

CHAPTER 1

The Nature of Sociological Theory

Theories Invite Controversy

Theories seek to explain things. And thus, sociological theory attempts to explain how the social world operates. This social world consists of the behaviors, interactions, and patterns of social organization among humans, although some would argue that a sociology of nonhuman animals that organize is also possible. As we will see, sociological theory tends to focus on interaction and organization more than behavior per se, but interactions are interpersonal behaviors, and patterns of social organization are ultimately built from interactions among individuals. And so, even though interaction and organization are the subject matter of most theories, there are almost always implicit theories of human behavior tagging along with this emphasis on interaction and social organization.

Theorizing about the social world is, of course, hardly new. Humans have always sought to explain the social world around them from their very beginnings, and today, each of us is a kind of “folk sociological theorists” offering explanations for why people behave and interact with others in a particular manner. We all are social critics of society, and in so being, we are also folk sociologists of patterns of social organization. Moreover, people generally do not see their folk theorizing as highly speculative; in fact, they typically think that have captured the essential reason for why and how people behave, interact, and organize. And yet, people often consider the theories of others, even scientists, to be speculation or “just a theory,” as when someone argues that the modern synthesis that produced the biological theory of evolution is “just a theory,” or a matter of speculation that has “yet to be proven.” But, theory is more than just speculation; the goal of articulating theories is to assess them *against the facts of the empirical world* to see if they are plausible.

And so, most theories in science that have been around for some time are much more than idle speculation. They are explanations for why and how social processes operate the way they do. They are generally backed up by considerable evidence and data; and still, they are often doubted, just as the modern theory of biotic evolution is doubted by many in some societies, particularly in the United States but elsewhere as well.

Thus, people often chose not to believe a theory, even one that is well supported, because it violates their perceptions of how the world really works or their beliefs that are important to them. And people tend to have strong beliefs about human nature, appropriate behaviors and interpersonal demeanors, and how societies should be organized. These beliefs can be more powerful than a clearly stated theory in science, even one supported by evidence. And such is most likely to be the case for sociological theories because our theories are about what people often experience in their daily lives, leading them to assume that they understand the social world and, thereby, do not need sociologists to tell them about “their” world. There is, then, always a problem in developing sociological explanations that contradict people’s folk theorizing.

Even within the discipline of professional sociologists, there are many who reject even the possibility that sociology can develop theory like that in the natural sciences. Sociological theorists must, therefore, confront not only a skeptical lay public but also professional colleagues who would argue that scientific theorizing about human behavior, interaction, and organization is not possible. People are different, these critics argue, because they have the capacity for agency that can change the fundamental nature of the social universe, thereby obviating any proposed laws about the fundamental properties and processes of the social universe. Other critics take a different stance and argue that scientific theory is too value neutral, dispassionate, and detached from the problems of societies; instead of standing on the sidelines, sociology should be moral, exposing social problems and proposing solutions to these problems. Sociology must advocate and not sit back as dispassionate and cold scientists. Indeed, science and formal theories are often seen by these moralizing sociologists as “part of the problem” in societies.

As will become clear, my bias is toward scientific theorizing in sociology—even if it is necessary to endure the distain of critical sociologists. I not only believe that there can be a natural science of society,¹ but that sociology is far along in explaining the fundamental dynamics of the social universe. The skeptics within and outside sociology are, I would argue, simply wrong in their challenge to theoretical sociology. Still, we cannot ignore the critics, and in the pages to follow, I will outline the principle theories in sociology of how the social world operates *and* the critiques of, and challenges to, such theories.

¹I have taken this phrase from A. R. Radcliffe-Brown’s, *A Natural Science of Society* (Glencoe, IL: Free Press, 1948).

From its very beginnings, when Auguste Comte proclaimed in 1830 that there could be a “social physics,” immediate controversy arose over whether or not there could be scientific sociology built around explanatory theories of the social universe.² This controversy persists to the present day and, no doubt, will persist well into the future. One way to put the controversy into a broader perspective is to outline the fundamental beliefs of scientific theory in a broader context of other belief systems. Science is a belief system, but it is obviously not the only set of beliefs that influence people perceptions and judgments. There are different types of knowledge possessed by humans, and science is only *one of several types*, which means, inevitably, that science as a way of knowing about the world will sometimes clash with knowledge generated by other belief systems.

Science as a Belief System

Social scientific theories begin with the assumption that the universe, including the social universe created by acting human beings, reveals certain basic and fundamental properties and processes that explain the ebb and flow of events in specific contexts. Because of this concern with discovering fundamental properties and processes, scientific theories are always stated abstractly, rising above specific empirical events and highlighting the underlying *forces that drive these events* in all times and places. In the context of sociological inquiry, for example, theoretical explanations are not so much about the specifics of a particular economy as about the underlying dynamics of production and distribution as social forces that drive the formation and change of economies. Similarly, scientific theories are not about a particular form of government but about the nature of power as a basic social force. Or, to illustrate further, scientific theories are not about particular behaviors and interactions among actual persons in a specific setting as about the nature of human interpersonal behavior in general, and hence, the forces that are always operative when people interact with each other. The goal, then, is always to see if the underlying forces that govern particulars of specific empirical cases can be discovered and used to explain the operation of these empirical cases. To realize this goal, theories must be about generic properties and processes transcending the unique characteristics of any one situation or case. Thus, scientific theories always seek to transcend the particular and the time bound. Scientific theories are therefore about the generic, the fundamental, the timeless, and the universal.

Another characteristic of scientific theories is that they are stated more formally than ordinary language. At the extreme, theories are couched in

²Auguste Comte, *System of Positive Philosophy*, vol. 1 (Paris: Bachelier, 1830). Subsequent portions were published between 1831 and 1842. For a more detailed analysis of Comte’s thought, see Jonathan H. Turner, Leonard Beeghly, and Charles Powers, *The Emergence of Sociological Theory*, 7th ed. (Newbury Park, CA: Sage).

another language, such as mathematics, but more typically in the social sciences and particularly in sociology, theories are phrased in ordinary language. Still, even when using regular language, an effort is made to speak in neutral, objective, and unambiguous terms so that the theory means the same thing to all who examine it.

Terms denoting properties of the world and their dynamics are defined clearly so that their referents are clear, and relationships among concepts denoting phenomena are stated in ways such that their inter-connections are understood by all who examine the theory. At times, this attention to formalism can make theories seem stiff and dull, especially when these formalisms are couched at higher levels of abstraction. Yet, without attention to what terms and phrases denote and connote, a theory could mean very different things to diverse audiences.

A final characteristic of scientific theories is that they are designed to be systematically tested with replicable methods against the facts of particular empirical settings. Despite being stated abstractly and formally, scientific theories do not stand aloof from the empirical. Useful theories all suggest ways that they can be assessed against empirical events.

All scientific fields develop theories. For in the end, science seeks (1) to develop abstract and formally stated theories and (2) to test these theories against empirical cases to see if they are plausible. If the theory seems plausible in light of empirical assessment, then it represents *for the present time* the best explanation of events. If a theory is contradicted by empirical tests, then it must be discarded or revised. If competing theories emerge to explain the same phenomena, they too must be empirically assessed, with the better explanation winning out.

Science is thus a rather slow process of developing theories, testing them, and then rejecting, modifying, or retaining them, at least until a better theory is proposed. Without attention to stating theories formally and objectively, while assessing them against the empirical world, theory would become self-justifying and self-contained, reflecting personal biases, ideological leanings, or religious convictions.

Our biases and personal ideologies about what should occur, or our commitments to other belief systems such as those articulated by religion, are, in essence, belief systems; these stand in contrast to science as a belief system. These differences between scientific theory and other types of knowledge are presented in Figure 1.1.

The typology asks two basic questions:³ (1) Is the search for knowledge to be evaluative or neutral? (2) Is the knowledge developed to pertain to actual empirical events and processes, or is it to be about non-empirical realities? In other words, should knowledge tell us what *should be* or *what is*? And should it refer to the observable world or to other, less observable,

³I am borrowing the general ideal from Talcott Parsons' *The Social System* (New York: Free Press, 1951).

Figure 1.1 Types of Knowledge

		Is knowledge to empirical?	
		yes	no
Is knowledge to be evaluative?	yes	Ideologies: beliefs stating the way the social world should be	Religious: beliefs stating the dictates of supernatural forces
	no	Science: belief that all knowledge is to denote actual operation of the empirical world	Logics: systems of reasoning that employ rules of calculation

realms? If knowledge is to tell us what should exist (and, by implication, what should not occur) in the empirical world, then it is *ideological knowledge*. If knowledge informs us about what should be and does not pertain to observable forces but to hypothesized supernatural force, then the knowledge is *religious* and, hence, about forces and beings in another realm of existence. If knowledge is neither empirical nor evaluative, then it is a formal *system of logic*, such as mathematics, for developing other forms of knowledge, particularly science. And if it is about empirical events and is non-evaluative, then it is *science*.

This typology is crude, but it makes the essential point: there are different ways to look at, interpret, and develop knowledge about the world. Science is only one way. In its most developed form, science is based on the presumptions that theoretical knowledge (1) can be value free, (2) can explain the actual workings of the empirical world in all times and place, and (3) can be revised as a result of careful observations of empirical events. These characteristics distinguish science from other beliefs about how we should generate understanding and insight about the world.⁴

⁴It is very difficult to find recent works in sociology on formal theory building because these kinds of works have fallen out of favor. There is some justification for this because these works tended to have an overly idealized view of how theories are built. Still, it is useful to read one or two such works, just to get an idea of the issues involved in developing formal theory. Though necessarily old, because no new works have been written, I have found the following useful references over the years: Paul Davidson Reynolds, *A Primer in Theory Construction* (Indianapolis: Bobbs-Merrill, 1971, now in its 21st printing by Macmillan); Arthur L. Stinchcombe, *Constructing Social Theories* (New York: Harcourt, Brace & World,

The boundaries among these types of knowledge are often open, or at least permeable. Logics can be the language of science, as is the case when mathematics is used to state important relationships among forces driving the universe. The boundaries between these forms of knowledge can also be confrontational, as is evident today in the controversy between religious and scientific explanations for the evolution of humans. Within sociology proper, the most contentious and controversial relationship is between ideology and science. Many sociologists believe that theory must contain an ideological component; it must criticize undesirable conditions and advocate alternatives. Beliefs about “what should be” thus dominate the analysis of the social universe. This view of sociology contradicts the value-neutrality of science, where ideologies and other evaluative beliefs are not to contaminate analysis of social conditions. As noted earlier, the debate between those who advocate a scientific approach and those who argue for the infusion of ideology into sociology has been present for most of the history of sociology, and today, this debate still rages. In the last section of this book, I devote several chapters to *critical theory* where the goal is to criticize existing conditions and to advocate potential alternatives.

