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o some of the specific topics of com-
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erry, *On Human Communication*, 3d ed. (Cambridge
s, 1978), p. ix.
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port, "The Promise and Pitfalls of Informatio
vioral Science* 1 (1956): 303–309 [reprinted in *Mod*
*arch for the Behavioral Scientist*, ed. W. Buckley (C
, 1968), pp. 137–142]. See also Handy and Kurtz, "C
al"; Roger C. Conant, "A Vector Theory of Infor
*ommunication Yearbook* 3, ed. D. Nimmo (N
NJ: Transaction, 1979), pp. 177–196.
t, "Vector Theory," p. 178.
hua Bar-Hillel, "Concluding Review," in *Inform*
*ychology*, ed. H. Quastler (Glencoe, IL: Free Press,

or example, Krippendorff, "Information Theory."

CHAPTER 4

# THEORIES OF SIGNS AND LANGUAGE

In the previous chapter, we looked at system theory, one general way of understanding human communication. Beginning with Chapter 4, we look now at specific aspects of communication itself. John Powers, in a wide-ranging integration of the various strands of the communication discipline, suggests that the field can be divided into a series of tiers, the most central of which is *messages*.[1] Messages, according to Powers, have three structural elements—signs and symbols, language, and discourse. As a central aspect of communication, then, message structures are an appropriate topic to cover early in the book. Accordingly, in Chapter 4 we will look at some theories of signs, symbols, and language, and in Chapter 5, we will move on to discourse structures. Signs are the basis of all communication. In these two chapters, we will explore the importance of signs and symbols to human life and the often elaborate ways they are used.

A *sign* designates something other than itself, and *meaning* is the link between an object or idea and a sign. These basic concepts tie together an extremely broad set of theories dealing with verbal language, discourse, and nonverbal behaviors—theories that explain how signs are related to their meanings and how signs are organized. In general, the study of signs is referred to as *semiotics*.[2]

## SEMIOTICS

The first modern theory of signs was developed by the nineteenth-century philosopher and logician Charles Saunders Peirce, founder of modern semiotics.[3] Peirce defined *semiosis* as a

1 John H. Powers, "On the Intellectual Structure of the Human Communication Discipline," *Communication Education* 4 (1995): 191–222.

2 For a good overview, see Wendy Leeds-Hurwitz, *Semiotics and Communication: Signs, Codes, Cultures* (Hillsdale, NJ: Erlbaum, 1993). See also Kaja Silverman, *The Subject of Semiotics* (New York: Oxford University Press, 1983); and Arthur Asa Berger, *Signs in Contemporary Culture: An Introduction to Semiotics* (Salem, WI: Sheffield, 1989).

3 Charles Saunders Peirce, *Charles S. Peirce: Selected Writings*, ed. P. O. Wiener (New York: Dover, 1958). See also, for example, John Stewart, *Language as Articulate Contact: Toward a Post-Semiotic Philosophy of Communication* (Albany: SUNY Press, 1995), pp. 76–81; Christopher Hookway, *Peirce* (London: Routledge & Kegan Paul, 1985); Max H. Fisch, *Peirce, Semiotic, and Pragmatism* (Bloomington: Indiana University Press, 1986); Thomas A. Goudge, *The Thought of Peirce* (Toronto: University of Toronto Press, 1950); John R. Lyne, "Rhetoric and Semiotic in C. S. Peirce," *Quarterly Journal of Speech* 66 (1980): 155–168.

relationship among a sign, an object, and a meaning. The sign represents the object, or referent, in the mind of an interpreter. Peirce referred to the representation of an object by a sign as the *interpretant*. For example, the word *dog* is associated in your mind with a certain animal. The word is not the animal, but the association you make (the interpretant) links the two. All three elements are required in an irreducible triad in order for signs to operate. This three-part relationship is clearly depicted in a well-known model created by C. K. Ogden and I. A. Richards, shown in Figure 4.1.[4]

An informative illustration of semiosis is the study of generic pronouns by Wendy Martyna.[5] Traditionally in English, the pronoun *he* has been used to designate both males and females when a singular pronoun is required, as in the sentence, "When a teacher returns tests, he usually discusses them with the class." Martyna was interested in finding out what generic pronouns people would actually use in such situations and their meanings for these pronouns. Forty students at Stanford completed a series of sentences requiring the use of a generic pronoun. Some of the sentences referred to people traditionally thought of as male ("Before a judge can give a final ruling, he must weigh the evidence"). Some referred to people traditionally considered female ("After a nurse has completed training, she goes to work"). And some were neutral ("When a person loses money, he is apt to feel bad").

