3

Thinking About Theory

Emile and Irene Hirsch

Emile Hirsch and his wife, Irene, have been married for fifty-five years. For fifty of their years together, they lived in the small town of Antigo, Wisconsin, on a dairy farm. Together they raised two daughters and four sons and successfully managed their farm business. Now they have retired from the active life of running the farm, and they have turned it over to one of their daughters and her family. But they continue to live in the old farmhouse where they shared fifty years of experiences and now share memories.

One night at supper, Emile suggested to Irene that they should think about moving to a warmer climate. He observed that they were both getting on in years and that Geoff, one of their sons, who lives in Florida, had mentioned how nice it would be to have his parents come to live nearby in a retirement village.

Irene was startled by Emile's comments. She had absolutely no desire to leave Antigo, the farm, their church, their friends, or the rest of their children, who had all settled in Wisconsin. Further, she had never gotten along with Geoff's wife, and she couldn't foresee how that relationship would improve if they lived closer. She was also dumbfounded that Emile would entertain thoughts of leaving their happy life in Antigo. She had always believed that the two of them were so alike in the way they approached new situations and problems. She almost started to cry thinking that at this late date they might differ on such a fundamental issue. She put down her coffee cup and cleared her throat before speaking.

Emile looked at her with some concern. She had been silent so long he was getting nervous because he thought that she didn't like the idea or that she was angry at him for discussing it with Geoff before the two of them had a chance to talk. He knew that all major decisions had to be made by the two of them together; that was the way their marriage always had worked. It was just chance that Geoff had called him with this idea at the same time that Emile himself had been wondering if he and Irene needed to make a move.

The Hirsches, like all of us, continually experience complex communication interactions such as those described above. Often people wonder to themselves, or even ask each other, Why do we act the way we do? Why do we argue about some things and not others? Why are we successful in communicating sometimes and not other times? How can we be better communicators? Researchers believe that we can provide answers to these kinds of questions with theory, a type of framework that helps us sort out the separate bits of our behavior and quilt them together in some meaningful way. Sir Karl Popper, a phi-

losopher who significantly shaped the twentieth century's approach to theoretical thinking, captured this notion eloquently: "Theories are nets cast to catch what we call 'the world'" (1959, p. 48).

For Emile and Irene Hirsch, a theory might be able to offer a general pattern that would help Emile understand Irene's silence or that would explain why, even after fifty-five years of marriage, there are still elements of unpredictability. Theories may help satisfy their questions about their interactions and clarify what is happening in their relationship.

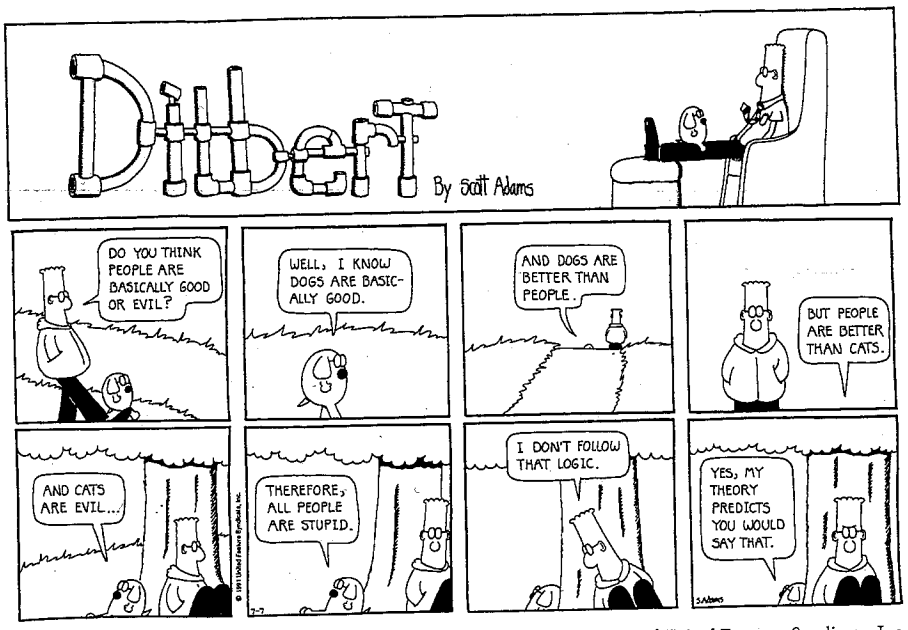
Emile and Irene are primarily interested in explaining each other's behavior, and they will probably be satisfied with the first compelling explanation they discover. Communication researchers, however, want to explain communication behavior in general or to explain behavior in a rich, in-depth manner. Theories can help both everyday interactors and communication researchers in reaching satisfactory explanations.

In this book we are discussing theory as professional researchers use it in their work; yet, all of us in daily life think like researchers, using implicit theories to help us understand those questions we mentioned previously. Fritz Heider (1958) referred to everyday interactors engaging in theoretical thinking as "naive psychologists." Whenever we pose an answer to one of our questions (for example, if we suggest that maybe we are really fighting over power and control and not what color to paint the living room), we are engaging in theoretical thinking. Studying theory can be challenging, yet remember that we are all intuitive theorists trying to find explanations for our communication interactions.

Defining Theory

Generally speaking, a **theory** is an abstract system of concepts with indications of the relationships among these concepts that help us to understand a phenomenon. Stephen Littlejohn (1999) suggests this abstract system is derived through systematic observation. In 1986, Jonathan H. Turner defined theory as "a process of developing ideas that can allow us to explain how and why events occur" (p. 5). This definition focuses on the nature of theoretical thinking without specifying exactly what the outcome of this thinking might be. William Doherty and his colleagues (1993) have elaborated on Turner's definition by conveying the notion that theories are both process and product: "Theorizing is the process of systematically formulating and organizing ideas to understand a particular phenomenon. A theory is the set of interconnected ideas that emerge from this process" (p. 20). In this definition, the authors attempt to be inclusive. They do not use Turner's word *explain* because the goals of theory can be broader than explanation, which implies causality.

In this brief discussion, you have probably noticed that different theorists approach the definition of theory somewhat differently. The search for a universally accepted definition of theory is a difficult, if not impossible, task. As D. C. Phillips (1992) observes, "there is no divinely ordained *correct* usage, but we can strive to use the word consistently and to mark distinctions that we feel are important" (p. 121). The distinctions we think are important include (1) an ex-



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amination of the goals of theory, (2) a discussion of the relationship between theory and experience, and (3) an investigation of the paradigms and metatheoretical foundations that shape researchers' approaches to and uses of theory. We address these elements in this chapter.

Goals of Theory

In a broad, inclusive sense, the goals of theory can include explanation, understanding, prediction, and social change; we are able to *explain* something (Emile's approach to Irene about moving, for example) because of the concepts and their relationships specified in a theory. We are able to *understand* something (Irene's increased uncertainty) because of theoretical thinking. Additionally, we are able to *predict* something (how Emile and Irene will negotiate their differences about moving) based on the patterns suggested by a theory. Finally, we are able to effect *social change* or empowerment (altering the institution of marriage so that it more completely empowers both partners, for example) through theoretical inquiry.

Although some theories might try to reach all these goals, most feature one goal over the others. Rhetorical theories, some media theories, and many interpersonal theories seek primarily to provide explanation or understanding. Others—for example, traditional persuasion and organization theories—focus on prediction. Still others—for instance, some feminist and other critical theories—have a central goal of changing the structures of society. For critical theorists, this means effecting social change, not simply improving individual life. For instance, a theory about conflict management may help people understand

how to engage in conflict more productively, thus enriching their lives. Yet it may do nothing toward changing the underlying structures that promoted the conflict in the first place. We will discuss this approach further in Chapter 4.

Theories, then, help us answer why and how questions about our communication experiences. From this, you can see that experience and theory are related, although experience is concrete and theory is abstract. The traditional social scientific approach suggests that theories be sufficiently general to explain many different specific observations or experiences. The humanistic approach suggests that theories be sufficiently general to guide multiple investigations, allowing different researchers to apply them to a variety of texts for study.

Relationship Between Theory and Experience

In 1952, Carl Hempel compared a scientific theory to a complex spatial network, saying, "its terms are represented by the knots, while the threads connecting the latter correspond, in part, to the definitions and, in part, to the fundamental and derivative hypotheses included in the theory" (p. 36). Hempel then noted that this theory/network

> floats, as it were, above the plane of observation and is anchored to it by rules of interpretation. These might be viewed as strings which are not part of the network but link certain points of the latter with specific places in the plane of observation. . . . From certain observational data, we may ascend, via an interpretive string, to some point in the theoretical network, then proceed, via definitions and hypotheses, to other points, from which another interpretive string permits a descent to the plane of observation. (p. 36)

Hempel suggests that although a theory is abstract, it enables us to understand concrete experiences and observations, and that a theory itself is capable of being modified by observations. In addition, his statement asserts that our concrete experiences and observations are interpreted by us through the lens offered by the theory we are using.

Thus, if we applied Uncertainty Reduction Theory (Berger & Calabrese, 1975), a theory we discuss in Chapter 9, to an analysis of the Hirsches' dinner table conversation, we might attribute Emile and Irene's halting contributions to a high degree of uncertainty suddenly presenting itself in their relationship. We would reach this conclusion because the theory suggests that uncertainty and intimacy are negatively related. Yet, if we applied a dialectic approach (Baxter, 1988, 1990; Montgomery, 1984; Rawlins, 1992; Yerby, 1995), discussed in Chapter 11, we might interpret their conversation differently, seeing it instead as a strategic means of negotiating tensions between simultaneous desires for closeness and individuality. Janet Yerby (1995), commenting on the notion that theories act as a lens, allowing us to see some things while ignoring others, refers to theories as "the stories we have developed to explain our view of reality" (p. 362). The strings of interpretation that Hempel mentions can be seen as the elements in the story we have chosen as satisfactory explanations for communication behaviors. In taking this approach, we have to be aware, as Yerby suggests, that theories, like stories, change and evolve over time as new information modifies and refines them.