These critical theories make a number of arguments. One is that no matter how hard scholars try to exclude ideology from their work, ideology will slip in. Every analyst is located at a particular position in society and will, therefore, have certain interests that guide both the problems selected for analysis and the mode of analysis itself. Inevitably, what people think should occur will enter their work, and so, it is only an illusion that statements about the operation of the social world are free of ideology. Another line of criticism is that when scientists study what exists, they will tend to see the way the social world is currently structured as the way things must be. As a result, theories about the world as it exists in the present can become ideologies legitimating the status quo and blinding thinkers to alternative social arrangements.⁵ And, a third line of attack on the value-neutrality of

1968), pp. 3–56; Karl R. Popper, *The Logic of Scientific Discovery* (New York: Harper & Row, 1959); David Willer and Murray Webster, Jr. “Theoretical Concepts and Observables,” *American Sociological Review* 35 (August 1970): pp. 748–57; Hans Zetterberg, *On Theory and Verification in Sociology*, 3rd ed. (Totowa, NJ: Bedminster Press, 1965); Jerald Hage, *Techniques and Problems of Theory Construction in Sociology* (New York: John Wiley & Sons, 1972); Walter L. Wallace, *The Logic of Science in Sociology* (Chicago: Aldine Publishing, 1971); Robert Dubin, *Theory Building* (New York: Free Press, 1969); Jack Gibbs, *Sociological Theory Construction* (Hinsdale, IL: Dryden Press, 1972); Herbert M. Blalock, Jr., *Theory Construction: From Verbal to Mathematical Formulations* (Englewood Cliffs, NJ: Prentice Hall, 1969); Nicholas C. Mullins, *The Art of Theory: Construction and Use* (New York: Harper & Row, 1971); Bernard P. Cohen, *Developing Sociological Knowledge: Theory and Method* (Chicago: Nelson-Hall, 1989).

⁵For example, there is a growing conviction among some sociologists that science is much like any other thought system in that it is devoted to sustaining a particular vision, among a community of individuals called scientists, of what is “really real.” Science simply provides one interesting way of constructing and maintaining a vision of reality,

science is that humans have the capacity to change the very nature of their universe; therefore, there can be no immutable laws of human social organization because humans' capacity for agency allows them to alter the very reality described by these laws. As a result, a natural science of society is not possible because the very nature of social reality can be changed by the will of actors.

Those who advocate a scientific approach reject these arguments by critical theorists. While they see ideological bias as a potential problem, this problem can be mitigated, if not obviated, by careful attention to potential sources of bias. And even if one's position in the social world shapes the questions asked, it is still possible to answer these questions in an objective manner. Moreover, the notion that the objective study of the social world ensures that inquiry will support the status quo is rejected by those committed to science. Real science seeks to examine the forces driving the current world, and theories are about these underlying forces that, in the very best theories, have operated in all times and places. Thus, science does not just describe the world as it presently is, but rather, it tries to see how forces operating in the past, present, and future work to generate the empirical world. These forces will thus change the present, just as they transformed the past into a new present and will eventually bring about a new future. There is no reason, therefore, for theories to legitimate a status quo; indeed, theories are about the dynamic potential of the forces that change social arrangements. And finally, the contention of critics that humans can change the very nature of the forces driving the social world is rejected by scientists. Humans can, of course, change the social world as it exists, but this is very different from changing the generic and basic forces that shape the organization of the social universe. Agency is thus constrained by the underlying forces that drive the social universe; indeed, for agency to be successful, it must be directed at changing the valences of the forces that drive the social universe. In fact, when people's concerted efforts to change certain arrangements consistently fail, this failure is often an indicator that they are fighting against a powerful social force. For example, humans can change the way they produce things, but they cannot eliminate production as a basic force necessary for the survival of the species; people can change political regimes, but they cannot eliminate the operation of power in social relations.

but there are other, equally valid views among different communities of individuals. Obviously, I do not accept this argument, but I will explore it in more detail in various chapters. For some interesting explorations of the issues, see Edward A. Tiryakian, "Existential Phenomenology and the Sociological Tradition," *American Sociological Review* 30 (October 1965): pp. 674–88; J. C. McKinney, "Typification, Typologies, and Sociological Theory," *Social Forces* 48 (September 1969): pp. 1–11; Alfred Schutz, "Concept and Theory Formation in the Social Sciences," *Journal of Philosophy* 51 (April 1954): pp. 257–73; Harold Garfinkel, *Studies in Ethnomethodology* (Englewood Cliffs, NJ: Prentice Hall, 1967); George Psathas, "Ethnomethods and Phenomenology," *Social Research* 35 (September 1968): pp. 500–520.

The debate over whether or not sociology can be a natural science will, no doubt, rage into the future.⁶ For our purposes, we simply must recognize that commitments to science vary among theorists in sociology. Yet, in the pages to follow, emphasis is on the contribution of theories to the science of sociology. Of course, those theories rejecting this orientation are also examined, but these alternatives will always be examined in terms of how they deviate from scientific sociology.

The Elements of Theory

Theory is a mental activity revolving around the process of developing ideas that explain how and why events occur. Theory is constructed with several basic elements or building blocks: (1) concepts, (2) variables, (3) statements, and (4) formats. Although there are many divergent claims about what theory is or should be, these four elements are common to all of them. Let me examine each of these elements in more detail.

Concepts: The Basic Building Blocks of Theory

Theories are built from concepts. Most generally, concepts denote phenomena; in so doing, they isolate features of the world that are considered, for the moment at hand, important. For example, notions of atoms, protons, neutrons, and the like are concepts pointing to and isolating phenomena for certain analytical purposes. Familiar sociological concepts would include production, power, interaction, norm, role, status, and socialization. Each term is a concept that embraces aspects of the social world that are considered essential for a particular purpose.

Concepts are constructed from definitions.⁷ A *definition* is a system of terms, such as the sentences of a language, the symbols of logic, or the notation of mathematics, that inform investigators as to the phenomenon denoted by a concept. For example, the concept *conflict* has meaning only when it is defined. One possible definition might be the following: *Conflict is interaction among social units in which one unit seeks to prevent another from realizing its goals.* Such a definition allows us to visualize the phenomenon that is denoted by the concept. It enables all investigators to see the same thing and to understand what it is that is being studied.

Thus, concepts that are useful in building theory have a special characteristic: they strive to communicate a uniform meaning to all those who use them. However, since concepts are frequently expressed with the words

⁶For my views on these controversial issues, see Jonathan H. Turner, "In Defense of Positivism," *Sociological Theory* 3 (Fall 1985): pp. 24–30 and Stephan Fuchs and Jonathan H. Turner, "What Makes a Science Mature?" *Sociological Theory* 4 (Fall 1986): pp. 143–50.

⁷For more detailed work on concept formation, see Carl G. Hempel, *Fundamentals of Concept Formation in Empirical Science* (Chicago: University of Chicago Press, 1952).

of everyday language, it is difficult to avoid words that connote varied meanings—and hence point to different phenomena—for varying groups of scientists. It is for this reason that many concepts in science are expressed in technical or more neutral languages, such as the symbols of mathematics. In sociology, expression of concepts in such special languages is sometimes not only impossible but also undesirable. Hence the verbal symbols used to develop a concept must be defined as precisely as possible so that they point to the same phenomenon for all investigators. Although perfect consensus may never be attained with conventional language, a body of theory rests on the premise that scholars will do their best to define concepts unambiguously.

The concepts of theory reveal a special characteristic: *abstractness*.⁸ Some concepts pertain to concrete phenomena at specific times and locations. Other, more abstract, concepts point to phenomena that are not related to concrete times or locations. For example, in the context of small-group research, *concrete concepts* would refer to the persistent interactions of particular individuals, whereas an *abstract* conceptualization of such phenomena would refer to those general properties of face-to-face groups that are not tied to particular individuals interacting at a specified time and location. Whereas abstract concepts are not tied to a specific context, concrete concepts are. In building theory, abstract concepts are crucial, although we will see shortly that theorists disagree considerably on this issue.

Abstractness, then, poses a problem: how do we attach abstract concepts to the ongoing, everyday world of events that we want to understand and explain? Although it is essential that some of the concepts of theory transcend specific times and places, it is equally critical that there be procedures for making these abstract concepts relevant to observable situations and occurrences. After all, the utility of an abstract concept can be demonstrated only when the concept is brought to bear on some specific empirical problem encountered by investigators; otherwise, concepts remain detached from the very processes they are supposed to help investigators understand. Thus, just how to attach concepts to empirical processes, or the workings of the real world, is an area of great controversy in sociology. Some argue for very formal procedures for attaching concepts to empirical events. Those of this persuasion contend that abstract concepts should be accompanied by a series of statements known as *operational definitions*, which are sets of procedural instructions telling investigators how to go about discerning phenomena in the real world that are denoted by an abstract concept.