The researcher found that the participants usually used a pronoun that was consistent with sex stereotypes. In the neutral sentences, the masculine was most often used, although some participants deliberately suggested role reversals by switching the pronouns, and others tried to avoid sexism by using a combination, as in *he or she*. Women were less likely to use the masculine generic than men.

After the participants completed the sentences, the researcher asked them what image they had when they completed a sentence. Most often, they imagined a man in male-stereotyped sentences and a woman in female-stereotyped ones. In neutral sentences, the image was almost exclusively male.

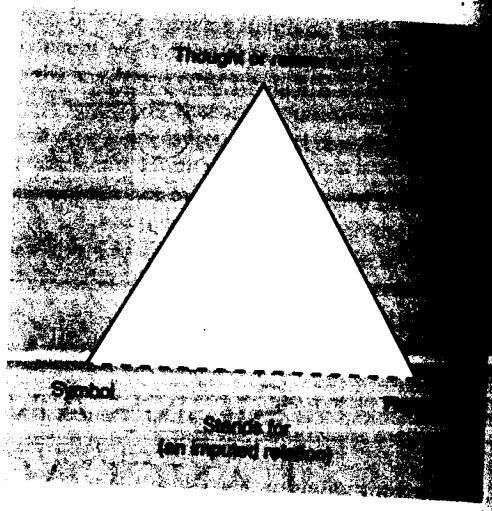


FIGURE 4.1

**Ogden and Richards's Meaning Triangle**

From *The Meaning of Meaning*, by C. K. Ogden and I. A. Richards. Copyright © 1923. Reprinted by permission of Harcourt Brace Jovanovich and Routledge & Kegan Paul.

This study clearly illustrates that the sign, in this case a pronoun, is connected to its referent through the mind of the user. Meaning thus depends on the image or thought of the person in relation to the sign and the object being signified. Many semiotic theorists have elaborated and expanded this basic idea. Here, we will discuss three of the best known—Charles Morris, Susanne Langer, and Umberto Eco.

## Morris on Signs, Behavior, and Interaction

Charles Morris is a well-known philosopher who wrote for many years about signs and values.[6] For Morris, a sign is a stimulus that elicits a

4 C. K. Ogden and I. A. Richards, *The Meaning of Meaning* (London: Kegan, Paul, Trench, Trubner, 1923).

5 Wendy Martyna, "What Does 'He' Mean?" *Journal of Communication* 28 (1978): 131–138.

6 Morris's classic work on signs is *Signs, Language, and Behavior* (New York: Braziller, 1946). A shorter version can be found in "Foundations of the Theory of Signs," in *International Encyclopedia of Unified Science*, vol. 1, part 1 (Chicago: University of Chicago Press, 1955), p. 84. A unified theory of signs and values is developed in *Signification and Significance* (Cambridge, MA: MIT Press, 1964).

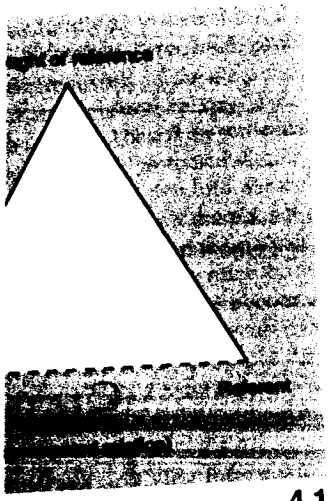

FIGURE 4.1

**ıards's Meaning Triangle**

ıaning, by C. K. Ogden and I. A. Richards. Copy- ɔy permission of Harcourt Brace Jovanovich and

:learly illustrates that the sign, in noun, is connected to its referent ind of the user. Meaning thus de- mage or thought of the person in sign and the object being signified. : theorists have elaborated and ex- ɔasic idea. Here, we will discuss best known—Charles Morris, ;er, and Umberto Eco.