Paradigms and Metatheoretical Foundations

One explanation for why theories may change and for why different scholars have different perspectives about the definition of theory itself has to do with the fact that individual theories are grounded in intellectual traditions that involve certain assumptions. By an intellectual tradition, we mean a way of viewing the world, or "a general way of thinking that has been shared in common by a community of scholars" (Klein & White, 1996, p. 10). Intellectual traditions affect the values, goals, and scholarly style of researchers, and they greatly influence the work that researchers do. It is critical to understand the intellectual traditions, or **paradigms,** that ground the theories we read and use. Thus, paradigms offer general ways of viewing human communication; theories are the more specific explanations of a particular aspect of communication behavior.

Thomas Kuhn (1970) notes that paradigms tend to become entrenched over time until they are dislodged by newer ways of organizing the world that seem to make better sense to researchers. Kuhn refers to this process as a scientific revolution. In the natural sciences, for example, Newtonian physics was replaced by Einsteinian relativism. Yet, not all researchers subscribe to the same paradigm at a given time. Although one paradigm may be very popular, it is only natural that different people see the world differently. When we discuss standpoint theory in Chapter 25, we explore a theoretical explanation for this very phenomenon.

Several paradigms guide researchers working today. Some researchers are influenced by feminism, constructivism, or Marxism. These paradigms guide researchers' beliefs about the world. For example, researchers who operate within a feminist paradigm believe that women are subjugated and that this status should be changed (Cirksena & Cuklanz, 1992). Those working within a constructivist paradigm suggest that people continuously create social structure through their actions and interactions; thus, there is no abstract truth or reality because reality exists only as people create it together (Yerby, 1995). Researchers subscribing to a Marxist paradigm believe that social behavior is best understood as a process of conflict, specifically, the conflict between different economic classes (Marx, 1963). We can theorize from more than one paradigm as some are compatible with one another.

Paradigms are founded in **metatheory,** or theories about theory. Metatheories revolve around three areas, representing three philosophical questions concerning the research enterprise: **ontology,** questions about the nature of reality; **epistemology,** questions about how we know things; and **axiology,** questions about what is worth knowing.

Ontology

Ontological questions focus on the nature of reality and on what we should be studying. The decisions that scholars come to about ontology form the background for their theorizing. Ontological questions have provided many ongoing debates, and we cannot address them all here. However, we wish to delineate three important ontological positions that can shape theory and research. We

Table 3.1 Ontological Approaches to Communication

APPROACH	DESCRIPTION/EXAMPLE
Covering Law	Covering law theorists hold that there are fixed relationships between two or more events or objects. Example: Whenever A occurs, B occurs; this is a lawlike statement that expresses a relationship between A and B. These statements are commonly referred to as if-then statements.
Rules	Rules theorists contend that much of human behavior is a result of free choice. People pick the social rules that govern their interactions. Example: In an interaction between co-workers, much of their conversation will be guided by rules of politeness, turn taking, and so on.
Systems	Systems theorists hold that human behavior is part of a system. Example: Think of a family as a system of family relationships rather than individual members. This illuminates the complexity of communication patterns within the family.

must caution that few scholars take the extreme positions sketched out here. Rather, these positions form benchmarks from which researchers anchor their own stances on questions of truth and human nature. We will outline two extremes and one intermediate position.

The extremes focus on questions of free will, and they provide us with two different ways to approach theory creation. These are the **covering law approach** and the **rules approach.** The covering law approach seeks to explain an event in the real world by recourse to a general law. Researchers applying a covering law approach believe that communication behavior is governed by forces that are predictable and generalizable. The rules approach, at the other end of the ontological continuum, holds that communication behavior is rule governed, not lawlike. The rules approach differs from the covering law approach in that researchers holding the rules approach admit the possibility that people are free to change their minds, to behave irrationally, to have idiosyncratic meanings for behaviors, and to change the rules. Ultimately, the ontological issue focuses on the concept of choice. The covering law model explains human choices by seeking an antecedent condition (usually a **cause**) that determines the choice that is made (usually an **effect**). From the rules model, rule following results from a choice made by the follower but does not necessarily involve antecedent conditions or any aspect of the cause-effect logic of the covering law approach.

A third view, the **systems approach,** subscribes somewhat to the ontology of the rules approach while also suggesting that people's free will may be constrained by the system in which they operate. Further, this approach acknowledges the impossibility of achieving what the covering law approach requires: laws about human communication that are invariant and general. The systems approach proposes assumptions that are more easily met than those of the covering law approach (Monge, 1973). We now examine each of the three approaches in more detail and provide an overview in Table 3.1.

Covering Law Approach This term was first introduced by William Dray (1957), a historian who defined covering law as that "explanation is achieved, and only achieved, by *subsuming what is to be explained under a general law*" (p. 1, [emphasis in original]). Carl Hempel (1952) expanded the notion by distinguishing three types of covering law explanations: deductive-nomological (D-N), deductive-statistical (D-S), and inductive-statistical (I-S).

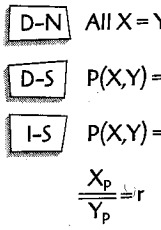
Covering laws of the D-N type are divided into two general parts: that which is to be explained and that which does the explaining. The second part, the explaining part, is further divided into specific conditions under which some type of general law must be explained. The conditions and the laws combine, and then the first part can be deduced. D-N explanations refer to universal laws that state all x is y. These laws are not restricted by time or space. As Charles Berger (1977) explains, "When we assert that every body that is near the earth and that freely falls toward it falls with an acceleration of 32 feet per second per second, we are advancing a general law which applies to all bodies falling toward the earth which are near the earth" (p. 8). However, as new information comes to light, even laws have to be modified. Hempel suggests that if the truth of a law is in doubt, the term *lawlike* should be used.

D-N explanations do not have to be cause-effect as in the example above. They may also specify relationships of coexistence. A causal relationship is specified when we say that self-disclosures by one person cause reciprocal self-disclosures from a relational partner. A claim of coexistence merely asserts that two things go together—that is, when one person self-discloses, the other does too—but it does not claim that the first self-disclosure causes the second. It's possible that social norms of reciprocity cause the second self-disclosure or that both disclosures are caused by the environment (an intimate, smoky bar or more alcohol than usual).

Critical attributes of D-N explanations are that they provide an explicit statement of a boundary condition and that they allow **hypotheses,** testable predictions of relationships, of varying levels of specificity to be generated within this boundary condition. Further, because the system is deductive, complete confirmation of theories is never possible. There will always be unexamined instances of the hypothesis.

Deductive-statistical explanations are similar to D-N explanations except that they specify the probability of the relationship in a statistical manner. Where D-N explanations state all x is y, D-S explanations state the probability that x is y. For example, as Berger (1977) asserts, "We can predict with a certain probability that if males and females with certain eye colors have large numbers of children, a certain proportion of those children will have a certain eye color. However, we are *not* in a position to predict what the eye color of a *particular* child will be" (p. 10).

The third type of covering law is the inductive-statistical explanation. This type explains a particular event by employing statistical laws as inductive support for the event. For example, let's assume that high levels of conflict between two people have a high probability of producing a high level of negative feelings between the two people. If we further assume that Mark and Ryan have high levels of conflict between them, then we can conclude that Mark and Ryan



P = probability
X_p = probability of a particular instance of X
Y_p = probability of a particular instance of Y

FIGURE 3.1 *Covering Law Relationships*

will likely have a high level of negative feelings as well. In this example, the negative feelings between Mark and Ryan (that which is to be explained) does not follow with deductive certainty from the statistical law that high levels of conflict produce high levels of negative feelings and does not follow from the statement that Mark and Ryan engage in high levels of conflict. Rather, we must use the explanation as inductive support for the phenomenon.

Overall, a covering law approach instructs researchers to search for lawlike generalizations and regularities in human communication. These lawlike generalizations may be culturally bound or may have some other complex relationship with culture. Berger (1977) notes:

> It is possible for theoretical propositions to be invariant from culture to culture but for the character of constructs employed in the theory to change from culture to culture. For example, the law-like generalization that increases in source credibility produce increases in persuasion may be invariant across cultures, but the attributes that make a source highly credible in Chad may not be the same attributes that make for high source credibility in Costa Rica. The law holds in both cultures, but the relevant dimensions of the constructs load differently between cultures. (p. 14)

Covering law offers a theory-generating option that aims for complete explanation of a phenomenon. The law, in effect, governs the relationship among phenomena. Figure 3.1 provides a diagram of relationships within the covering law approach.

Rules Approach This approach assumes that people are typically engaged in intentional, goal-directed behavior and are capable of acting rather than simply being acted upon. We can be restricted by previous choices we have made, by the choices of others, by cultural and social conditions, but we are conscious and active choice makers. Further, human behavior can be classified into two categories: activities that are stimulus-response behaviors (termed **movements**) and activities that are intentional choice responses (termed **actions**) (Cushman & Pearce, 1977). Rules theorists contend that studying actions is most relevant to theorists.