Others argue, however, that the nature of our concepts in sociology precludes such formalistic exercises. At best, concepts can be only sensitizing devices that must change with alterations of social reality, and so we can only intuitively and provisionally apply abstract concepts to the actual flow

⁸For a useful and insightful critique of sociology's ability to generate abstract concepts and theory, see David and Judith Willer, *Systematic Empiricism: Critique of Pseudoscience* (Englewood Cliffs, NJ: Prentice Hall, 1973).

of events. Moreover, among those making this argument, emulating the natural sciences in an effort to develop formal operations for attaching concepts to reality is to ignore the fact that social reality is changeable; it does not reveal invariant properties like the other domains of the universe.⁹ Thus, to think that abstract concepts denote enduring and invariant properties of the social universe and to presume, therefore, that the concept itself will never need to be changed is, at best, naive.¹⁰

And so the debate rages, taking many different turns. We need not go into detail here since these issues will be brought out again and again as the substance of sociological theory is examined in subsequent chapters. For the present, it is only necessary to draw the approximate lines of battle.

Variables as an Important Type of Concept

When used to build theory, two general types of concepts can be distinguished: (1) those that simply label phenomena and (2) those that refer to phenomena that differ in degree.¹¹ Concepts that merely label phenomena would include such commonly employed abstractions as *dog*, *cat*, *group*, *social class*, and *star*. When stated in this way, none of these concepts reveals the ways in which the phenomena they denote vary in terms of such properties as size, weight, density, velocity, cohesiveness, or any of the many criteria used to inform investigators about differences in degree among phenomena.

Those who believe that sociology can be like other sciences prefer concepts that are translated into variables—that is, into states that vary. We want to know the variable properties—size, degree, intensity, amount, and so forth—of events denoted by a concept. For example, to note that an aggregate of people is a group does not indicate what type of group it is or how it compares with other groups in terms of such criteria as size, degree of differentiation of roles, and level of cohesiveness. And so, some concepts of scientific theory should denote the *variable* features of the world. To understand events requires that we visualize how variation in one phenomenon *is related to*

⁹For examples of this line of argument, see Herbert Blumer, *Symbolic Interaction: Perspective and Method* (Englewood Cliffs, NJ: Prentice Hall, 1969) or Anthony Giddens, *New Rules of Sociological Method* (New York: Basic Books, 1977). For a more recent advocacy, see John Martin Levy, *The Explanation of Social Action* (New York: Oxford University Press, 2011).

¹⁰For the counterargument, see Jonathan H. Turner, "Toward a Social Physics: Reducing Sociology's Theoretical Inhibitions," *Humboldt Journal of Social Relations* 7 (Fall/Winter 1979–80): pp. 140–55; "Returning to Social Physics," *Perspectives in Social Theory*, vol. 2 (1981); "Some Problematic Trends in Sociological Theorizing," *The Wisconsin Sociologist* 15 (Spring/Summer 1978): pp. 80–88; and *Theoretical Principles of Sociology*, vol. 1, 2, and 3 (New York: Springer, 2010–2012).

¹¹Reynolds, *Primer in Theory Construction*, p. 57; see also Stinchcombe, *Constructing Social Theories*, pp. 38–47 for a discussion of how concepts not only point to variable properties of phenomena but also to the interaction effects of interrelated phenomena. For an interesting discussion of the importance of variable concepts and for guidelines on how to use them, see Hage, *Techniques and Problems of Theory Construction*.

variation in another. Others, who are less enamored by efforts to make sociology a natural science, are less compulsive about translating concepts into variables. They are far more interested in whether or not concepts sensitized and alert investigators to important processes than they are in converting each concept into a metric that varies in some measurable way. They are not, of course, against the conversion of ideas into variables, but they are cautious about efforts to translate each and every concept into a metric.

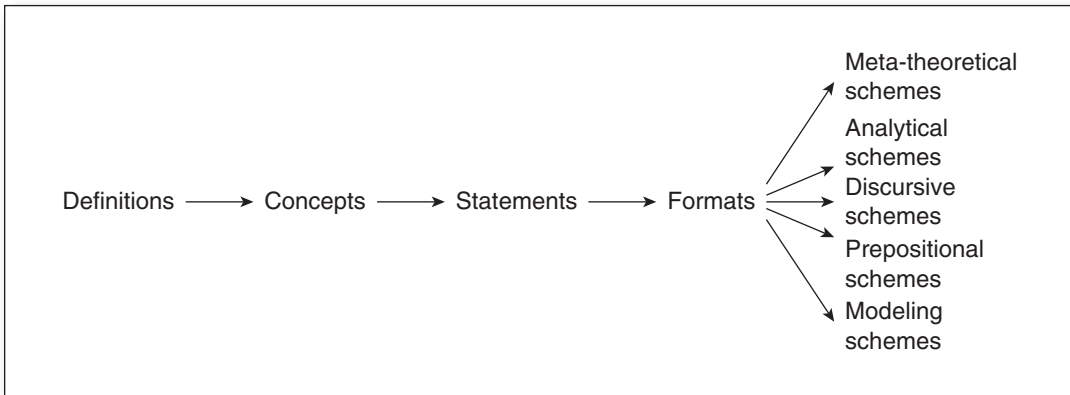
Theoretical Statements and Formats

To be useful, the concepts of theory must be connected to one another. Such connections among concepts constitute *theoretical statements*. These statements specify the way in which events denoted by concepts are interrelated, and at the same time, they provide an interpretation of how and why events should be connected. When these theoretical statements are grouped together, they constitute a *theoretical format*. There are, however, different ways to organize theoretical statements into formats. Indeed, in sociological theory, there is relatively little consensus over just how to organize theoretical statements; in fact, much of the theoretical controversy in sociology revolves around differences over the best way to develop theoretical statements and to group them together into a format. Depending on one's views about what kind of science, if any, sociology can be, the structure of theoretical statements and their organization into formats differ dramatically. Let us review the range of opinion on the matter.

There are five basic approaches in sociological theory for generating theoretical statements and formats: (1) meta-theoretical schemes, (2) analytical schemes, (3) discursive schemes, (4) propositional schemes, and (5) modeling schemes. Figure 1.2 summarizes the relations among these schemes and the basic elements of theory.

Concepts are constructed from definitions; theoretical statements link concepts together; and statements are organized into five basic types of formats. However, these five formats can be executed in a variety of ways. So, in reality, there are more than just five strategies for developing theoretical statements and formats. Moreover, these various strategies are not always mutually exclusive, for in executing one of them, we are often led to another as a kind of next step in building theory. Yet—and this point is crucial—these various approaches are often viewed as antagonistic, and the proponents of each strategy have spilled a great deal of ink sustaining the antagonism. Moreover, even within a particular type of format, there is constant battle over the best way to develop theory. This acrimony represents a great tragedy because in a mature science—which, sad to say, sociology is not—these approaches are viewed as highly compatible. Before pursuing this point further, we need to delineate in more detail each of these approaches.

(1) **Meta-Theoretical Schemes.** This kind of theoretical activity is more comprehensive than ordinary theory. Meta-theoretical schemes are

Figure 1.2 The Elements of Theory in Sociology

not, by themselves, theories that explain specific classes of events; rather, they explicate the basic issues that a theory must address. In many sociological circles, meta-theory is considered an essential prerequisite to adequate theory building,¹² even though the dictionary definition of *meta* emphasizes “occurring later” and “in succession” to previous activities.¹³ Furthermore, in most other sciences, meta-theoretical reflection has occurred *after* a body of formal theoretical statements has been developed. It is typically after a science has used a number of theoretical statements and formats successfully that scholars begin to ask: what are the underlying assumptions about the universe contained in these statements? What strategies are demanded by, or precluded from, these statements and their organization into formats? What kind of knowledge is generated by these statements and formats, and conversely, what is ignored? In sociological theory, however, advocates of meta-theory usually emphasize that we cannot develop theory *until* we have resolved these more fundamental epistemological and metaphysical questions.

For those who emphasize meta-theory, several preliminary issues must be resolved. These include the following: (1) What is the basic nature of human activity about which we must develop theory? For example, what is the basic nature of human beings? What is the fundamental nature of society? What is the fundamental nature of the bonds that connect people to one another and to society? (2) What is the appropriate way to develop theory, and what kind of theory is possible? For instance, can we build highly formal systems of abstract laws, as is the case in physics, or must we be content with general concepts that simply sensitize and

¹²For a review of different types of meta-theorizing, see George Ritzer, *Metatheorizing in Sociology* (Lexington, MA: Lexington Books, 1991).

¹³*Webster's New Collegiate Dictionary* (Springfield, MA: G & C Merriman, 1976).

orient us to important processes? Can we rigorously test theories with precise measurement procedures, or must we use theories as interpretative frameworks that cannot be tested by the same procedures as in the natural sciences? (3) What is the critical problem on which social theory should concentrate? For instance, should we examine the processes of social integration, or must we concentrate on social conflict? Should we focus on the nature of social action among individuals, or on structures of social organization? Should we stress the power of ideas, like values and beliefs, or must we focus on the material conditions of people's existence?

A great deal of what is defined as sociological theory in sociology involves trying to answer these questions. The old philosophical debates—idealism versus materialism, induction versus deduction, causation versus association, subjectivism versus objectivism, and so on—are re-evoked and analyzed with respect to social reality. At times, meta-theorizing has been true to the meaning of *meta* and has involved a re-analysis of previous scholars' ideas in light of these philosophical issues. The idea behind re-analysis is to summarize the metaphysical and epistemological assumptions of the scholars' work and to show where the schemes went wrong and where they still have utility. Furthermore, on the basis of this assessment, there are some recommendations for re-analyses as to how we should go about building theory and what this theory should be.

Meta-theorizing often gets bogged down in weighty philosophical matters and immobilizes theory building. The enduring philosophical questions persist because they are not resolvable—which is the reason they are philosophical in the first place. One must just take a stand on the issues and see what kinds of insights can be generated. But meta-theory often stymies as much as stimulates theoretical activity because it embroils theorists in inherently unresolvable and always debatable controversies. Of course, many sociologists reject this assertion, and so, for our present purposes, the more important conclusion is that a great deal of sociological theory is, in fact, meta-theoretical activity.