## Signs, Behavior, ıction

:is is a well-known philosopher who any years about signs and values.[6] a sign is a stimulus that elicits a

readiness to respond. In a Latin-influenced vocabulary, he defines the *interpreter* as the organism that takes a stimulus as a sign, the *interpretant* as a disposition to respond in a certain way because of the sign, the *denotatum* as anything designated by the sign that enables the organism to respond appropriately, and the *significatum* as the conditions making the response possible.

Let's take a look at some simple examples. In classical conditioning, a dog is taught to respond to a buzzer as a sign of food. When the conditioned buzzer is sounded, the dog salivates in preparation for food. Here, the buzzer is a sign, and the dog is the interpreter. The dog's readiness for food is the interpretant, and because the food itself will enable the dog to fulfill the goal, the food is the denotatum. The edible quality of the food is the significatum.

Suppose, in a second example, that a father says to his child, "Let's go get some toys." The word *toys* is the sign, the child is the interpreter, her disposition to go to the toy box is the interpretant, the presence of the toys in the box is the denotatum, and the fact that they can be played with is the significatum.

These terms establish the basic elements of Morris's system of semiotics. More important, however, is the role of signs, and on this subject Morris has much to say. People and animals, even machines perhaps, use signs in three ways, which means that a sign has three values, or factors. These are the designative, the appraisive, and the prescriptive.

The *designative* aspect of signs directs the interpreter to specific objects or particular types of denotata. In other words, the sign is used to designate something. The *appraisive* aspect of a sign points the interpreter to particular qualities of the denoted object, which enables one to appraise or evaluate the object. The *prescriptive* aspect directs one to respond to the object in certain ways. In other words, signs prescribe a set of ways in which the interpreter can behave toward the designated object or idea.

In the dog food example above, the designative factor directs the dog to food. The dog may come to expect a certain kind of food. The appraisive factor tells the dog that the food is good, and the prescriptive factor compels the dog to eat it.

One of the most important systems of signs for people is language. In language, signs consist of sound groupings that have meaning. Sounds are combined into phrases, clauses, and sentences, which designate objects. Morris refers to simple linguistic signs as *ascriptors*, because they signify something about an object or idea. The sentence "The boy is happy" is an ascriptor designating boy and signifying happiness.

Like any sign, ascriptors can be designative, appraisive, or prescriptive. For example, a physician might say, "Here is an ointment that will stop your itching. Rub it in three times a day." "Here is an ointment" designates the object, "that will stop your itching" is an appraisal of the value of the object, and "Rub it in three times a day" is an obvious prescription.

Morris wrote about semiotics for at least thirty years. During this time his theory became increasingly sophisticated. His early ideas discussed above are basic and somewhat limited, but they do help us understand the nature of signs. Morris's later expanded theory is a much fuller, more human conception.

The expanded theory is influenced by system theory (Chapter 3) and symbolic interactionism (Chapter 8) among others. Specifically, Morris shows that all human action involves signs and meaning in various intriguing ways. Any act consists of three stages—perception, manipulation, and consummation.[7] In *perception* the person becomes aware of a sign. In the *manipulation* stage, the person interprets the sign and decides how to respond to it. Then the act is *consummated* by an actual response.

The designative value of signs predominates in the perceptual stage, the prescriptive value predominates in manipulation, and the appraisive marks consummation. So our itchy patient becomes aware of the medication because of the doctor's mentioning it in a perceptual stage, decides to try it in the manipulation

ı and I. A. Richards, *The Meaning of Meaning* (Lo… l, Trench, Trubner, 1923).
tyna, "What Does 'He' Mean?" *Journal of Com…* ): 131–138.
ıssic work on signs is *Signs, Language, and Beh…* ıziller, 1946). A shorter version can be found… f the Theory of Signs," in *International Encyclop…* ce, vol. 1, part 1 (Chicago: University of Chic… 84. A unified theory of signs and values is de… ıtion and Significance* (Cambridge, MA: MIT P…

7 George Herbert Mead, *Mind, Self, and Society* (Chicago: University of Chicago Press, 1934). See also Chapter 8.

TABLE

**Stages of Action in Relation to Dimensions of Signifying and Value**

| Stages of Action | Dimensions of Signifying | Dimensions of Value |
|---|---|---|
| Perceptual | Designative | Detachment |
| Manipulatory | Prescriptive | Dominance |
| Consummatory | Appraisive | Dependence |

SOURCE: From *Signification and Significance* by Charles Morris (Cambridge, MA: MIT Press, 1964).

stage because of the physician's prescription, and actually applies the ointment in the consummation stage because of the doctor's appraisal of the effectiveness of the medicine.