Rules theorists look inside communities or cultures to get a sense of how people regulate their interaction with others (Shimanoff, 1980). Rules do not require people to act in a certain way; rather, rules refer to the standards or criteria that people use when acting in a particular setting (Cushman & Cahn,

Table 3.2 Rules Governing Initial Peer Encounters

In the first fifteen minutes of an encounter:	*In the second fifteen minutes:*
Politeness should be observed.	Politeness should be observed.
Demographics should be exchanged.	Likes and dislikes can be discussed.
Partners should speak in rough equivalence to each other.	One partner can speak more than another, but avoid dominance.
Interruptions and talk-overs should be minimal.	More interruptions can be tolerated, but avoid dominance.

1985). In this sense, when two people meet, they normally do not begin at an intimate level of exchange. Rather, there is an agreed-upon starting point, and they will delve further into intimacy if the two see the relationship as having a future. The process of meeting another is guided by rules, although these rules are rarely verbally identified by either person. Don Cushman and Barnett Pearce (1977) believe that if the relationship evolves, the rules guiding interactions change. Rules, then, are important benchmarks for the direction of an interaction. Table 3.2 illustrates how rules guide initial encounters of peers in the United States.

Several researchers (Lull, 1982; Wolf, Meyer, & White, 1982) have used a rules-based theoretical framework to study family television viewing behaviors. James Lull (1982) identified three types of rules that govern family television watching. First are **habitual rules,** which are nonnegotiable and are usually instituted by the authority figures in the family. When Roger and Marie tell their children that there can be no television until all homework is checked over by one of them and declared finished for the night, they are establishing a habitual rule. **Parametric rules** are also established by family authority figures, but they are more negotiable than habitual rules. For example, the Marsh family may have a rule that members can engage in extended talk only during commercial breaks when they are viewing television. Yet, if something exciting has happened to one member, they may negotiate to talk about it during the program itself.

Finally, Lull identified **tactical rules,** or rules used to achieve a personal or interpersonal objective. For example, if Rob and Jeremy are watching television together and Rob wants to please Jeremy, he may tune in Jeremy's favorite show even though he himself would not have chosen that program. He follows the tactical rule of maintaining relational harmony with his partner.

Systems Approach Systems thinking in communication derived from General Systems Theory (GST), which is both a theory of systems in general—"from thermostats to missile guidance computers, from amoebas to families" (Whitchurch & Constantine, 1993, p. 325)—and a program of theory construction. Systems thinking captured the attention of communication researchers because it changed the focus from the individual to an entire family, a small group, or an organization. This shift reconceptualized communication for scholars and helped them to think innovatively about experience and interaction in groups. Further, systems thinking replaced the stringent assumptions of covering law

with more realistic ones. First, Peter Monge (1973) agreed with the rules ontological assertion that "human communication is not characterized by universal patterns" (p. 9). Systems thinking requires systemic, nonuniversal generalizations, does not depend on inductive reasoning, separates the logical from the empirical, allows alternative explanations for the same phenomenon, and permits partial explanations (Monge, 1973).

Systems thinking rests on several properties, including wholeness, interdependence, hierarchy, boundaries/openness, calibration/feedback, and equifinality. We will explain each of these properties briefly.

WHOLENESS **Wholeness** is the most fundamental concept of the systems approach. It refers to the idea that a system cannot be fully comprehended by a study of its individual parts in isolation from one another. In order to understand the system, it must be seen as a whole.

> To make a cake, you add butter, sugar, flour, eggs, baking soda and other ingredients, and perhaps chocolate flavoring. When you bake the cake, it changes into something that is more than the individual characteristics of the ingredients. . . . Even though you added just a bit of chocolate, the flavor changed the entire cake. . . . A cake is more than just the individual parts added together, as you might add layers to a sandwich. (Infante, Rancer, & Womack, 1997, p. 91)

Wholeness suggests that we learn more about the Hirsches, for example, by analyzing their interactions together than we do by simply analyzing Emile's motivations or statements alone. This principle asserts that families, groups, and organizations have personalities that are different from the personality of any one member and that cannot be understood from simply combining each member's individual personality.

INTERDEPENDENCE Ludwig von Bertalanffy (1975), who is generally credited with the foundational work in GST, defines a system as a "set of elements standing in interrelation among themselves and with the environment" (p. 159). Because the elements of a system are interrelated, they exhibit **interdependence.** This means that the behaviors of system members co-construct the system, and all members are affected by shifts and changes in the system. Virginia Satir (1988) compares the family to a mobile to illustrate how this principle applies to families. In this analogy, the family members are seen as connected by the strings of the mobile, and a disturbance to one of the members (or ornaments on the mobile) will reverberate through the entire family (mobile). In organizations this interdependence can be seen when one employee leaves or the company undergoes corporate downsizing. With these changes in personnel come changes in the organization that affect you even though you retain your job. We might expect that whatever Emile and Irene Hirsch decide to do about moving, their changes will affect all of their children.

HIERARCHY All systems have levels, or **subsystems,** and all systems are embedded in other systems, or **suprasystems.** Thus, systems are a **hierarchy,** a complex organization. Each of the subsystems can function independently of the

whole system, but each is an integral part of the whole. Subsystems generally shift and change over time, but they may potentially become extremely close and turn into alliances or coalitions that exclude others. For example, if Emile confides a great deal in their son in Florida while Irene talks to one of their daughters, two coalitions may form in the family, making interactions more strained and troubled.

BOUNDARIES/OPENNESS Implicit in the preceding discussion about hierarchy and complexity is the notion that systems develop **boundaries** around themselves and the subsystems they contain. Because human systems are open systems (it is not possible to completely control everything that comes into or goes out from them), these boundaries are relatively permeable; thus have **openness.** Thus, although the managers of the General Motors plant in Lima, Ohio, may wish that their employees did not know about the strike at the General Motors plant in Flint, Michigan, they will be unable to prevent information and communication from passing through the boundary around their organizational system.

CALIBRATION/FEEDBACK All systems need stability and constancy within a defined range (Watzlawick et al., 1967). **Calibration,** or checking the scale, and subsequent **feedback** to change or stabilize the system allow for control of the range. The thermostat provides a common example illustrating this process. Home heating is usually set at a certain temperature, say 65 degrees. The thermostat will allow a temperature range around 65 before changing anything. Therefore, if the thermostat is set for 65 and the temperature is 65 plus or minus 3 degrees, nothing happens. If the temperature drops below 62 degrees, the heat goes on; if it rises above 68 degrees, the furnace shuts off. In this way, the heating system remains stable. However, if conditions change in the house (for example, the family insulates the attic), the thermostat may need to be recalibrated or set at a slightly lower temperature to accommodate the change. After insulating, the house can be comfortable if the temperature is set at 63 degrees.

Changing the standard (moving the temperature from 65 to 63 degrees) is accomplished through feedback. Feedback, in systems thinking, is positive when it produces change (the thermostat is set differently) and negative when it maintains the status quo (the thermostat remains at 65). When systems change they are called **morphogenic,** and when they stay the same they are called **homeostatic.**

EQUIFINALITY Open systems are characterized by the ability to achieve the same goals through different means, or **equifinality** (von Bertalanffy, 1968). This principle applies to human groups in two ways. First, a single group can achieve a goal through many different routes. For example, if a manager wants to increase productivity, he can raise wages, threaten the workers with firing, hire a consultant, or do some combination of the above. There are several ways the manager can reach the goal. Additionally, equifinality implies that different groups can achieve the same goal through multiple pathways. For instance, Apple Computers may achieve profitability by adopting a casual organizational

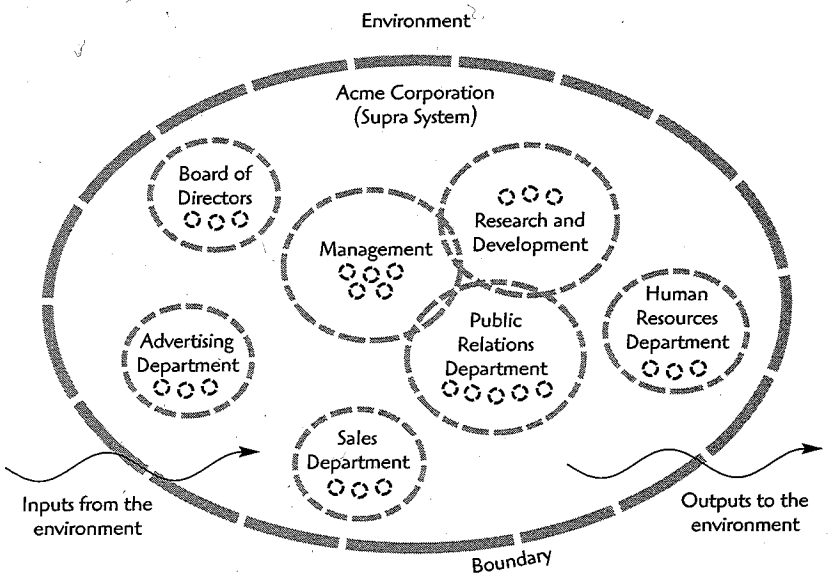


FIGURE 3.2 ***Suprasystems, Systems, and Subsystems in the Acme Corporation***

culture, whereas IBM may achieve profitability by demanding a more formal workplace. The systems approach is mapped in Figure 3.2.

The rules and systems approaches take into consideration the importance of culture and context in theory building and theory testing. People live in an external context consisting of national culture, ethnicity, popular culture, social movements, governmental policies, and economic climate, just to name a few elements. We have relatively little control over our external environment, but it exerts a lot of influence on how we interact. For example, before the nineteenth amendment was added to the Bill of Rights, women in the United States were not allowed to vote or to exercise overt political power. Thus, women in these circumstances focused their attention on conforming to their social conditions or on protesting them. Eventually, these protests had an impact, and women's status and circumstances changed. Women born after suffrage came into a completely different set of external conditions than those who were born earlier.