Yet, not all meta-theorizing gets bogged down in unresolvable issues. Some meta-theorists, and I must include myself in this group, examine theories that have been stated in one format and try to convert it to another format. For example, a theory stated discursively in just words and texts might be converted to more formal propositions so that the key theoretical ideas are highlighted, or the theory might be converted into an analytical model, where the variables or forces in play are visually arranged so as to highlight their causal relations to each other. Thus, as George Ritzer has emphasized, there are several different types of meta-theorizing, with one being the analysis of existing theories to make the theories more formal and precise.¹⁴

¹⁴Alexander's work is more in this tradition. See also Richard Münch, *Theory of Action: Reconstructing the Contributions of Talcott Parsons, Émile Durkheim, and Max Weber* (Frankfurt: Suhrkamp, 1982).

(2) **Analytical Schemes.** Much theoretical activity in sociology consists of concepts organized into a classification scheme that denotes the key properties, and interrelations among these properties, in the social universe. There are many different varieties of analytical schemes, but they share an emphasis on classifying basic properties of the social world. The concepts of the scheme chop up the universe; then, the ordering of the concepts gives the social world a sense of order. Explanation of an empirical event comes whenever a place in the classificatory scheme can be found for an empirical event.

There are, however, wide variations in the nature of the typologies in analytical schemes, although there are two basic types: (1) *naturalistic schemes*, which try to develop a tightly woven system of categories that is presumed to capture the way in which the invariant properties of the universe are ordered,¹⁵ and (2) *sensitizing schemes*, which are more loosely assembled congeries of concepts intended only to sensitize and orient researchers and theorists to certain critical processes. Figure 1.3 summarizes these two types of analytical approaches.

Naturalistic/positivistic schemes assume that there are timeless and universal processes in the social universe, just as there are in the physical and biological realms. The goal is to create an abstract conceptual typology that is isomorphic with these timeless processes. In contrast, sensitizing schemes are sometimes more skeptical about the timeless quality of social affairs. As a consequence of this skepticism, concepts and their linkages must always be provisional and sensitizing because the nature of human activity is to change those very arrangements denoted by the organization of concepts into theoretical statements.¹⁶ Hence, except for certain very general conceptual categories, the scheme must be flexible and capable of being revised as circumstances in the empirical world change. At best, then, explanation is simply an interpretation of events by seeing them as an instance or example of the provisional and sensitizing concepts in the scheme.

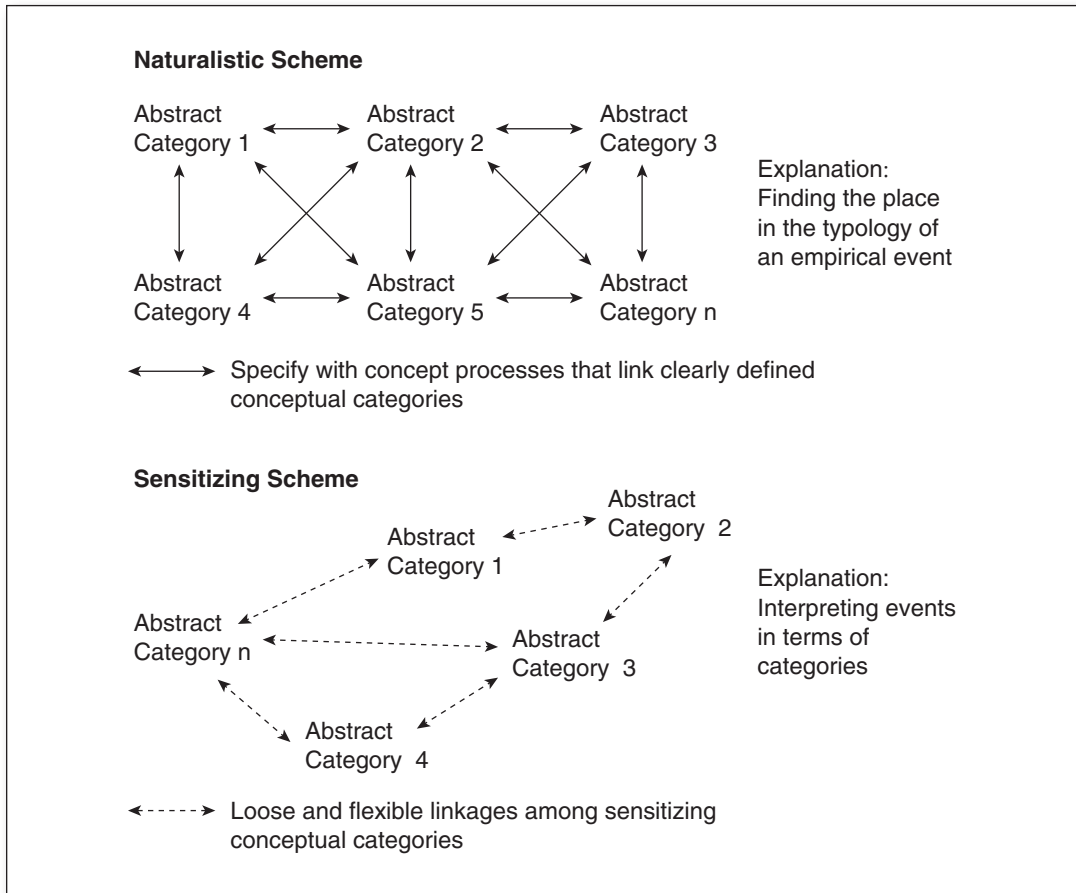
Often it is argued that analytical schemes are a necessary prerequisite for developing other forms of theory. Until one has a scheme that organizes the properties of the universe, it is difficult to develop propositions and models about specific events. For without the general analytical framework, how can a theorist or researcher know what to examine? There is some merit to this position, but if the scheme becomes too complex and elaborate, it is not easily translated into other theoretical formats. Thus, analytical schemes can represent a useful way to begin theorizing, unless they are too rigid and elaborate to stimulate theorizing outside the parameters imposed by the scheme itself.¹⁷

¹⁵Talcott Parsons' work is of this nature, as we will see in the next chapter.

¹⁶Anthony Giddens' work represents this alternative. See his *The Constitution of Society* (Berkeley, CA: University of California Press, 1984).

¹⁷For my best effort to use sensitizing schemes, see Jonathan H. Turner, *A Theory of Social Interaction* (Stanford, CA: Stanford University Press, 1988).

Figure 1.3 Types of Analytical Schemes



(3) **Discursive Schemes.** Many theories are simply stated in words that are not highly formalized or ordered into propositions or other structured formats. They simply outline in everyday language key variables and forces, discursively suggesting the ways in which they affect each other. Indeed, it may be that the majority of sociological theories are stated in this way because their authors often think of formalization as overly contrived and, hence, unnecessary. Such theories are, of course, often subject to meta-theorizing as theorists try to extract the key arguments and formalize them in some manner, as I will do for various theories reviewed in the chapters to follow.

The great strength of discursive schemes is that they are typically easier to understand than those that are more formal, but the great weakness can be that the variables and forces highlighted and the dynamic relations among them are vague and imprecise. Such is often the case with meta-theorizing and analytical schemes discussed above, and indeed, these may

present more difficulty than discursive schemes in figuring out the causal connections or even the basic relationships among the forces theorized to operate. For example, a theory may be illustrated with so much historical detail that it is difficult to figure out what the more generic forces in play might be. Or, the forces may be defined as a typology in which variations in the values and valences of the forces are not emphasized; as a result, it is difficult to understand how variations in typologically defined forces cause variation in other forces. Yet, when the theory is powerful, a meta-theorist can often make reasonable inferences about the range of variation in forces and thus connect them in analytical models or propositional schemes. When, however, the variables are not clearly defined and are used loosely in rambling text, meta-theorizing may not be able to isolate them and then connect their operation to other forces driving the social world. For example, of the founding theorists of sociology—say, Auguste Comte, Herbert Spencer, Karl Marx, Max Weber, Georg Simmel, Émile Durkheim, and George Herbert Mead—it is relatively easy to convert their arguments into propositions or laws, even if they themselves would not have agreed with such a meta-theoretical exercise. Some are particularly easy because, like Spencer, Simmel, and Durkheim, they presented their discursive arguments in close-to-proposition formats, whereas a scholar like Weber did not. Still, it is not difficult to convert Weber's arguments, for all of their embeddedness in historical analysis and typologies (his "ideal types"), into causal models and propositions. For, when a theorist is being a "good theorist," attention is paid to isolating key variables and forces and, in discursive text, connecting them to other forces. Even with a certain vagueness in language, it is still possible to discern the basic theoretical argument and convert it—if one is so disposed—into a more formal format like an analytical model or propositions scheme, as is outlined below.

(4) **Propositional Schemes.** A proposition is a theoretical statement that specifies the connection between two or more variables. It tells us how variation in one concept is accounted for by variation in another. For example, the propositional statement "group solidarity is a positive function of external conflict with other groups" says that, as group conflict increases, so does the internal sense of solidarity among members of the respective groups involved in the conflict. Thus, two properties of the social universe denoted by variable concepts, "group solidarity" and "conflict," are connected by the proposition that, as one increases in value, so does the other.

Propositional schemes vary perhaps the most of all theoretical approaches. They vary primarily along two dimensions: (1) the level of abstraction and (2) the way propositions are organized into formats. Some are highly abstract and contain concepts that do not denote any particular case but all cases of a type (for example, group solidarity and conflict are abstract because no particular empirical instance of conflict and solidarity is

addressed). In contrast, other propositional systems are tied to empirical facts and simply summarize relations among events in a particular case (for example, as World War II progressed, nationalism in America increased). Propositional schemes vary not only in terms of abstractness but also by virtue of how propositions are laced together into a format. Some are woven together by very explicit rules; others are merely loose bunches or congeries of propositions.

By using these two dimensions, several different types of propositional schemes can be isolated: (a) axiomatic formats, (b) formal formats, and (c) various empirical formats. The first two (axiomatic and formal formats) are clearly theoretical, whereas various empirical formats are simply research findings that might be useful to test more abstractly stated theories. But, these more empirical types of propositional schemes are often considered theory by practicing sociologists, and so they are included in our discussion here.