Morris's most important innovation is his application of signs to the study of values. Morris shows how values stress different things and how they relate to signs. Certain values stress dependence, others emphasize detachment, and still others relate to dominance.

As we recall from system theory, a system influences and is influenced by other systems. When one system is being affected by another, it is said to be *dependent* on the other system. When it is affecting another system, it is *dominant* over that other system. A state of *detachment* exists when a system is more or less autonomous. Detachment, then, corresponds to perception and the designative mode of signification. Dominance corresponds to the manipulation and prescriptive factors, and dependence corresponds to consummation and appraisive values. Table 4.1 summarizes these relationships.[8]

Suppose, for example, that you are watching television one evening, and you see a new commercial for some product you do not currently use. Viewing the commercial represents the perceptual stage of the act. Here you are detached, simply taking it in. After seeing the commercial, however, you may spend some time thinking about it, considering what was meant by some of the statements in the advertisement, perhaps determining the relevance of the product for yourself. This stage is manipulation. Here you ar dominating by thinking over the information and making your decision to buy or not to buy. The third stage would occur in actually purcha ing the new product (consummation). Here you allow yourself to become "dependent" on the product, at least temporarily.

At each point in this process, signs are used. In the first stage, the product is identified, and various aspects are designated. In the manipulation stage, you are deciding how to act toward the product (whether or not to buy), thus using primarily prescriptive signs. Finally, in consummation you discover and signify to yourself your like or dislike for the product.

All of our examples so far feature a single individual, but groups can act too. Putting on a party, having a class, arranging a car pool, managing an automobile dealership, and conducting an orchestra are just a few examples. When you think about it, very few acts are strictly individual. Group acts, called *social acts*, go through the same stages as individual ones, but in a group you can divide the labor. Because of role specialization, some people may be primarily responsible for perceptual aspects of the act, others for manipulation, and still others for consummation.

In addition, a given individual may show a preference for certain aspects of individual and social acts. This preference—expressed in terms of detachment, dominance, or dependence—represents the person's values.

A value may be individual or social. Social values deal with a person's relationship to others, and individual values deal with his or her

8 Morris, *Signification*, p. 22.

**Model of the Relat**

From *Signification and Signi*

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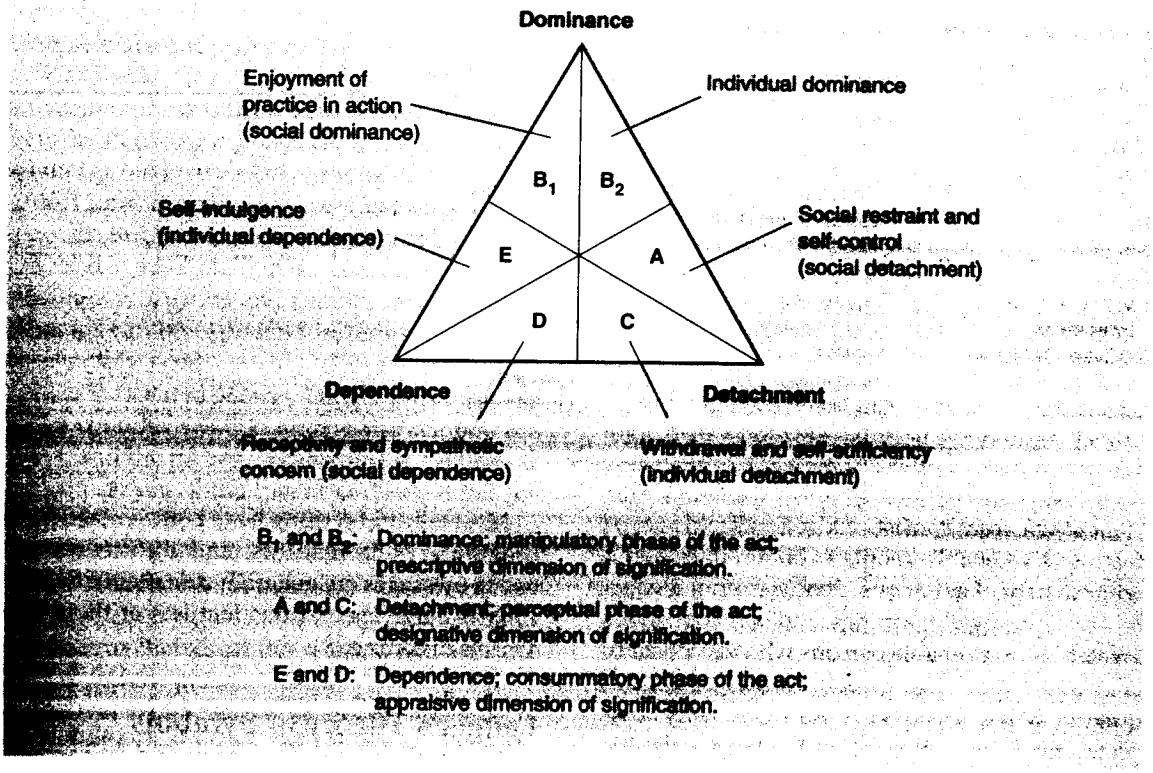