Our emphasis on context, culture, and diversity recognizes that although members of a given group do share core values and beliefs as well as rules and rituals that guide interaction, it is a mistake to assume that all members of a group are the same. With reference to African Americans, for example, it is the case that "there is no monolithic Black experience. There is no singular socialization pathway. Indeed, there is a tapestry of variegated socialization possibilities" (Boykin & Toms, 1985, p. 47). Although context, culture, and co-culture are important aspects affecting communication, individuals are affected somewhat differently, and other issues like class and socioeconomic status also play an important role.

Culture has implications for theory as well. Marsha Houston (1992) observes that one of the challenges to feminist theory is the call by women of color

to "give voice to the experiences of diverse groups of women" (p. 50). Houston points out that much of feminist theory is grounded in the experiences of European American women. When these theories are applied to data gathered on women of color, the results often "obscure communication patterns that are specific to black women" (p. 51). Houston refers, for example, to research that labels Black women's communication as more expressive and emotional than White women's patterns (Booth-Butterfield & Jordan, 1989). Houston questions whether Black women would give the same meaning to their communication style.

Epistemology

The questions that cluster in the domain of epistemology focus on how we go about knowing and what counts as knowledge. We discuss this area in greater detail in Chapter 4 when we examine research methods—the specific ways that scholars gather and analyze information in their attempt to generate and expand knowledge about communication phenomena. We raise the issue here, however, because it is intimately related to ontology. How researchers see the world, truth, and human nature necessarily influences how they believe they should try to learn about these things. As with ontology, epistemology has generated a great many debates, and our discussion here will only touch the tip of the iceberg. Two epistemologies are worthy of note: the objectivist position and the subjectivist position.

The objectivist epistemology holds that it is possible to explain the world (because there is some type of objective truth that exists apart from our knowing of it) and that as researchers study the world, they accumulate small pieces of information about the truth. The way in which we ultimately learn the truth about social life is through social scientists combining all these small pieces of information. This is why scholars publish their findings and gather at conventions to share their research. In contrast, the subjectivist epistemology rejects the notion that truth exists apart from the knower of truth. Subjectivists believe that the social world is relativistic and "can only be understood from the point of view of the individuals who are directly involved in the activities which are to be studied" (Burrell & Morgan, 1979, p. 5). Thus, objectivists could study the Hirsches by observing them and comparing them to other couples who are similar to them in age, ethnicity, and so forth. Yet, subjectivists would argue that the way to know about the Hirsches is to ask them to explain themselves; subjectivists would want the insiders' viewpoint to permeate anything they conclude about the Hirsch family.

Axiology

The final set of considerations involves axiology, or questions about the place of values in theory and research. Like epistemology, this is a topic that we will return to in Chapter 4 when we address research methods. The traditional scientific position on axiology is that science must be value-free. This position fits with the objectivist epistemology we discussed previously. However, most re-

searchers do not take this extreme position and accept that some subjectivity, in the form of values, informs the research process. The question that is still debated concerns not *whether* values should permeate theory and research but *how* they should.

Here we briefly present three positions on this debate: avoiding values that influence verification, recognizing how values influence the entire research process, and advocating that values should be closely intertwined with scholarly work. The first stance argues that the research process consists of many stages and that values should inform some of these stages but not others. For example, the part of the research enterprise that focuses on theory choice and paradigm considerations must be informed by the values of the researcher. Scholars choose to view a research problem through the lens that they believe accurately describes the world. Thus, some researchers choose theoretical frameworks that are consistent with an ontology of free choice, whereas others choose frameworks that are more lawlike and deterministic. Yet, when they test these theories (the verification stage), then they must eliminate "extra-scientific values from scientific activity" (Popper, 1976, p. 97). As you can see, this stance advocates a very limited role for values.

The second position argues that it is not possible to eliminate values from any part of theorizing and research. In fact, some values are so embedded in researchers' culture that researchers are unconscious that they even hold them. Sandra Bem (1993), for instance, observes that much of the research on differences between women and men was influenced by biases existing at the time. Many feminist scholars argue that social science itself suffers from a male bias (Harding, 1987). Some African American scholars make the same observations about the European American biases that exist in much social scientific research (Houston, 1992). Thomas Nakayama and Robert Krizek (1995) point out that communication researchers often take White for granted as the default race. Thus, the values and assumptions held by those with a European American perspective are never highlighted, questioned, or acknowledged; they simply inform a scholar's process.

The final position argues that not only are values unavoidable, but they are a desirable aspect of the research process. Earlier in this chapter we referred to the goals of theory as including social change. Those who embrace this goal are called critical theorists. In Chapter 4 we discuss this approach further. For now, we wish to clarify that critical theorists support an axiology that advocates seeing theory and research as political acts that call upon scholars to change the status quo. Thus, scholars must contribute to changing conditions rather than simply reporting conditions.

Evaluating Communication Theory

As you read the communication theories in the following chapters, you need some standards for judging their worth. The following criteria are generally accepted as useful measures for evaluating communication theory: scope and boundaries, logical consistency, parsimony, utility, testability, heurism, and the

test of time. We will discuss each of them briefly, and as you read through the book, refer back to this section to judge the theories we present.

Scope and Boundaries

Scope refers to the breadth of communication behaviors covered by the theory. **Boundaries** are the demarcations of a theory's scope. Although theories should explain enough of communication to be meaningful, they should also have clear boundaries specifying the limits of their scope. Some theories cover a relatively narrow range of behaviors, whereas others try for much larger scope. Uncertainty Reduction Theory (URT), which we discuss in Chapter 9, originally was bounded by initial encounters between strangers. In some ways this suggests a rather limited scope for the theory. However, although the duration of initial encounters is short, it is true that people spend a great deal of time throughout their lives meeting and conversing with new people. Thus, the scope of the theory may seem a bit broader upon reflection. Additionally, since URT was first proposed in 1975, other researchers have expanded the theory to cover developed relationships such as dating and friendship (Planalp & Honeycutt, 1985; Planalp & Rivers, 1988; Planalp, Rutherford, & Honeycutt, 1988) and marriage (Turner, 1992). As the theory has been used by researchers, its scope and boundaries have expanded.

Logical Consistency

Simply put, theories should make sense and have an internal **logical consistency** that is clear and not contradictory. Theories should provide us with good explanations that show us how the concepts work together and what results follow from their interactions. Additionally, the claims made by the theory should be consistent with the assumptions of the theory. If a theory is constructed using the covering law approach, it would be inconsistent for the theory to focus on people's choices and idiosyncratic activities.

Parsimony

Parsimony refers to the simplicity of the explanation provided by the theory. Theories should contain only the number of constructs necessary to explain the phenomenon under consideration. However, because theories of communication and social behavior are dealing with complex phenomena, they may have to be complex themselves. Parsimony requires simplicity without sacrificing completeness.

Utility

This criterion refers to the theory's usefulness, or practical value. A good theory has **utility** in that it tells us a great deal about communication and human behavior. It allows us to understand some element of communication that was previously unclear. It weaves together pieces of information in such a way that

we are able to see a pattern that was previously unclear to us. In so doing, theories can shape and change our behavior.

Testability

Testability refers to our ability to investigate a theory's accuracy. One of the biggest issues involved in testability concerns the specificity of the concepts that are central to the theory. For example, as we discuss in Chapter 12, Social Exchange Theory is predicated on the concepts of costs and rewards. The theory predicts that people will engage in behaviors that they find rewarding and avoid behaviors that are costly to them. However, the theory does not clearly define costs and rewards. In fact, they are defined in a circular fashion: Behaviors that people engage in repeatedly are rewarding, and those that they avoid are costly. You can see how difficult it is to test the central prediction of Social Exchange Theory given this circular definition.

Heurism

Heurism refers to the amount of research and new thinking that is stimulated by the theory. Theories are judged to be good to the extent that they generate insights and new research. Although not all theories produce a great deal of research, an effective theory prompts some research activity. For example, the theory we discuss in Chapter 20, Cultural Studies, came from many diverse disciplines and has stimulated research programs in English, anthropology, social psychology, and communication.

Test of Time

The final criterion, the **test of time**, can only be used after some time has passed since the theories' creation. Are these theories still generating research or have they been discarded as outmoded? Deciding whether a theory has withstood the test of time is often arbitrary. For instance, if a theory was conceptualized and tested in the 1970s but has remained dormant in the literature for over a decade and is now being reintegrated into research, has this theory satisfied the test of time? Judging this criterion is often a subjective process. Further, it is not a criterion that can be used to assess a new theory.

Conclusion

This chapter introduced the concept of theory and its usefulness for examining communication behaviors. We have provided an initial definition of theory as well as exploring some of the goals of theory and the relationship between theory and experience. We discussed the frameworks for theories, which consist of intellectual traditions and paradigms. We noted the relationship that theoretical thinking has to external contexts such as culture and co-culture, and we provided criteria for evaluating the theories that you will encounter in this book. As

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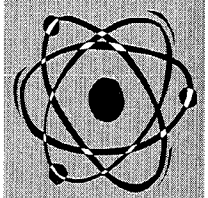


Theory * Into * Practice

In 1998, Malcolm W. Browne wrote an article in *The New York Times* entitled "Mass Found in Elusive Particle; Universe May Never Be the Same." In this article, Browne discussed the ways in which new discoveries change scientific theories, causing people to develop new insights and to have altered understandings of the world. This article illustrates how scientists engage in theoretical thinking. Theoretical formulations are the product of constant testing and reevaluation, as we described in this chapter. Further, the presence of this information on the front page of *The New York Times* indicates the widespread interest in theoretical thinking. The article included the following information:

> In what colleagues hailed as a historic landmark, 120 physicists from 23 research institutions in Japan and the United States announced today that they had found the existence of mass in a notoriously elusive subatomic particle called the neutrino.
>
> The neutrino, a particle that carries no electric charge, is so light that it was assumed for many years to have no mass at all. After today's announcement, cosmologists will have to confront the possibility that much of the mass of the universe is in the form of neutrinos. The discovery will also compel scientists to revise a highly successful theory of the composition of matter known as the Standard Model.
>
> Word of the discovery had drawn some 300 physicists here to discuss neutrino research. Among other things, they said, the finding of neutrino mass might affect theories about the formation and evolution of galaxies and the ultimate fate of the universe. If neutrinos have sufficient mass, their presence throughout the universe would increase the overall mass of the universe, possibly slowing its present expansion.
>
> Others said the newly detected but as yet unmeasured mass of the neutrino must be too small to cause cosmological effects. But whatever the case, there was general agreement here that the discovery will have far-reaching consequences for the investigation of the nature of matter. (p. A1)

Source: Browne, 1998.

we seek to understand communication, we need to turn to theory to help us organize the information that research provides.