- (a) An *axiomatic* organization of theoretical statements involves the following elements. First, it contains a set of concepts. Some of the concepts are highly abstract; others, more concrete. Second, there is always a set of existence statements that describe those types and classes of situations in which the concepts and the propositions that incorporate them apply. These existence statements make up what are usually called the *scope conditions* of the theory. Third—and most nearly unique to the axiomatic format—propositional statements are stated in a hierarchical order. At the top of the hierarchy are *axioms*, or highly abstract statements, from which *all* other theoretical statements are logically derived. These latter statements are usually called *theorems* and are logically derived in accordance with varying rules from the more abstract axioms. The selection of axioms is, in reality, a somewhat arbitrary matter, but usually they are selected with several criteria in mind. The axioms should be consistent with one another, although they do not have to be logically interrelated. The axioms should be highly abstract; they should state relationships among abstract concepts. These relationships should be law-like in that the more concrete theorems derived from them have not been disproved by empirical investigation. And the axioms should have an intuitive plausibility in that their truth appears to be self-evident.

The end result of tight conformity to axiomatic principles is an inventory or set of interrelated propositions, each derivable from at least one axiom and usually more abstract theorems. There are several advantages to this form of theory construction. First, highly abstract concepts, encompassing a broad range of related phenomena, can be employed. These abstract concepts do not have to be directly measurable since they are logically tied to

more specific and measurable propositions that, when empirically tested, can indirectly subject the more abstract propositions and the axioms to empirical tests. Thus, by virtue of this logical interrelatedness of the propositions and axioms, research can be more efficient since the failure to refute a particular proposition lends credence to other propositions and to the axioms. Second, the use of a logical system to derive propositions from abstract axioms can also generate additional propositions that point to previously unknown or unanticipated relationships among social phenomena.

There are, however, some fatal limitations on the use of axiomatic theory in sociology. In terms of strict adherence to the rules of deduction (the details of which are not critical for my purposes here), most interesting concepts and propositions in sociology cannot be legitimately employed because the concepts are not stated with sufficient precision and because they cannot be incorporated into propositions that state unambiguously the relationship between concepts. Axiomatic theory also requires controls of all potential extraneous variables so that the tight logical system of deduction from axiom to empirical reality is not contaminated by extraneous factors. Sociologists can create such controls, although in many situations, this kind of tight control is not possible.¹⁸ Thus, axiomatic theory can be used only when precise definitions of concepts exist, when concepts are organized into propositions using a precise calculus that specifies relations unambiguously, and when the contaminating effects of extraneous variables are eliminated.

These limitations are often ignored in propositional theory building, and the language of axiomatic theory is employed (axioms, theorems, corollaries, the like); but these efforts are, at best, pseudo-axiomatic schemes.¹⁹ In fact, it is best to call them *formal propositional schemes*²⁰—the second type proposition strategy listed earlier.

- (b) *Formal* theories are, in essence, watered-down or loose versions of axiomatic schemes. The idea is to develop highly abstract propositions that are used to explain some empirical event. Some highly abstract propositions are seen as higher-order laws, and the goal of explanation is to visualize empirical events as instances of this *covering law*. Deductions from the laws are made, but they are much looser, rarely conforming to the strict rules of axiomatic theory. Moreover, there is a recognition that extraneous variables cannot always be excluded, and so the propositions

¹⁸For more details of this argument, see Lee Freese, "Formal Theorizing," *Annual Review of Sociology* 6 (1980): pp. 187–212 and Herbert L. Costner and Robert K. Leik, "Deductions from Axiomatic Theory," *American Sociological Review* 29 (December 1964): pp. 19–35.

¹⁹See, for example, Peter Blau's *Structural Context of Opportunities* (Chicago: University of Chicago Press, 1994) and *Inequality and Heterogeneity: A Primitive Theory of Social Structure* (New York: Free Press, 1977).

²⁰See Freese.

usually have the disclaimer “other things being equal.” That is, if other forces do not impinge, then the relationship among concepts in the proposition should hold true. For instance, our earlier example of the relationship between conflict and solidarity might be one abstract proposition in a formal system. Thus a formal scheme might say “Other things being equal, group solidarity is a positive function of conflict.” Then we would use this law to explain some empirical event—say, for example, World War II (the conflict variable) and nationalism in America (the solidarity variable). And we might find an exception to our rule or law, such as America’s involvement in the Vietnam War, or more recently the wars in Iraq and Afghanistan, that contradict the principle, forcing its revision or the recognition that “all things were not equal.” In this case, we might revise the principle by stating a condition under which it holds true: when parties to a conflict perceive the conflict as a threat to their welfare, then the level of solidarity of groups is a positive function of their degree of conflict. Thus, in the end, the Vietnam War nor the wars in Iraq and Afghanistan did not produce internal solidarity in America because, eventually, they were not defined as a threat to America’s general welfare (whereas, for the North Vietnamese or Taliban, the threat posed by the American military did produce solidarity of the enemy, which in turn made the wars not only costly but difficult to win).

The essential idea here is that, in formal theory, an effort is made to create abstract principles. These principles are often clustered together to form a group of laws from which we make rather loose deductions to explain empirical events. Much like axiomatic systems, formal systems are hierarchical, but the restrictions of axiomatic theory are relaxed considerably. Most propositional schemes in sociological theorizing are, therefore, of this formal type.

- (C) Yet, much of what is defined as theory in sociology is more empirical. These *empirical formats* consist of generalizations from specific events, in particular empirical contexts. For example, Golden’s Law states that “as industrialization increases, the level of literacy in the population increases.” Such a proposition is not very abstract; it is filled with empirical content—industrialization and literacy—which have not existed in all times and places of human social organization. Thus, the law is not about a timeless process, since industrialization is only a few hundred years old and literacy emerged, at best, only 6,000 years ago. There are many such generalizations in sociology that are considered theoretical. They represent statements of empirical regularities that scholars think are important to understand. Indeed, most substantive areas and subfields of sociology are filled with these kinds of propositions.

Strictly speaking, however, these are not theoretical. They are too tied to empirical contexts, times, and places. In fact, they are generalizations that are *in need of a theory to explain them*. Yet, many scholars working in substantive areas see their empirical generalizations as theory; and so, once again, it is clear that there is no clear consensus in sociology as to what constitutes theory.

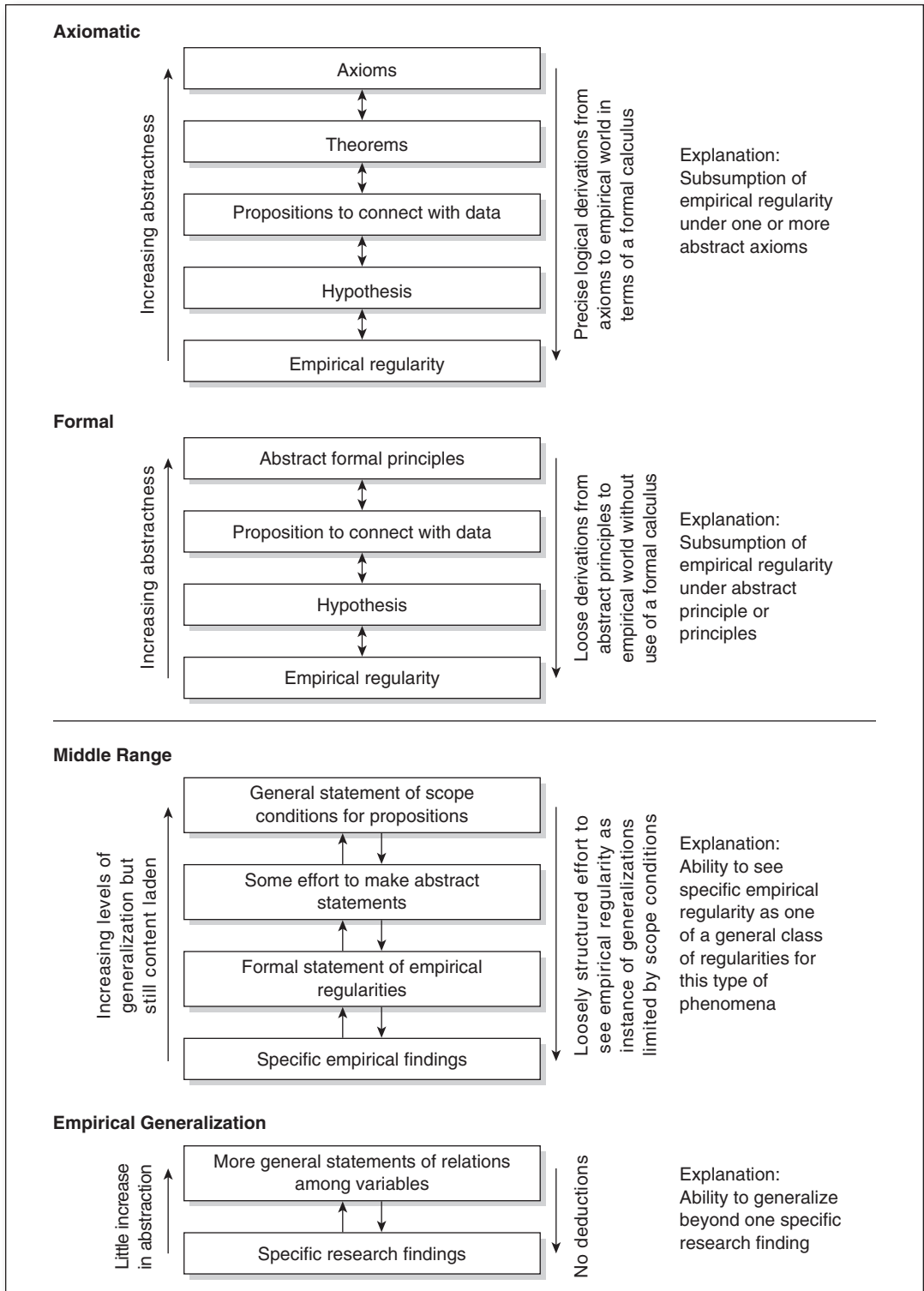
There are other kinds of empirical generalizations, however, that raise fewer suspicions about their theoretical merits. These are often termed *middle-range theories*, because they are more abstract than a research finding and because their empirical content pertains to variables that are also found in other domains of social reality.²¹ For example, a series of middle-range propositions from the complex organization's literature might be stated: "(a) Increases in the complexity (differentiation) of its structure, (b) reliance on formal rules and regulations, (c) decentralization of authority, and (d) span of control for each center of authority of a bureaucracy is a positive function of a bureaucracy's size and rate of growth."²² These principles (the truth of which is not an issue here) are more abstract than Golden's Law because they denote a whole class of phenomena—organizations. They also deal with more generic variables—size, differentiation, centralization of power, spans of control, rules, and regulations—that have existed in all times and all places. Moreover, these variables could be stated more abstractly to apply to *all* organized social systems, not just bureaucratic organizations. For instance, a more abstract law might state: "(a) Increases in levels of system differentiation, (b) codification of norms, (c) decentralization of power, and (d) spans of control for each center of power is a positive function of the size of the system and its rate of growth." The truth or falsity of these propositions is not being asserted here; rather, these are illustrations of how empirical generalizations can be made *more abstract* and, hence, theoretical. The central point is that some empirical generalizations have more theoretical potential than others. If their variables are relatively abstract and if they pertain to basic and fundamental properties of the social universe that exist in other substantive areas of inquiry, then it is more reasonable to consider them theoretical.

