain this kind of intimate knowledge about only a relatively small number of cases.

However, it might be possible to survey these same 500 corporations and find out basic information like total assets, profitability, and number of employees. The information from this survey would not add up to intimate knowledge of each of the 500 corporations, but could be used to examine relations among variables characterizing these corporations. For example, does large corporate size pose an obstacle to profitability? Answering this question does not require in-depth knowledge of the workings of *any* of the 500 corporations. Of course, such in-depth knowledge would improve the analysis of the evidence on size and profitability and the representation of the results, but it is not essential to the study of the general relationship between these two variables.

It is important to note that Figure 2.1 represents the tendencies of these three strategies and does not establish absolute boundaries around these three strategies in any way. Some quantitative researchers, for example, collect hundreds of variables on thousands of cases when they conduct research, and they try to squeeze as much of this information as possible into the representations they construct. Of course, these representations are still "big picture" representations of broad patterns of covariation across cases. Likewise, there are some qualitative researchers who work in teams to increase the number of cases they study. Thus,

Figure 2.1 should be viewed as an attempt to depict the nature of the typical representations that result from these three common strategies.

Table 2.1 maps the relation between these three strategies and the seven goals of social research discussed in this chapter. The column headings of the table are the three general strategies; the rows are the seven goals. The table shows the fit between goals and strategies.

The three different strategies range from intensive (qualitative study of commonalities) to comprehensive (comparative study of diversity) to extensive (quantitative study of the relationships among variables) in their approach to cases. An intensive approach is best suited for goals that involve close attention to specific cases; a comprehensive approach is best suited for goals that involve examination of patterns of similarities and differences across a moderate number of cases; an extensive approach is best suited for goals that involve knowledge of broad patterns across many cases. It is important to remember, however, that the three strategies examined here and in Part II are three among many different strategies of social research.

The goal of identifying general patterns (goal 1), for example, is best served by the quantitative approach, but it is also served by the comparative approach, though maybe not quite as well. (Thus, the *primary* strategy for identifying general patterns is the quantitative approach; a *secondary* strategy is the comparative approach.) A pattern is not general if it does not embrace many cases. Also, most statements about general

TABLE 2.1

The Goals and Strategies of Social Research*

	Qualitative Research	Comparative Research	Quantitative Research
1. Identifying broad patterns		secondary	primary
2. Testing/refining theory	secondary	secondary	primary
3. Making predictions		secondary	primary
4. Interpreting significance	primary	secondary	
5. Exploring diversity	secondary	primary	secondary
6. Giving voice	primary		
7. Advancing new theories	primary	primary	secondary

*The three research strategies are qualitative research on commonalities, comparative research on diversity, and quantitative research on relationships between variables. *Primary* indicates that the strategy is a very common way of achieving a goal; *secondary* indicates that the strategy is sometimes used to achieve a goal.

patterns involve variables. Both of these features of general patterns point to the quantitative approach as the primary strategy. The goal of *testing theory (goal 2) is served by all three strategies. Most theories,* however, are composed of abstract concepts that are linked to each other and thus concern general relationships that can be viewed across many cases or across a range of cases. Sometimes a single case will offer a critical test of a theory, but this use of individual cases is relatively rare (Eckstein 1975). Besides, from the perspective of most theories, single cases are unique and therefore relatively unreliable as raw material for *testing theories. Likewise, the most appropriate strategy for making pre-*dictions is the quantitative approach. Most predictions involve extrapolations based on many cases, the more the better, as long as they are appropriate and relevant to the substance of the prediction.

The goals of interpreting significance and giving voice, by contrast, are best served by a strategy that examines a small number of cases (often a single historical episode or a single group) in depth—the qualitative *approach. Similarly, the best raw material for advancing theory is often* provided by strategies that focus on cases, which is the special forte of qualitative research and one of the strong points of comparative research. However, all research, including quantitative research, can advance theory. Finally, the goal of exploring diversity is best served by the comparative approach. However, because qualitative and quantitative research contribute to knowledge of diverse groups, they too serve this goal.

The Social Nature of Social Research

Imagine a chart comparable to Table 2.1 constructed for a hard science like chemistry or physics. Goals 4 and 6 would not exist, at least they would not be considered major goals, and goal 5 would concern only a handful of researchers. The remaining four goals (1, 2, 3, and 7) are all served by the quantitative approach—a strategy that addresses general relations between measurable aspects of the things social scientists study. Goals 4, 5, and 6 reflect the social nature of social research. It is also these goals that sometimes make social scientists seem "unscientific," especially to scientists, social or otherwise, strongly committed to the other goals.

Consider again the goal of giving voice. Why should any particular voice be privileged by social research? Why should a social researcher try to enhance a particular group's visibility in society? Who cares whether or not people who are not marginal can understand those who are? Consider the goal of interpreting cultural or historical significance.

How do we know that the social researcher is not trying to whitewash horrific events, or perhaps make the members of a truly destructive group look like victims of oppression? Finally, consider the goal of exploring diversity. By highlighting diversity, a social researcher may glorify it. But too much diversity in society can tear it apart. Might it be better to emphasize the things that we have in common, what most members of society share?

These aspects of social research make it an easy target of criticism. However, it is important to understand that no social research exists in a vacuum. Research on general patterns, for example, may simply privilege what is normative. All social research gives voice in one way or another to some aspect of society. Similarly, research that tests theories has implications for how we think about human nature, social organization, and the different kinds of social worlds that are possible to construct. In fact, because of the social nature of social research, all social research has implications for the interpretation and understanding of anything that people do or refuse to do together. Social research is inescapably social in its implications. For this reason, social researchers cannot escape bias, regardless of which goals motivate research.