Yet, we must realize the limitations of theory. Communication interactions consist of multiple perspectives, and theories are, at best, only partial explanations of the multiplicity of social life. Yet, we can overcome this limit to an extent by acknowledging the partiality of our theories and opening ourselves to diverse points of view. As Yerby (1995) states, our ability to listen to the perspectives of others while at the same time voicing our own perspectives ultimately contributes to our ability to understand how we are connected to others.

Discussion Starters

1. Do you think that a theory can help us understand the communication behavior of Emile and Irene Hirsch? Why or why not? Use examples in your response.

2. Provide some examples of ways you think like a theorist in your daily life.

3. How would you distinguish between covering laws and systems approaches to theory building? Try to be specific and provide examples along the way.

4. Do you see communication behavior as being lawlike or rule governed? Explain your answer.

5. Why is it important to evaluate communication theory? Can you think of any other criteria for evaluating theory besides those listed in the chapter?

Terms for Review

theory
paradigms
metatheory
ontology
epistemology
axiology
covering law approach
rules approach
cause
effect
systems approach
hypotheses
movements
actions
habitual rules
parametric rules
tactical rules
wholeness
interdependence
subsystems
suprasystems
hierarchy
boundaries/openness
calibration/feedback
morphogenic
homeostatic
equifinality
scope and boundaries
logical consistency
parsimony
utility
testability
heurism
test of time

4

Understanding the Research Process

Rolanda Nash

Rolanda Nash had to hurry to class from work. She seemed always to be running late these days. She had a lot on her mind since she had decided to divorce Anton and move from Sheridan, Wyoming, to Chicago. She was pretty sure Anton was finally going to leave her alone now and just cooperate with the divorce. After her relationship with him, she felt she would never trust another man again. Meanwhile, she had to complete six credits in order to graduate and keep the new job she had secured in Chicago. In addition to her doing schoolwork, Rolanda was working thirty hours a week for one of her professors, Dr. Stevens. Dr. Stevens was testing a theory about communication behaviors, and so far it had been a fun job for Rolanda. Stevens was interested in examining Communication Accommodation Theory in an organizational setting. The professor had sent Rolanda into two different organizations with a tape recorder. Rolanda's task was to tape naturally occurring conversations between subordinates and managers. Stevens called it water cooler conversations, but so far Rolanda had not seen a single water cooler!

Rolanda thought it was very challenging to capture natural conversations. Although Stevens had obtained permission for her to record conversations in the organizations. Some people recognized Rolanda and were self-conscious about talking around her. Additionally, neither of the two organizations employed many Blacks. Rolanda felt she stuck out as she walked through the hallways. But she was used to that. In most of her university classes she was the only Black woman. At first, it really bothered her, but she was used to it by now. She was hoping Chicago would be a better experience.

Now, if she could only get enough conversations to satisfy Dr. Stevens, she could go home to tackle her English assignment. Stevens hadn't really told her how many conversations she needed. Rolanda was hoping ten would be enough. That's all she had gotten in five days of taping. Dr. Stevens had mentioned last week that when Rolanda was finished taping, she would probably be sending her back to the organizations to do some follow-up interviews with the people she had taped. Rolanda wondered how that would work out. She hoped she could get what Dr. Stevens wanted.

Like all of us, Rolanda experiences the effects of theorizing in many aspects of her life. First, her job is one of collecting data for theory testing. In this, Rolanda (and her boss, Dr. Stevens) are following the traditional scientific model. This model begins with Dr. Stevens's interest in the phenomenon of communication accommodation in the workplace. In other words, the traditional model begins with theory. Communication Accommodation (CA), a theory we profile in Chapter 27, refers to the process of conforming one's speaking style to that of one's partner. Communication Accommodation is the theoretical framework from which Dr. Stevens begins to speculate. Because the theory suggests certain relationships and the existence of certain behaviors, Stevens has a guide for these speculations. The theory supports a series of specific guesses, or **hypotheses**, that can be tested by Stevens's work. As we commented in Chapter 3, the theory is general, whereas the observations Stevens makes and her hypotheses are specific. For example, the theory is not bounded by the context of the workplace; it generalizes to communication accommodation in all contexts. Yet, Stevens narrows her study to the specific area of communication accommodation in organizational life.

After Stevens has hypothesized about what she will find in the workplace regarding accommodations between workers and managers based on the theory, she then must **operationalize** all the variables. This means she needs to specify how she will measure the concepts that are important to her study. In this process, Dr. Stevens turns the abstract concepts of the theory into concrete variables that can be observed and measured. For example, status difference is a critical notion in the theoretical framework, so Stevens specifies to Rolanda how she should measure this. In this case, measurement will be based on job title. Rolanda has to discover the job title for each of the people she observes and then compare those titles to a chart Stevens has given her classifying job titles into the two categories of "supervisor" and "subordinate." This seems like a fairly straightforward means to operationalize the notion of status, but there may be instances where it is not a perfect operationalization. For instance, a lower-level employee who has worked for the company for many years might hold more status than a middle manager who has only recently arrived and is just learning the corporate culture. Additionally, women managers often report some problems with achieving the status expected from their job title. You can see how concepts that are more complex and abstract, like love and intimacy, for example, would be even more difficult to operationalize than occupational status.

The next step in the traditional scientific model sends Rolanda into the two organizations to make **observations** and collect **data** (in this case, the conversations and the job titles). When Rolanda returns with the tapes, Dr. Stevens will have to **code** the conversations, again using operationalizations for terms such as *convergence* (making your speech similar to your partner's) and *divergence* (making your speech patterns dissimilar to your partner's). Some types of data do not need extensive coding to analyze. For example, if Dr. Stevens operationalized status based on income and then provided respondents with a survey asking them to indicate the category for their salary, these data would not need the same type of coding required in the Communication Accommodation study. The income categories could simply be numbered consecutively. In con-

trast, the conversations have to be listened to repeatedly in order to determine whether a given comment converges with or diverges from the comment preceding it.

In the example of Dr. Stevens's study, the coded data are used to test Stevens's hypotheses about communication accommodation in the workplace. Dr. Stevens will see if the speculations she made based on the theory's logic hold true in the conversations that Rolanda taped. This traditional process, known as the **scientific method,** follows **deductive logic** in that Stevens moved from the general (the theory) to specific instances (the actual conversations gathered in two workplaces). If Stevens had used **inductive logic,** she would have asked Rolanda to record many more conversations. Stevens would have refrained from hypothesizing, or guessing, about what she might find in advance of the data collection. Then she and Rolanda would have listened to their tapes, trying to find some type of pattern that best explained what they heard. Finally, Stevens would have generalized based on her observations.

The deductive approach allows Stevens to test a specific prediction, or hypothesis, generated from a generalization, or theory. The results of this testing allow modifications and corrections to the theory. The inductive approach enables Stevens to gather many specific instances in the hopes of being able to generalize, or create theory. Of course, if Stevens only conducted one study, the theoretical conclusions she could draw would be limited. A theory derived inductively needs the support of many specific studies.

Although some researchers approach their work strictly as hypothesis testers and some approach it more as theory generators, in practice most weave back and forth between the two. Walter Wallace (1971) suggests that the research process is circular, moving continuously between induction and deduction. Wallace refers to this as the wheel of science (Figure 4.1). Further, as Dr. Stevens follows the traditional model of science, she is using only one approach that communication researchers apply to their work. We will talk about some other approaches later in the chapter.

In the example of Rolanda and Dr. Stevens, we have seen how Rolanda's work utilizes theory and how theory and research relate in Dr. Stevens's study. Additionally, Rolanda operates as an intuitive or naive scientist in her daily life. An intuitive scientist follows many of the same processes and reasoning patterns that trained scientists do, just not in as explicit or rigorous a fashion. Usually, intuitive scientists follow inductive logic: They experience something and then generalize from that. So when Rolanda concludes that all men are untrustworthy, she is inducing a general statement about all men from her experiences with one man, Anton. This is similar to the process a researcher might follow; however, a social scientist would not make hasty generalizations, or move to theory, on the basis of one observation.