In sum, there are three basic kinds of propositional schemes: axiomatic, formal, and various types of empirical generalizations. These propositional schemes are summarized in Figure 1.4. Although axiomatic formats are elegant and powerful, sociological variables and research typically cannot conform to their restrictions. Instead, we must rely upon formal formats that generate propositions stating abstract relations among variables and then make loosely structured "deductions" to specific empirical cases.

²¹See Chapter 5 on Robert K. Merton's work. In particular, consult his *Social Theory and Social Structure* (New York: Free Press, 1975).

²²I have borrowed this example from Peter M. Blau's "Applications of a Macrosociological Theory" in *Mathematische Analyse von Organisationsstrukturen und Prozessen* (Internationale Wissenschaftliche Fachkonferenz, vol. 5, March 1981).

Figure 1.4 Types of Propositional Schemes



Finally, there are empirical formats that consist of generalizations from particular substantive areas, and these are often considered theories of that area. Some of these theories are little more than summaries of research findings that require a theory to explain them. Others are more middle range and have more potential as theory because they are more abstract and pertain to more generic classes of variables.

(5) **Analytical Modeling Schemes.** At times, it is useful to draw a picture of social events. Some models are drawn with neutral languages such as mathematics, in which the equation is presumed to map and represent empirical processes.²³ In reality, such equations are propositions (formal statements of relations among variables) *unless* they can be used to generate a picture or some form of graphic representation of processes. There is no clear consensus on what a model is, but in sociological theory, there is a range of activity that involves representing concepts and their relations as a picture that arrays in visual space what are considered the important elements of a social process.

A model, then, is a diagrammatic representation of social events. The diagrammatic elements of any model include: (1) concepts that denote and highlight certain features of the universe; (2) the arrangement of these concepts in visual space so as to reflect the ordering of events in the universe; and (3) symbols that mark the connections among concepts, such as lines, arrows, vectors, and so on. The elements of a model may be weighted in some way, or they may be sequentially organized to express events over time, or they may represent complex patterns of relations, such as lag effects, threshold effects, feedback loops, mutual interactions, cycles, and other potential ways in which properties of the universe affect one another.²⁴

In sociology, most diagrammatic models are constructed to emphasize the *causal connections* among properties of the universe. That is, they are designed to show how changes in the values of one set of variables are related to changes in the values of other variables. Models are typically constructed when there are numerous variables whose causal interrelations an investigator wants to highlight.

Sociologists generally construct two different types of models, which can be termed *analytical* models and *causal* models. This distinction is somewhat

²³Actually, these are typically *regression equations* and would not constitute modeling as I think it should be defined. A series of differential equations, especially as they are simulated or otherwise graphically represented, would constitute a model. Computer simulations represent, I think, an excellent approach to modeling. See, for example, Robert A. Hanneman, *Computer-Assisted Theory Building: Modeling Dynamic Social Systems* (Newbury Park, CA: Sage, 1988).

²⁴Good examples of such models are in my *Theoretical Principles of Sociology, Volume 1 on Macrodynamics* (New York: Springer, 2010). For examples of more empirical, yet still analytical, models, see Gerhard and Jean Lenski, *Human Societies* (Boulder, CO: Paradigm Press, 2011). See also the numerous analytical models in Randall Collins, *Theoretical Sociology* (San Diego, CA: Harcourt Brace Jovanovich, 1988).

arbitrary, but it is a necessary one if we are to appreciate the kinds of models that are constructed in sociology. The basis for making this distinction is two-fold: First, some models are more abstract than others in that the concepts in them are not tied to any particular case, whereas other models reveal concepts that simply summarize statistically relations among variables in a particular data set. Second, more abstract models almost always reveal more complexity in their representation of causal connections among variables. That is, one will find feedback loops, cycles, mutual effects, and other connective representations that complicate the causal connections among the variables in the model and make them difficult to summarize with simple statistics. In contrast, the less abstract models typically depict a clear causal sequence among empirical variables.²⁵ They typically reveal independent variables that effect variation in some dependent variable; furthermore, if the model is more complex, it might also highlight intervening variables and perhaps even some interaction effects among the variables.

Thus, analytical models are more abstract: they highlight more generic properties of the universe, and they portray a complex set of connections among variables. In contrast, causal models are more empirically grounded; they are more likely to devote particular properties of a specific empirical case; and they are likely to present a simple lineal view of causality. These modeling strategies are summarized in Figure 1.5.

Causal models are typically drawn in order to provide a more detailed interpretation of an empirical generalization. They are designed to sort out the respective influences of variables, usually in some temporal sequence, as they operate on some dependent variable of interest. At times, a causal model becomes a way of representing the elements of a middle-range theory so as to connect these elements to the particulars of a specific empirical context. For example, if we wanted to know why the size of a bureaucratic organization is related to its complexity of structure in a particular empirical case of a growing organization, we might translate the more abstract variables of size and complexity into specific empirical indicators and perhaps try to introduce other variables that also influence the relationship between size and complexity in this empirical case. The causal model thus becomes a way to represent with more clarity the empirical association between size and complexity in a specific context.²⁶

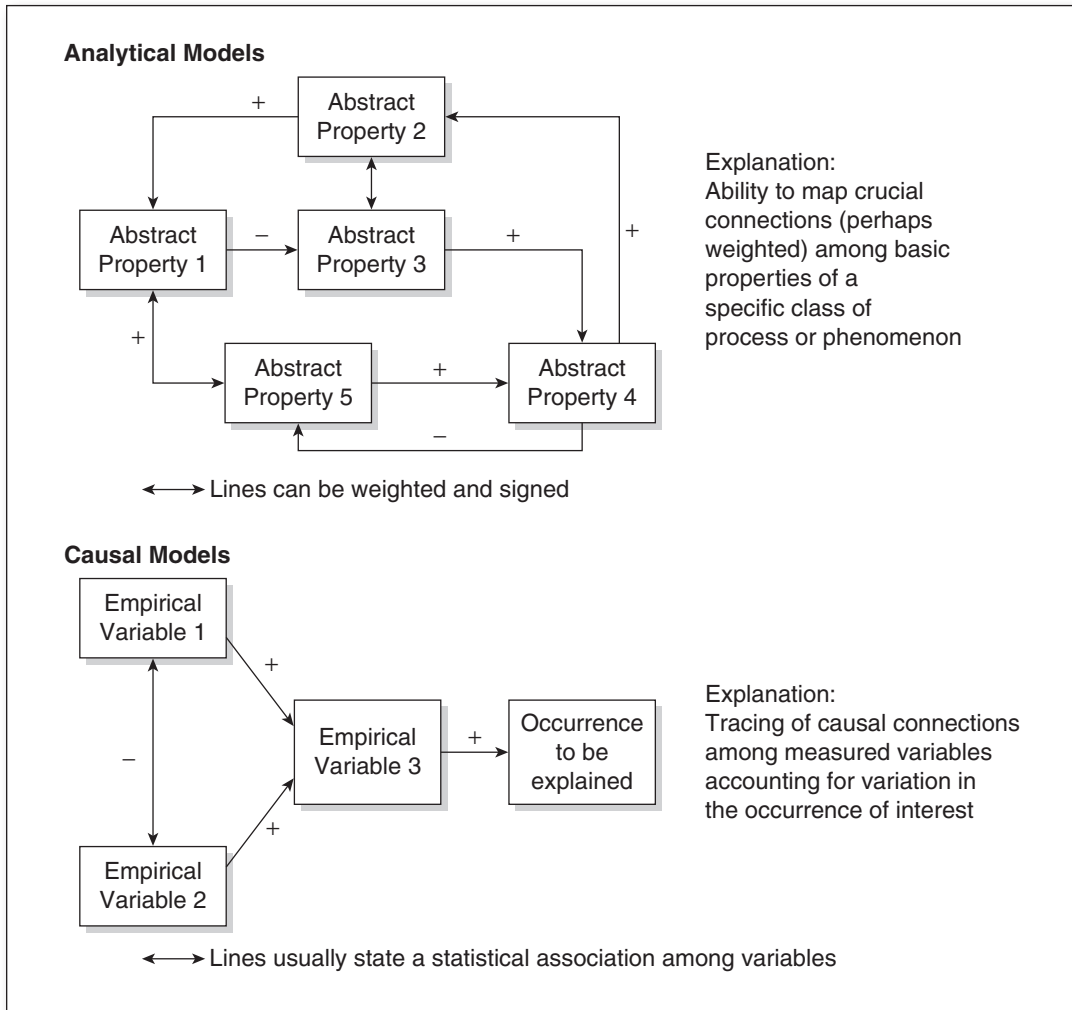
Analytical models are usually drawn to specify the relations among more abstract and generic processes. Often they are used to delineate the processes that operate to connect the concepts of an axiomatic or, more likely, a formal theory.²⁷ For example, we might construct a model that tells us

²⁵The “path analysis” that was so popular in American sociology in the 1970s is a good example of such modeling techniques.