FIGURE 4.2

**Model of the Relation of Values, Signs, and the Act**

From *Signification and Significance* by Charles Morris. (Cambridge, MA: MIT Press, 1964).

personal preferences. Morris identifies five value clusters, including social restraint and self-control, enjoyment of practice in action, withdrawal and self-sufficiency, receptivity and sympathetic concern, and self-indulgence. Figure 4.2 shows the relationship of these factors to the three-point model of the act developed earlier.[9]

Morris's most enduring contribution is his designation of three fields of sign theory. The first field is *semantics*, or the study of how signs relate to things. Here we are interested in what a sign is taken to designate, the relationship between the world of signs and the world of things. The second is *syntactics*, or the study of how signs relate to other signs. This field examines grammar and system structure and points to the ways signs are organized into larger sign systems. Finally, in the field of *pragmatics* we are interested in the actual use of codes in everyday life, including the effects of signs on human behavior and the ways people mold signs and meanings in their actual interaction.

Donald Ellis has done an especially fine job of showing the importance of each of these areas, and he has developed syntactics and pragmatics in some detail.[10] Ellis points out that human beings operate with both a syntactic code and a pragmatic code.

9 Morris, *Signification*, p. 26.

10 Donald G. Ellis, "Syntactic and Pragmatic Codes in Communication," *Communication Theory* 2 (1992): 1–23.

TABLE

**Summary of Syntactic and Pragmatic Codes**

| Feature | Pragmatic Code | Syntactic Code |
|---|---|---|
| Meaning | In person, assumed | In text |
| Comprehension | Coherence: Link language to experience | Cohesion: Internal lexical ties |
| Reasoning | Subjective, organic | Logic |
| Structure | Implicit | Explicit |
| Context | High context | Low context |
| Fragmentation–Integration | Fragmented | Integrated |
| Involved–Detached | Involved | Detached |
| Level of Planning | Unplanned | Planned |
| Oral–Literate | Oral-like | Literate-like |

*Syntactic codes* consist of a generalizable set of features that enable people to communicate in a wide variety of situations. People cannot always rely on situational meanings, and syntactic codes are necessary to enable persons who do not share common experience to communicate. Consequently, syntactic codes are more internally complete and formal. People understand syntactic codes because they know the rules of the grammar and denotations of terms, not because they share a lot of specialized knowledge. Legal writing used for wills and contracts is a good example; it aims to remove ambiguity and leave as little as possible up to the imagination of the communicators.