Intuitive science proceeds on the basis of deductive logic as well, as Rolanda's theory about cities demonstrates. She believes that larger cities are more diverse than smaller ones. As she moves from Sheridan to Chicago, she will test that theory with her observations about life in Chicago. Here again, the issue of numbers of observations is important. How long does Rolanda have to live in Chicago before she can be satisfied that her theory is correct? Does she have

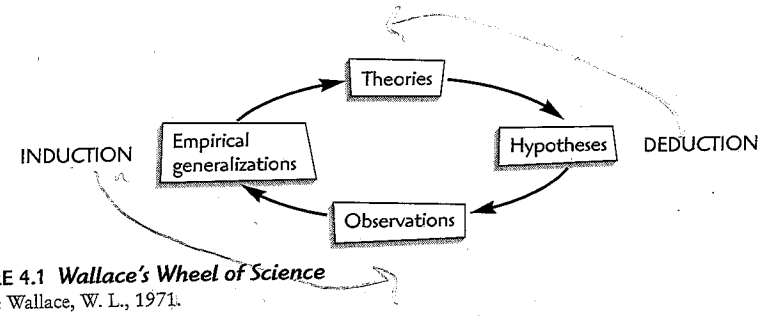


FIGURE 4.1 ***Wallace's Wheel of Science***
Source: Wallace, W. L., 1971.

to sample life in other large cities to substantiate her theory, or is Chicago alone a sufficient observation? This is very similar to Dr. Stevens's concerns in her study. When Rolanda wonders about the number of conversations that she is collecting for Dr. Stevens, she focuses on a key point: How many instances do you need to observe before you can come to a conclusion? There are no absolute answers to this question although there are some standards that are often accepted by practicing researchers. Ultimately, social science depends on the arguments that researchers are able to muster to convince readers that they have made good observations and used careful logic.

Observations and logic combine in many patterns beyond the deductive and inductive that we have outlined here. There are almost as many research methods as there are researchers, and there is room for a great deal of creativity in the research process. In this chapter we outline four of the standard methods used by communication researchers to test theoretical propositions or to generate theoretical statements. First, however, we discuss three general approaches to scholarly work that ground researchers' processes. As we described in Chapter 3, issues about *how* to gather data belong in the domain of epistemology. But as our discussion indicated, epistemological issues are intertwined with concerns about ontology and axiology.

Ways of Knowing

The decisions about what theory to use in research, what type of logic to use, and what type of method to apply are conditional on the three philosophical questions that we reviewed in Chapter 3. The first question concerns **ontology**, or views of human nature. In Chapter 3, we concluded that a researcher's notion of how much choice and free will humans possess will influence the research process. The second question centers on **epistemology**, or how we know what we know. Whereas ontology addresses the question of what human nature is, epistemology approaches the question of what truth is and how to go about finding knowledge. The third question deals with issues of **axiology**, or values, and focuses on how much values should affect research; in other words, to what degree should subjectivity enter into the research process?

Researchers' answers to these questions are based on their paradigm, or worldview. As you can guess, there are spirited disagreements among researchers about issues of worldview. David Klein and James White (1996) discuss three different philosophies of science that present three separate ontologic, episte-

mologic, and axiologic interpretations. Adherence to any one of these philosophies influences the way to approach theory and research in communication. Klein and White label these three philosophies positivistic, interpretive, and critical. These three philosophies conform to the three perspectives (empiricism, hermeneutics, and critical theory) that Arthur Bochner (1985) reviewed while discussing the study of interpersonal communication. As we mentioned in Chapter 3, these philosophies are presented in extreme form, and many researchers would not identify themselves as subscribing to the extremes. Most people find a comfortable middle ground based on these philosophies that represents their worldview.

The Positivistic, or Empirical, Approach

The **positivistic, or empirical, approach** assumes that there are objective truths that can be uncovered about interaction and that the process of inquiry that discovers these truths can be, at least in part, value-neutral. This tradition advocates the methods of the natural sciences, with the goal of constructing general laws governing human interactions. The researcher in this intellectual tradition strives to be objective and works for **control**, or direction over the important concepts in the theory. In other words, when the researcher moves to the plane of observation, he or she carefully structures the situation so that only one element varies, enabling the researcher to make relatively definitive statements about that element. For instance, if Dr. Stevens worked in the positivistic tradition, she would institute many more controls than we described. Further, the number of observations would not be left to chance or to Rolanda's schedule. Dr. Stevens would have calculated the number of conversations she needed to support the statistics to predict relationships among status and communication accommodation.

The Interpretive, or Hermeneutic, Approach

The **interpretive, or hermeneutic, approach** views truth as subjective and co-created by the participants. And the researcher him- or herself is clearly one of the participants. There is less emphasis on objectivity because complete objectivity is seen as impossible. However, this does not mean that research in this tradition has to rely totally on what participants say with no outside judgment by the researcher. Martyn Hammersley (1992), for example, advocates a "subtle realism" that suggests that researchers "monitor [their] assumptions and the inferences [they] make on the basis of them" (p. 53). In this subtle realism, Hammersley suggests that research can find a way to be reasonably objective. In this tradition, the researcher believes that values are relevant in the study of communication and that researchers need to be aware of their own values and to clearly state them for readers, because values will naturally permeate the research. These researchers are not concerned with control and the ability to generalize across many people as much as they are interested in rich descriptions about the people they study. For example, if Dr. Stevens operated in this tradition, she would not be content with her own analysis of the conversations.

She might invite the participants to read the transcripts of their conversations so that they could tell her whether they were trying to accommodate to their partners. Stevens would probably be interested in the participants' explanations for why they changed (or did not change) their speech patterns as they conversed with superiors or subordinates in the workplace. For researchers in this tradition, theory is best induced from the observations and experiences the researcher shares with the respondents.

The Critical Approach

Finally, Klein and White (1996) discuss the **critical approach,** where an understanding of knowledge relates to power. As Bochner (1985) notes, this tradition "assumes that science cannot exist without ideology" (p. 46). In this tradition, researchers believe that those in power shape knowledge in ways that work to perpetuate the status quo. Thus, powerful people work at keeping themselves in power, which requires silencing minority voices questioning the distribution of power and the power holders' version of truth. Patricia Hill Collins (1990) speaks from this tradition when she says that "the tension between the suppression of Black women's ideas and our intellectual activism in the face of that suppression, comprises the politics of Black feminist thought" (pp. 5–6). Black feminists are not the only researchers who are comfortably rooted in the critical tradition; Marxists, postmodernists, and feminists of all types, among others, also work from this intellectual tradition. For critical researchers, it is generally important to change the status quo to resolve power imbalances and to give voice to those who have been silenced by the power structure.

Some critical theorists, notably Stuart Hall (1981), whose work we feature in Chapter 20, have commented that power imbalances may not always be the result of intentional strategies on the part of the powerful. Rather, ideology, or "those images, concepts, and premises which provide the frameworks through which we represent, interpret, understand and 'make sense' of some aspect of social existence" (Hall, 1981, p. 31), is often "produced and reproduced" accidentally. For example, this may come about when certain images of masculinity work to sell a product. When advertisers observe this success, they continue creating ads with these images. In this fashion, the images of masculinity become entrenched in society. Thus, although the powerful are interested and invested in staying in power, they may not be fully aware of what they do to silence minority voices.

Using a critical approach, Dr. Stevens might bring some of the following questions to her research: How is the relationship between workers of differing statuses communicatively constructed? Does convergence happen unequally based on status? Are there other status differences that impact communication accommodation besides occupation? How can we change the prevailing power structures to improve the inequities we observe in the workplace?

We can see that each tradition or paradigm suggests something different about the definition of truth and the best method for searching for truth. Additionally, there are other intellectual traditions we have not reviewed that en-

tail different values, goals, and methods. Intellectual traditions influence how given researchers try to understand, explain, predict, or change communication. When researchers pick a theory to guide them that is rooted in one of these traditions, they also get all the intellectual trappings that come along with the tradition. As we have noted, people call the trappings a **worldview** because it provides people with a lens for seeing and making sense of the world they inhabit.

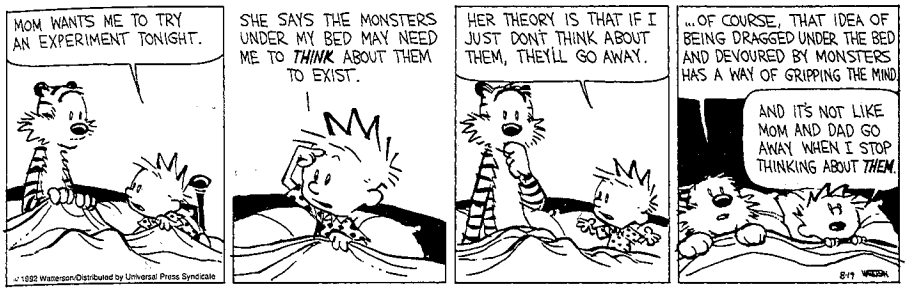
Our views of the world—answers to questions about what is the nature of humans, what is the best way to gather knowledge, and what is the relationship between values and knowledge—together form a foundation to guide us as we think about the questions of our lives and strive to discover the answers. In other words, our paradigm shapes our choices of theories for explaining communication behavior and our choices of methods for investigating questions relevant to those theories. Yet, it is also true that the scholarly process itself shapes our paradigm. As we think about communication and as we pursue the answers to our questions about it, we may modify our beliefs about the nature of truth, the utility of objectivity, or the necessity for social change. Thus, paradigms evolve and have a somewhat reciprocal relationship with the research process. We now turn our attention to the specific ways of gathering knowledge about communication, or research methods. You will see how some methods seem better suited to one worldview than to others.

Methods of Inquiry

Many researchers divide research methods into two main categories: quantitative and qualitative. Although that may be overly simplistic in light of what scholars actually do, it provides a starting point for our discussion. **Quantitative methods** require researchers to gather observations that can be quantified (converted to numbers) and then to analyze the numbers. The analysis provides the basis for an argument about the observations' meaning relative to a theoretical position. **Qualitative methods** ask researchers to analyze the topics of their study through sense-making tools like stories, myths, and themes. These tools help researchers understand how people make sense of their experiences. Qualitative methods do not depend on statistical analysis to support an interpretation but rather require researchers to make a rhetorical appeal or a reasoned argument for their findings. Quantitative methods are considered more appropriate for researchers who embrace a positivistic or empirical worldview and qualitative methods more appropriate for interpretive and critical researchers.