²⁶For an example of a model for these variables, see Peter M. Blau’s “A Formal Theory of Differentiation in Organizations,” *American Sociological Review* 35 (April 1970): pp. 201–18. See also Chapter 12.

²⁷*Ibid.* is a good example.

Figure 1.5 Types of Modeling Schemes



more about the processes that operate to generate the relationship between conflict and solidarity or between size and differentiation in social systems. Additional concepts would be introduced, and their weighted, direct, indirect, feedback, and cyclical, lagged, and other patterns of casual effect on one another would be diagrammed. In this way, the analytical model tells us more about how and why properties of the universe are causally connected. In addition to specifying processes among formal propositions, analytical models can be used to describe processes that connect variables in the propositions of a middle-range theory. For example, we might use a model to map out how organization size and complexity are connected by virtue of other processes operating in an organization.

Of course, we can construct analytical models or causal models for their own sake, without reference to an empirical generalization, a middle-range theory, or a formal/axiomatic theory. We may simply prefer modeling to propositional formats. One of the great advantages of modeling is that it allows the presentation of complex relations among many variables in a reasonably parsimonious fashion. To say the same thing as a model, a propositional format might have to write complex equations or use many words. Thus, by itself, modeling represents a tool that many theorists find preferable to alternative theoretical schemes.

Assessing Diverse Theoretical Approaches

My belief is that theory should be abstract. That is, the less substantive content in the concepts, the better they are. For if theories are filled with empirical referents, they are tied to specific contexts and, hence, are not as useful as those that view specific empirical contexts as instances or examples of a more basic underlying process. Most theorists in sociology, however, would disagree with me on this score; I will return to this point of contention shortly.

I also believe that theory should be such that it can be proven wrong by empirical tests. As a general platitude, few would disagree with this statement. But as a more practical matter of how we should construct theories to be proven wrong, there is enormous disagreement. Theories must be sufficiently precise in the definitions of concepts and in the organization of concepts into statements that they can be, in principle, measured and tested. It is only through the generation of precise theoretical statements and efforts at their refutation that scientific knowledge can be generated. What distinguishes good theoretical statements from the bad ones is that they *are created to be proven wrong*. A theory that, in principle, cannot be proven wrong is not very useful. It becomes a self-sustaining dogma that is accepted on faith. A theory must allow for understanding of events, and hence, it must be tested against the facts of the world. If a theoretical statement is proven wrong by empirical tests, science has advanced. When a theory is rejected, then one less possible line of inquiry will be required in search of an answer to the question, Why? By successively eliminating incorrect statements, those that survive attempts at refutation offer, for the present at least, the most accurate picture of the real world. Although having one's theory refuted may cause professional stigma, refutations are crucial to theory building. It is somewhat disheartening, therefore, that some scientists appear to live in fear of such refutation. For in the ideal scientific process, just the opposite should be the case, as Karl Popper has emphasized:

Refutations have often been regarded as establishing the failure of a scientist, or at least of his theory. It should be stressed that this is an

inductive error. Every refutation should be regarded as a great success; not merely as a success of the scientist who refuted the theory, but also of the scientist who created the refuted theory and who thus in the first instance suggested, if only indirectly, the refuting experiment.²⁸

Even statements that survive refutation, and hence bring professional prestige to their framers, are never fully proven. It is always possible that the next empirical test could disprove them. Yet, if statements consistently survive empirical tests, they have high credibility and are likely to be at the core of a theoretical body of knowledge. As I have now phrased the issue, however, many sociological theorists would disagree. Moreover, most philosophers of science would argue that this process of refutation is idealized and, in fact, rarely occurs in the actual operation of science.

Despite these reservations, it is perhaps best to proceed *as if* we can develop theoretical statements that are highly abstract and, at the same time, sufficiently precise so as to be testable. Again, as will be evident in the chapters to come, many social theorists disagree with this position. I have injected my personal views because it is important to understand the biases with which I approach the review and analyses of social theory. Moreover, these biases are the central issue around which the debate over the best approach to developing theory and knowledge rages. So, let me elaborate on them by assessing the merits of various approaches that were outlined in this chapter.

From my point of view, empirical generalizations and causal models of empirically operationalized variables are not theory at all. They are useful summaries of data that need a theory to explain them. Some would argue that theory can be built from such summaries of empirical regularities. That is, we can induce from the facts the more general properties that these facts illustrate. Yet, induction is not a mechanical process of making empirical variables more abstract; often, a creative leap of insight is necessary, and so, theory building by total immersion in the empirical facts is, I believe, a barrier to rising above these facts and producing more abstract theory. Still, there are many instances in science where scholars have been able to make inductions, and so, we should not be too quick to reject this approach out of hand. Still, there is almost always a creative leap here as one moves from empirical generalizations to more generic and abstract concepts, propositions, and models that can explain these facts.

At the other extreme, meta-theory is like empirical facts in that it often becomes difficult to move onto producing real theory. It is easy to get bogged down in enduring philosophical issues when producing meta-theory, with the result that scholars never get around to developing theory. Again, such is not always the case, but there is a clear tendency for theorists in sociology who practice meta-theorizing to remain meta-theorists and indeed to become hostile to formal theories and models or, if not hostile,

²⁸Karl R. Popper, *Conjectures and Refutations* (New York: Basic Books, 1962), p. 243.

to think of these as premature and as not fully exploring their implicit assumptions.

Analytical schemes often suffer from the same problems as meta-theory. Naturalistic schemes have a tendency to become overly concerned with their architectural majesty. In an effort to construct an orderly scheme that mirrors at an abstract level the empirical world in all its dimensions, naturalistic schemes get ever more complex; as new elements are added to the scheme, efforts to reconcile new portions with the old take precedence over making the scheme testable. Moreover, the scheme as a whole is impossible to test because relations among its elements cover such a broad range of phenomena and are rarely stated with great precision. And when imprecision is compounded by the abstractness, then empirical tests are infrequent because it is not clear to researchers how to test any portion of the scheme. Yet, despite these problems, creators of analytical schemes view them as a necessary prerequisite for developing testable theoretical statements, and in this sense, they are much like meta-theoreticians.

In contrast, sensitizing schemes are typically constructed as a loose framework of concepts to interpret events and to see if they yield greater understanding of how and why these events occur. Even if such schemes are not considered science, they can be very insightful. Yet, much like naturalistic approaches, sensitizing schemes also become self-reinforcing because they are so loosely structured and so often vague (albeit suggestive and insightful) that the facts can always be bent to fit the scheme. Hence, the scheme can never be refuted or, I suspect, revised on the basis of actual empirical events. Sensitizing schemes are most useful, then, when they are used to orient us to important phenomena and, then, are elaborated upon with propositions and analytical models.

Discursive schemes vary in how useful they can be in generating explanations. If there is precision in the writing—that is, variables are clearly defined and their connection and effects on other variations are unambiguously stated—then a discursive format can offer a sound explanation. But, if variables do not vary but are typologized in categories, and if causal statements say things like “sometimes has an effect on,” “tends to influence,” “is known to have an effect on,” and the like, then the theory will lack precision, and it will be difficult to isolate the forces in play and their relation to each other. Unfortunately, much discursive theorizing is imprecise; even when highly provocative and interesting, the use of informal languages is filled with vagueness. As a result, a meta-theorist interested in formalizing the theory will have to make many inferences and, in the process, not capture the discursive argument intended by the theorist. This weakness in much discursive theorizing is immediately noticeable once the reader seeks precise definitions of the concepts and causal relations among the properties of the social universe supposedly denoted by these concepts.

Let me now turn to axiomatic/formal propositional formats, analytical models, and middle-range propositions. As already indicated, axiomatic theorizing is, for the most part, impractical in sociology. In my view, formal

theorizing is the most useful approach because it contains abstract concepts that are linked with sufficient precision so as to be testable. Analytical models can be highly insightful, but they are hard to test as a whole. They contain too many concepts, and their linkages are too diverse to be directly tested. And so, it is reasonable to ask: in what sense can they be useful for sociological theorizing? My view is that an analytical model can best be used to specify the processes by which concepts in a formal proposition are connected.²⁹ For example, if a proposition states that the “degree of differentiation” is a function of “system size,” the model can tell us why and how size and differentiation are connected. That is, we can get a better sense for the underlying processes by which size increases differentiation (and perhaps vice versa). Alternatively, analytical models can also be a starting point for formal theorizing. By isolating basic processes and mapping their interconnections, we can get a sense for the important social processes about which we need to develop formal propositions. And although the model as a whole cannot be easily tested (because it is too complex to be subject to a definitive test), we can decompose it into abstract propositional statements that are amenable to definitive tests.