*Pragmatic codes* tend to be used in everyday speech and rely on the practical knowledge of particular groups within given situations. Pragmatic codes can only be understood because of the shared knowledge of those involved in the situation. As an example, consider the following terms: *got it done, chop shop, custom studio, artist, ink, clean spots, fade, boutique, nice work.* You know all of these words, but not in the same way as members of the tattoo subculture. Ellis uses this example to illustrate a very specific pragmatic code. For example, the word *clean* as used by this group is not intended to be the opposite of *dirty* but designates a place on the skin not yet tattooed.

Most talk and writing have both syntactic and pragmatic code features, and differences between messages are generally a matter of degree. Table 4.2 lists the various features of these two aspects of coding.[11]

## Langer's Theory of Symbols

A prominent and useful theory of language is that of Susanne Langer, whose *Philosophy in a New Key* has received considerable attention by students of symbolism.[12] Langer considers symbolism to be the central concern of philosophy, a topic that underlies all human knowing and understanding. According to Langer, all animal life is dominated by feeling, but human feeling is affected by conception and symbols—and language.

Langer makes a distinction between signs and symbols. She uses the term *sign* in a more restricted sense than Morris to mean a stimulus that signals the presence of something else. A sign corresponds closely to the actual signified object. In this sense clouds may be a sign of rain,

11 Ellis, "Syntactic and Pragmatic," adapted from p. 18.

12 Susanne Langer, *Philosophy in a New Key* (Cambridge, MA: Harvard University Press, 1942). See also *Mind: An Essay on Human Feeling*, 3 vols. (Baltimore: Johns Hopkins University Press, 1967, 1972, 1982). A good secondary source is Stewart, *Language as Articulate Contact*, pp. 92–101.

laughter a sign of happiness, and a red light a sign of cross traffic. A *symbol* is more complex: "Symbols are not proxy of their objects, but are *vehicles for the conception of objects.*"[13] Symbols allow a person to think about something apart from its immediate presence. In other words a symbol is "an instrument of thought."[14]

Not only do people have a capacity to use symbols, but they possess a basic need for symbols, and symbol-making is a continuous process tantamount to eating and sleeping. Much human behavior can be explained in terms of meeting the symbolic need.

Like Peirce and Morris, Langer sees meaning as the complex relation among the symbol, the object, and the person. As she puts it, "If there is not at least one thing meant and one mind for which it is meant, then there is not a complete meaning."[15] Thus, we have both a logical and psychological sense of meaning—the logical being the relation between the symbol and referent and the psychological the relation between the symbol and the person.

The real significance of language, however, is not in individual words, but in *discourse.* Words name things, but "before terms are built into propositions, they assert nothing, preclude nothing . . . say nothing."[16] By tying words together into sentences, people create *propositions,* which are complex symbols that present a picture of something. The word *dog* brings up a conception, but its combination with other words provides a unified picture: The little brown dog is nestled against my foot. Because language possesses this rich potential for combination and organization, it truly makes us human. Through language we communicate, we think, and we feel.

How, then, do symbols work? Any symbol, including a proposition, communicates a *concept,* a general idea, pattern, or form. The concept is a meaning shared among communicators, but each communicator also will have a private image or meaning that fills in the details of the conception picture. This private image is the personal *conception.*

Meaning therefore consists of the individual's private conception and the common concept shared with others. For example, Vincent van Gogh's paintings are filled with symbols with both common and private meanings. The common meanings in these paintings are accessible to anybody who views them; they are the generally recognized images in the scene. The private meanings are those of van Gogh himself and others who have studied the artist.[17]

For instance, his painting *Open Bible* is a view of a large open Bible sitting next to a candle. Next to the Bible is a small copy of a novel, Emile Zola's *The Joy of Living.* For the common viewer, these images are just objects, but for the artist, these images have very particular private meanings. As a whole the painting symbolizes the life and death of the artist's father. Van Gogh's father, a minister, is symbolized by the open Bible. His death is symbolized by the candle, which casts a light on a passage from Isaiah about the suffering servant. The title of the smaller book symbolizes the elder van Gogh's life.