In practice, it is a bit more complicated than this, and occasionally researchers blend methodologies from both the quantitative and qualitative categories. This is referred to as **triangulation,** or approaching the question with more than one method. Although triangulating is useful, it is sometimes difficult to achieve for two reasons. First, researchers are usually trained in only one methodology, and it is difficult to learn a new set of methods on the job. But, perhaps more important, researchers believe that the two categories of methods represent different epistemologies, ontologies, and axiologies. Thus, it

Calvin and Hobbes **by Bill Watterson**



would be difficult for a researcher who believes in the utility of control and the possibility of discovering universal truth to adopt interpretive and critical methods that ignore issues of researcher control and support multiple truths. Conversely, a researcher who focuses on giving voice to her respondents would recoil at speaking for them by analyzing their words without concern for their interpretations.

To give you a brief glimpse at the range of research methods available, we will review two popular quantitative methods—surveys and experiments—and two well-regarded qualitative methods—depth interviews and textual analysis. Keep in mind that there are many other methods for conducting communication research; we are simply illustrating these four to get you started in understanding the research process.

Surveys

Many researchers wishing to use quantitative methods opt for survey research. **Survey research** is a form of data collection that uses some sort of questionnaire administered to a sample of people. The responses given enable researchers to draw conclusions about the entire population the respondents represent. For example, when Dr. Stevens wants to find out how managers and employees communicate, she is interested in the population of employed people. When she chooses two specific organizations and a certain number of workers and managers from each, she is drawing a sample group from the entire population.

Surveys are a very old research technique. Earl Babbie notes that the Bible contains a reference to God instructing Moses and Eleazar to "take a census of all the congregation of the people of Israel, from twenty old and upward" (Num. 26:1–2, cited in Babbie, 1995, p. 256). You probably have been a respondent in survey research and perhaps you have even constructed a survey of your own at some time.

Typically, survey research consists of a researcher administering some type of a standardized questionnaire to a sample of respondents. The questionnaires may require directives from the researcher or they may be self-administered,

meaning that once the researcher gets the questionnaire to the respondent, all the information is provided for the respondent to fill in without any guidance or instruction from the researcher. There are various types of questionnaires, including paper and pencil type; telephone interviews, which consist of a series of closed-ended questions similar to what you would find on the paper and pencil type; and face to face in a structured interview format. Surveys may be administered in classrooms or other public facilities to groups of people, or researchers may give surveys individually. Surveys may also be given to respondents to fill out in their own homes, to be returned to the researcher at a later time.

Self-administered surveys are often sent to the respondents through the mail. The researcher has to depend on the respondents to return the completed questionnaire. Researchers utilize a variety of clever ways to ensure a high return rate for mailed questionnaires. These include providing stamped, self-addressed envelopes, making the questionnaire a self-mailer so that envelopes are not needed, including a monetary incentive, and administering follow-up mailings to nonrespondents as needed.

Survey research is best suited to questions where the individual is the **unit of analysis,** or object of study. For example, Dr. Stevens's work focuses on a dyadic phenomenon, accommodation. This is true because accommodation can only occur when more than one person is present. Thus, Dr. Stevens chose to send Rolanda to observe the employees talking to each other. Rather than obtaining survey information from one person at a time, it was important for Dr. Stevens to get a sense of the dyad, because that was her unit of analysis. Although individuals can give information about groups to which they belong, such as families and organizations, researchers have to keep in mind that the data generated are from individuals, reflecting what one member reports about the family, not what the whole family reports about itself, for example.

Surveys are very useful for collecting data from a large population. When researchers are interested in information about a population that is too large to observe directly, surveys are useful methods for reflecting the population as a whole. Public opinion polls such as Gallup and Yankelovich are able to sample carefully to determine the opinions of all people in the United States, for instance.

As an example of survey research, let's examine a study conducted by Joan O'Mara and her colleagues on the relationships among communication apprehension, nonverbal immediacy, and negative expectations for learning (O'Mara, Allen, Long, & Judd, 1996). The researchers were interested in the effects of communication apprehension (or fear of engaging in communication) and nonverbal immediacy (or "the degree of perceived physical or psychological closeness between communicators" [p. 111]) on students' expectations of themselves as learners. Further, they wished to examine how the first two variables, communication apprehension and nonverbal immediacy, related to instructors' evaluations of students. To investigate the five specific hypotheses they deduced from theories of nonverbal behavior and communication apprehension, they administered questionnaires to 389 undergraduates enrolled in the basic communication course at a medium-sized private university in New England. Their sample consisted of 180 women and 209 men.

In the questionnaire they operationalized each of the variables of interest in the following ways. Communication apprehension was measured by twenty-four questions concerning how respondents felt about being in a variety of communication situations. Nonverbal immediacy was measured by four questions asking about closeness in general, closeness with other students, closeness with professors, and closeness with the professor in this class. Students were asked to respond to these questions on Likert-type scales. Likert-type scales ask respondents to indicate on a scale of 1 to 7 (or 1 to 5) their level of nonverbal immediacy (1 = high, 7 or 5 = low). Students' expectations were measured by asking them to guess what grade they thought they would achieve in the class. The measure of teacher evaluation was the actual grade the students achieved when the course ended. The researchers went to the instructors to obtain this information at the end of the term.

The results of the questionnaire data indicated support for the hypotheses. The researchers found that as apprehension went up, immediacy scores went down, and students who were high in apprehension or low in immediacy expected lower scores and by and large achieved them, although this last finding was not a significant one. Here the researchers employed statistics to determine the extent of the relationship between the variables of interest to them. If there were no relationship between immediacy or apprehension and expectations about grades, we would expect the test of the relationship to show nothing (or a null relationship) at least 95 times out of 100. When the tests indicate that the relationship is greater than what we would expect to find 95 times out of 100, we say that it is **statistically significant** at the .05 level.

Survey research is a useful methodology that allows for a certain measure of researcher control because the researcher shapes the questions and each respondent receives the same questions in the same format. Additionally, self-administered surveys make large samples feasible. Thus, researchers in the positivist, or empiricist, tradition should feel comfortable with survey research because it fits rather well with many of their metatheoretical assumptions about the nature of people and the nature of truth. Perhaps researchers in qualitative traditions would feel more hesitant about utilizing surveys to answer their questions about communication behavior.

Experiments

Experimental research is a type of investigation that requires a researcher to systematically manipulate variables: the **independent variable,** a concept of interest that is presumed to have effects on another variable, and the **dependent variable,** a concept that is presumed to vary because of the independent variable. Variables are concepts such as education, gender, communication apprehension, and deception. In Dr. Stevens's research, communication accommodation and occupation are variables.

Further, variables have levels (in other words, they vary). Communication apprehension, for instance, is usually measured on three levels: high, moderate, and low. Occupation is a variable with levels consisting of job titles such as teacher, attorney, contractor, plumber, and so forth. Sex (or gender) is a variable

we measure on two levels: female and male. When we say variables are independent or dependent, we are postulating a relationship between them. If we use gender as the independent variable in an experiment and communication apprehension as the dependent variable, we are saying that fear of communicating varies depending on whether a person is male or female. The opposite would not be presumed to be true; people's gender does not depend on how apprehensive they are. In this example, gender is independent of communication apprehension, whereas communication apprehension depends on gender.

Experiments involve the researcher taking some type of action (the manipulation) and then observing the results of that action on the dependent variable. Research by Judee Burgoon and her colleagues on interpersonal deception illustrates the experimental approach (Burgoon, Buller, Guerrero, Afifi, & Feldman, 1996). These researchers were interested in how people specifically accomplish deception and in whether their targets, or receivers, recognize the changes that deceivers, or senders, make in order to deceive. They generated three hypotheses deduced from Interpersonal Deception Theory, which proposes that deceivers use five separate strategies to create credible but untrue messages. Their first hypothesis specified that deceivers would use these strategies, and their other two hypotheses referred to how receivers would hear deception compared to truthfulness. Hypothesis 2 asserted that receivers would respond more positively to the truth, and hypothesis 3 contended that receivers would notice and respond differently to the five strategies of deception.

The experiment to test the hypotheses involved forty adults (twenty-one men and nineteen women) from a metropolitan southwestern community who volunteered to come to a lab setting to participate in mock interviews. Six undergraduate students were employed to observe the interviews and rate the interviewees. The undergraduates were not aware of the experimenters' interests or of the instructions to the interviewees. Participants were asked to role play two interviews. In the first one they were instructed to be completely truthful, and in the second one they were told to be truthful in the first two answers but thereafter to engage in deception. The interviewers for all the interviews were pairs of men or pairs of women, so the participants had same-sex interviewers for both the truthful and the deceptive interviews. The interviewers were trained to control the interview and to be consistent across multiple interviews.

You can see that the researchers' goal was to keep everything constant except the deception/truthfulness variable. In this way they hoped to be able to measure whether participants were deceived in the ways predicted by the theory and whether observers were able to detect the strategies that deceivers used. Their results supported their contentions in the main, although the data did not confirm every hypothesis.

Experimental research is well suited to the ontology of covering law, objectivist epistemology, and axiology that advocates objectivity in some stages of the research process. Because experimental research relies on control and researcher manipulation without much concern for the qualitative input of the research participants, it is usually not the method chosen by proponents of the interpretive or critical traditions. Additionally, as you noticed in our description

of Burgoon and her colleagues' study, experiments are often performed in a laboratory setting. In this fashion, researchers can exert more control over the environment. But many researchers believe that this is an artificial context for testing theory and theory building.