Thus, analytical models are much more abstract, and thus, they can be the basis for developing formal propositional statements (in rare case, perhaps even axiomatic), or they can specify at an abstract level the robust causal connections among the abstract variables stated in a formal proposition. Moreover, both analytical models and formal propositional schemes cover a wide range of phenomena without being too broad as to become difficult to test empirically. Let me illustrate further with the proposition presented earlier that conflict promotes increased solidarity. While this proposition specifies a fundamental relationship in the social universe, it does not tell us just *how* threat and conflict translate into solidarity. What are the processes by which conflict and threat generate solidarity? The answer to this question can often be stated in an abstract model that outlines the causal sequences—direct, indirect, and reverse—of events that move parties to conflict to form more cohesive structures revealing high solidarity. In fact, introducing the notion of threat (as I did earlier) could have come from an analytical model as a variable that is critical to transforming conflict into high levels of prolonged solidarity. And, one might add other variables, such as (1) leader who can frame the issues and articulate ideologies highlighting threat and (2) entrepreneurs who can mobilize resources (including material and symbolic resources), to sustain the sense of threat and keep members of the conflict party mobilized and focused. Thus, an analytical model can fill in information that makes the basic relationship between conflict and solidarity more robust. One gets a better sense for why and through what processes conflict leads to solidarity, and of course, when it would not. Thus, there can be a synergy between formal propositional schemes and analytical models: the propositional scheme

²⁹I have tried to illustrate this strategy in my *Theoretical Principles of Sociology*.

indicates the nature of the fundamental relationship (e.g., the basic relationships between conflict and solidarity), while the analytical model indicates how and through what basic processes this relationship is produced. Moreover, the key processes discovered in the analytical model can be converted into a propositional scheme. For instance, a proposition like the following (no claim about its accuracy or exhaustiveness): the degree to which conflict generates solidarity among conflict parties is a positive and additive function of the level of threat posed, the availability of leaders to frame and formulate ideologies about the threat, and the capacity to mobilize symbolic, organizational, and material resources to pursue conflict.

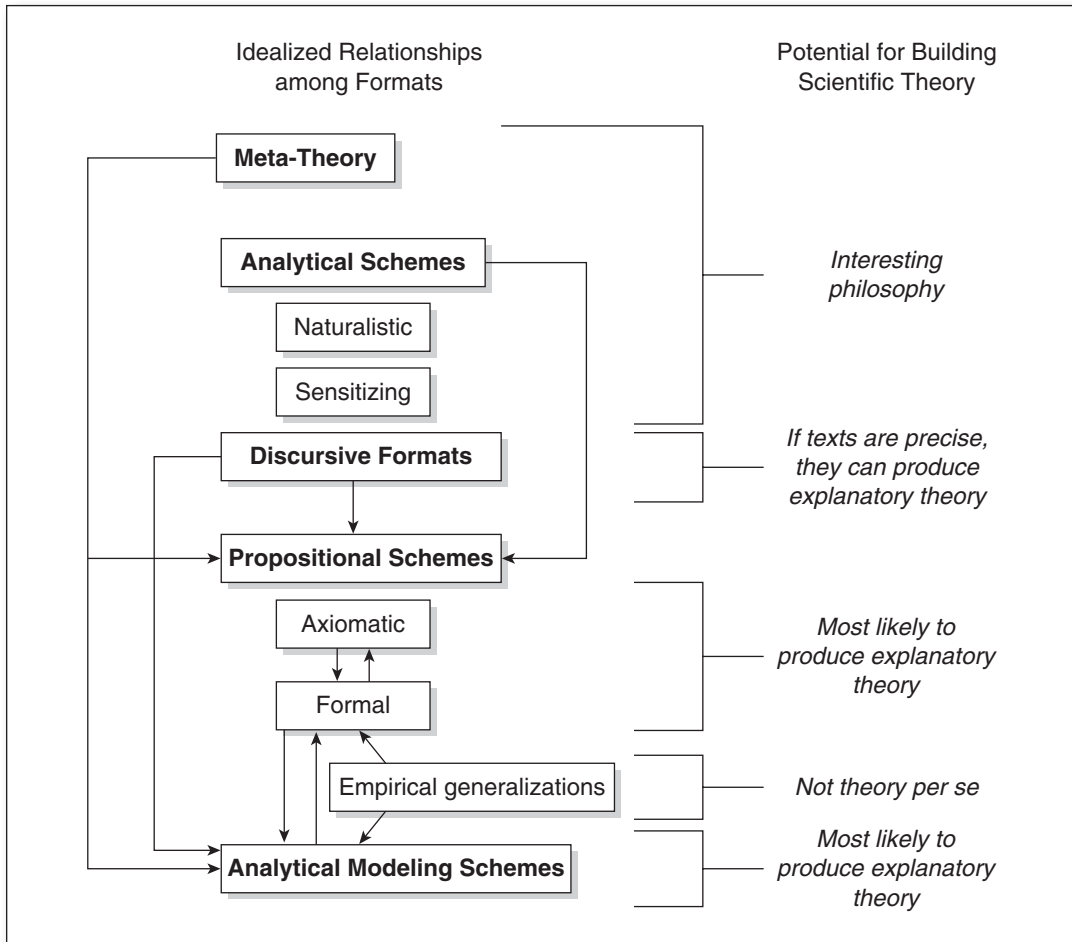
Analytical schemes are less likely to have this synergetic effect, even though they may be highly abstract and incorporate a wide range of phenomena. Because they categorize phenomena rather than seeing them as variables and because they do not specify causal relations among these phenomena within categories, they are often difficult to convert to propositional schemes or analytical models. They describe, albeit at a very abstract level, the organization of a broad range of phenomena in terms. Sensitizing schemes have the same problem. They are abstract, which is useful in building theory, but they do not specify in great detail the fundamental relations among phenomena. Rather, they denote phenomena, suggest how they might be related without great precision, and always hold out the possibility that the categories and variables in the scheme may be obviated by the agency of actors.

Middle-range propositions are, I feel, less useful as places to begin theory building. They tend to be too filled with empirical content, much of which does not pertain to the more basic, enduring, and generic features of the social universe.³⁰ For example, a “theory of ethnic antagonism” is often difficult to translate into a more general proposition or model on conflict. Moreover, scholars working at this middle range tend to become increasingly empirical as they seek to devise ways to test their theories in specific empirical contexts. Their propositions become, I have found, ever more like empirical generalizations as more and more research content is added. There is no logical reason why substantive and empirical referents cannot be taken out of middle-range theories and the level of abstraction raised, but such has infrequently occurred.

In Figure 1.6, I have summarized these conclusions in the right column. Meta-theory and naturalistic analytical schemes are interesting philosophy but poor theory. Sensitizing analytical schemes, formal propositional statements and analytical models offer the best place to begin theorizing, especially if interplay among them is possible. Middle-range theories have rarely realized their theoretical potential, tending to move toward empirical generalizations as opposed to formal propositions. Causal models and empirical generalizations are useful in that they give theorists some sense of

³⁰I doubt if this was Merton’s intent when he formulated this idea, but my sense is that his advocacy became a legitimization for asserting that empirical generalizations were “theory.”

Figure 1.6 Theoretical Formats and Potential for Building Testable Theory



empirical regularities, but by themselves and without creative leaps in scope and abstraction, they are not theoretical. They are usually data in need of a theory.

In the left column, I have presented my idealized view of the proper place of each theoretical approach for generating knowledge.³¹ If we begin to accumulate bodies of formal laws (perhaps on the basis of leads provided by a sensitizing scheme), then it is desirable to extract out the key concepts and look at these as the basic sensitizing and orienting concepts of sociology (much as magnetism, gravity, relativity, and the like were for early twentieth-century physics). We may even want to construct a formal analytical scheme and ponder on the meta-theoretical implications of these. In turn, such

³¹I should emphasize that this is not how things actually work in sociology; the diagram represents my *wish* for how sociological theory should be developed.

pondering can help reformulate or clarify analytical schemes, which can perhaps help construct new, or reverse old, formal propositions. But without a body of formal laws to pull meta-theory and analytical schemes back into the domain of the testable, they become hopelessly self-sustaining and detached from the very reality they are supposed to help clarify.

For building theory, the most crucial interchange is, I believe, between formal propositions and analytical models. There is a creative synergy between translating propositions into models and vice versa. Theories that begin with analytical models or propositions will help improve each other. Analytical models will add robustness that can be incorporate into propositions, whereas propositions will specify the beginning and end states of two phenomena—say conflict, as the beginning state, leads to solidarity, the end state. They will inevitably lead theorists to ask the question: how and why does this beginning state lead to the end state? And once this question is asked, an analytical model can specify the flow of causality and, in this specification, can introduce additional variables that are in play. In turn, these variables can be, if theorists are so disposed, converted into propositional schemes.

Going Forward

I have introduced a great deal of material in this first chapter that will, I believe, make more sense after studying various theories outlined in the pages to follow. Thus, the outline of theoretical approaches presented above may seem somewhat confusing, but if the basic types of schemes are kept in mind, it will be clear as to which one is being practiced by a particular theorist. For example, in Chapter 3 on Talcott Parsons, it will be evident that he is developing an analytical scheme, or system of categories, and as I will comment, this scheme is suggestive and indeed even intriguing, but it is difficult to translate into propositions or analytical models that would make the scheme testable. The same could be said of Anthony Giddens sensitizing scheme outlined in Chapter 28. Other theorists, such as Ralf Dahrendorf, Lewis Coser, and Jonathan Turner generate propositions in their effort to explain the dynamics of conflict, and for Turner and Dahrendorf, these propositions reflect engagement with analytical models on conflict that were initially generated from the discursive theories of Max Weber, Karl Marx, and Georg Simmel. Other theories, such as those on urban communities and organizations are stated abstractly and, yet, they have the flair of middle range theory because they are about urban communities and organizations in the present, although it would be relatively easy to make the theories for abstract and general, as will be evident in Amos Hawley's analysis in Chapter 7.

Thus, reading this chapter *after* the end of the book might provide instructive to readers—after, as it were, absorbing the range of theories presented in varying formats that now constitute theoretical sociology. For the

present, I will begin with sociology's first and most enduring theoretical perspective—functionalism. Functionalism emerged with Auguste Comte and then was solidified as a theoretical approach by Herbert Spencer and Émile Durkheim. For the first half of the twentieth century, functionalism virtually disappeared from sociology but was carried to the century's midpoint by anthropologists such as A. R. Radcliffe-Brown and Bronislaw Malinowski (whose work is briefly examined in the next chapter on the rise of functional theory). In the 1950s, however, functional theory reemerged with Talcott Parsons, whose work is examined in Chapter 3, and became the dominant theoretical approach in sociology for several decades. Then, after ruthless and sometimes unfair criticism, it seemingly disappeared, but as we will see in Chapter 5 where criticisms of the perspective are reviewed, functionalism has reemerged in new guises that often hide their functionalist origins.