Depth Interviews

Depth interviews are, like surveys, a method that allows interviewers to question respondents in the hopes of obtaining information about a phenomenon of interest. However, they differ from surveys in many significant ways. First, depth interviews are, at most, semistructured by the interviewer. They are seen by researchers as a collaboration between interviewer and participant, wherein what the participant wants to discuss is at least as important as what the interviewer had expected to discuss. Researchers employing depth interviews are interested in the directions in which respondents wish to take the interview. They are not as concerned with testing hypotheses as they are in finding out about the experiences of the respondents.

Second, depth interviews typically last between one and three hours. Researchers are more interested in obtaining rich, thick description than they are in collecting information from hundreds of respondents. Further, depth interviews are generally conducted in person. It may be possible to conduct depth interviews on the Internet (Garner, 1999), but this is a new technique, and typically personal contact is preferred.

Depth interviews are often used together with or as a part of ethnographic research. Gerry Philipsen (1989) notes that **ethnography** is a description of people's culturally distinctive patterns of communication. He observes that this description is derived after the researcher has spent a great deal of time living among the people and observing and gathering information from them. Thus, depth interviews are useful tools in ethnography. In some senses, Rolanda's observations in the two organizations constitute ethnographic research, and Dr. Stevens's plans for the follow-up interviews may involve this in-depth approach. Although depth interviews and ethnography are not identical methods, the two are compatible and may work together.

Sandra Petronio, Lisa Flores, and Michael Hecht (1997) published an essay making use of depth interview data and using qualitative methods to analyze the data. Petronio and her colleagues engaged in depth interviews with thirty-eight children and adolescents (thirty-two girls and six boys), ranging in age from 7 to 18 years old. These children had all been sexually abused, and the researchers were interested in "how sexually abused children regulate their privacy boundaries when they are deciding to disclose to others" (p. 103).

The researchers examined the transcripts of the interviews and identified five categories that the children used to judge whether to disclose to another. They found that children disclosed based on credibility, supportiveness, advocacy, strength, and protectiveness. After discussing these five categories, the authors concluded, "As adults, we need to hear these voices, to pay attention to their calls, and to acknowledge our own fears of involvement. . . . We need to

let the children's logic prevail" (p. 111). Petronio and her colleagues are interested in giving voice to those who may have been silenced, and their article contains many quotes from the participants to substantiate their claims about the children's use of logic and voice to rebuild trust.

Given this brief description of Petronio and her colleagues' work and the explanation of depth interviews as a research method, you can see that they represent a different paradigm for theory and research activity than do surveys and experiments. Here, lived experiences are the priority, and the researchers are collaborators with the research participants.

Textual Analysis

Textual analysis requires a researcher to identify a specific text for scrutiny. Texts can be presidential speeches, television shows, advertisements, or any type of discourse that the researcher focuses on to illuminate. Researchers engaged in textual analysis must apply some type of analytic tool (often, but not always, rhetorical theory) in order to understand the messages embodied within the text.

Textual analysis differs from the other methods we have discussed in several ways. First, it is centered on messages more completely than the other methods. By this we mean that textual analysis focuses on the actual words or symbols that are used in some type of discourse. Researchers adopting this method use a very inclusive definition of *text*. It can mean anything from a book to a speech to a film to a piece of architecture. Second, this method is nonreactive in the sense that when we study transcripts of speeches, we do not have to be concerned with the reactions we might engender in the transcripts. When Rolanda observes and tapes people in the organization, she is concerned about how they might be changing their behavior because of her presence. Transcripts do not present this concern. Finally, textual analysis does not require any manipulation or intervention, as surveys, experiments, and interviews do. In this way, "they preserve the integrity of the original communication" (Frey, Botan, Friedman, & Kreps, 1991). This does not mean that textual analysis is superior to the other methods but rather that it presents a different set of challenges and rewards. Textual analysis more closely fuses method and theory than the other methodologies we have reviewed because it is not interested in prediction or causality; rather, it focuses on insightful description and understanding of communication practices. Therefore, the analytic tool also may form the conceptual approach or theoretical framework for the analysis. The following example illustrates this assertion.

Trevor Parry-Giles and Shawn J. Parry-Giles (1996) explored political campaigning in the United States. They examined three presidential campaign films (their text) from the 1984, 1988, and 1992 campaigns to argue that campaigning is shifting toward a more intimate, self-disclosive style. The authors used a Freudian theory, scopophilia, as it has been applied in rhetorical theory to explain this shift. Scopophilia suggests that humans possess a need to gaze at others and that this gaze provides pleasure. The researchers examined the campaign films of Ronald Reagan, George Bush, and Bill Clinton, focusing on

Theory * Into * Practice

T*I*P

Sometimes theory can be tested without a clear intention on the investigator's part. In the following section of Sherry Turkle's book *Life on the Screen* (1995), Turkle provides support for a theory of Sandra Bem's (1993) called Gender Schema Theory. Gender Schema Theory asserts that people have cognitive structures called schema that filter information for them. In the case of gender schema, people are able to decide whether given activities and behaviors are appropriate for them based on whether they fit their notions of what men do and what women do. Turkle writes about cyberspace, in particular interactive computer programs for fantasy role-playing games that take place on MUDs (multi-user domains). Turkle's interests lie in how using computer technologies affects identity. Her observations give credence to Bem's theory even though she was not specifically testing the theory. Further, Turkle's observations support feminist theoretical assertions about the social construction of gender rather than the biological imperative of sex. Turkle writes:

> When I first logged on to a MUD, I named and described a character but forgot to give it a gender. I was struggling with the technical aspects of the MUD universe—the difference between various MUD commands such as "saying" and "emoting," "paging" and "whispering." Gender was the last thing on my mind. This rapidly changed when a male-presenting character named Jiffy asked me if I was "really an it." At his question, I experienced an unpleasurable sense of disorientation which immediately gave way to an unfamiliar sense of freedom.
>
> When Jiffy's question appeared on my screen, I was standing in a room of LambdaMOO filled with characters engaged in sexual banter in the style of the movie *Animal House*. The innuendos, double entendres, and leering invitations were scrolling by at a fast clip; I felt awkward, as though at a party to which I had been invited by mistake. I was reminded of junior high school dances when I wanted to go home or hide behind the punch bowl. I was reminded of kissing games in which it was awful to be chosen and awful not to be chosen. Now, on the MUD, I had a new option. I wondered if playing a male might allow me to feel less out of place. I could stand on the sidelines and people would expect *me* to make the first move. And I could choose not to. I could choose simply to "lurk," to stand by and observe the action. Boys, after all, were not called prudes if they were too cool to play kissing games. They were not categorized as wallflowers if they held back and didn't ask girls to dance. They could simply be shy in a manly way—aloof, above it all. . . .
>
> When much later I did try playing a male character, I finally experienced that permission to move freely I had always imagined to be the birthright of men. Not only was I approached less frequently, but I found it easier to respond to an unwanted overture with aplomb, saying something like, "That's flattering, Ribald-Temptress, but I'm otherwise engaged." My sense of freedom didn't just involve a different attitude about sexual advances, which now seemed less threatening. As a woman I have a hard time deflecting a request for conversation by asserting my own agenda. As a MUD male, doing so (nicely) seemed more natural; it never struck me as dismissive or rude. (pp. 210–211)

Source: Turkle, 1995.

devices in each film that increased a sense of intimacy with the audience. They concluded with a discussion of the implications of this new "politics of intimacy" on American life.

In this study, the assertions of the theory form the building blocks of the analysis, providing a close relationship between theory and its application to a research study. Textual analysis fits comfortably within the interpretive and the critical traditions because it allows the researcher to illuminate inequities and to give voice to silenced groups. Yet, because traditional rhetoricians may also apply this methodology, it also can fit within the positivist, or empirical, approach. With a text, researchers have complete control, and they can exercise an authoritative voice about its meaning without considering multiple interpretations.

Conclusion

In this chapter, we have introduced you to the overall logic of research, and we have discussed the relationship between theory and research. We have also presented you with some specific methods that communication researchers are currently using to investigate issues ranging from child sexual abuse to political campaigns to deception to communication behaviors and success in school. As you read about the four different research studies done with four different methodologies, you were probably struck by some of the epistemological, axiological, and ontological differences in their approaches. As you examine the theories in this book, think about how they might be applied to specific research questions and hypotheses. You may find that some of the theories and questions you wish to explore have different assumptions about the nature of truth, values, and human choice. Your evolving paradigm is an integral part of the process of becoming a critical thinker.

Discussion Starters

1. What is the difference between inductive and deductive logic? Give some examples of your everyday use of both induction and deduction.

2. What are your own epistemologic assumptions? What do you think is the nature of truth and what is your ontological stance? How do you see these affecting the research process?

3. If you were interested in the question that Dr. Stevens is studying, which of the four methods that we described would you utilize for your study? Explain your choice.

4. Describe how you might approach a study of presidential apologies. What methods might be useful? What theoretical framework would help you in this effort?

5. If you wanted to study the communicative foundations of romantic attraction, how might you go about it? How might that study differ from an investigation of female and male managers' communication style?

Terms for Review

hypotheses
operationalize
observations
data
code
scientific method
deductive logic
inductive logic
ontology
epistemology
axiology
positivistic, or empirical, approach
control
interpretive, or hermeneutic, approach
critical approach
worldview
quantitative methods
qualitative methods
triangulation
survey research
unit of analysis
statistically significant
experimental research
independent variable
dependent variable
depth interviews
ethnography
textual analysis