Van Gogh discussed the symbolism of his work in a letter to his brother:

> I want to paint men and women with that something of the eternal which the halo used to symbolize, and which we seek to convey by the actual radiance and vibration of our coloring.
>
> . . . I am always in the hope of being able to express the love of two lovers by a wedding of two complementary colors, their mingling and their opposition, the mysterious vibration of kindred tones. To express the thought of a brow by the radiance of a light tone against a somber background. To express hope by some star, the eagerness of a soul by a sunset radiance.[18]

Langer's vocabulary includes three additional terms: signification, denotation, and connotation. *Signification* is the meaning of a sign, or a simple stimulus announcing the presence of some object. Signification is a simple one-to-one

13 Langer, *Philosophy in a New Key,* p. 61.
14 Langer, *Philosophy in a New Key,* p. 63.
15 Langer, *Philosophy in a New Key,* p. 56.
16 Langer, *Philosophy in a New Key,* p. 67.
17 A semiotic analysis of van Gogh's work was done by Mark Roskill, "'Public' and 'Private' Meanings: The Paintings of van Gogh," *Journal of Communication* 29 (1979): 157–169.
18 Quoted in Roskill, "'Public' and 'Private' Meanings," p. 157.

relationship between sign and object, as between a stop sign and cross traffic.

*Denotation* is the relation of the symbol to its object. For example, the denotation of the symbol *dog* may be your image of a little brown puppy at your feet. This relationship between the word and the puppy occurs only in your mind through your idea of the animal. Even when the puppy is not present, you can think of it because of the relationship between the symbol and idea.

The *connotation* of a symbol is the direct relationship between the symbol and the conception. Connotation includes all of one's personal feelings and associations attached to a symbol. Here you are less concerned with the object (a puppy) associated with the symbol than with your own private orientation to that object—many happy childhood memories, for example.

Langer notes that humans possess a built-in tendency to *abstract*. Abstraction is a process of forming a general idea from a variety of concrete experiences. It is a process of leaving out details in conceiving of objects, events, or situations in ever more general terms. For example, the word *dog* may have a specific connotation, but this conception is incomplete; it always leaves something out. The more abstract the symbol, the sketchier the conception: A *dog* is a *mammal*, which is an *animal;* an animal is a *living thing*, which is an *object*. Each successive term in this series leaves out more details and is therefore more abstract than the previous term.

So far we have emphasized Langer's ideas about language, which she calls *discursive symbolism*. However, she also admits the importance of nondiscursive, or *presentational*, symbols. Some of the most important human experiences are emotional and are best communicated through forms such as worship, art, and music.

## Eco's Semiotics

In this section we describe the work of Italian semiotician Umberto Eco, who has produced one of the most comprehensive and contemporary theories of signs.[19] Eco's theory is important because it integrates earlier semiotic theories [illegible] advances semiotic thinking to a new level.

Eco believes that semiotics should incl[illegible] both a "theory of codes" and a "theory of s[illegible] production." Theories of codes, like those Morris and Langer, must come to grips with [illegible] structure of language and other signs, but th[illegible] ries of sign production are necessary to expl[illegible] the ways signs are actually used in social a[illegible] cultural interaction. Eco presents ideas about t[illegible] stability of signs as well as their variation.

The process of representing things by signs i[illegible] *signification* or *semiosis*, a four-part system:

1. conditions or objects in the world
2. signs
3. a repertoire of responses
4. a set of correspondence rules between signs and objects and between signs and responses

Eco uses the example of a dam in which a set of sensors activates a series of lights to tell an operator the height of the water level. A white light might mean that the water level is below normal, and the dam should be shut to let the water build up. If an amber light is lit, the water level is normal, and nothing should be done. If, however, the red light is lit, the water level is too high, and the operator must open the dam to let some out.

The water levels are the worldly conditions, the lights are the signs, and the actions that an operator can take are the responses. Notice how the signs cannot function without a set of correspondence rules. The rules tell the operator what water level each light represents and what should be done.

The system of objects, signs, and response possibilities constitutes an s-code, or *code system*. The *s-code* is a structure in and of itself apart from its actual use and can be studied as such, as in the case of the simple light system at the dam. However, a code system as actually employed by real people requires that we look at the human

19 Eco's primary semiotic works include *A Theory of Semiotics* (Bloomington: Indiana University Press, 1976); and *Semiotics and the Philosophy of Language* (Bloomington: Indiana University Press, 1984).

factor. When we do that, we are switching our focus from the s-code to the code.

A *code* is a set of correspondence rules used by a person or group. Any s-code can be adapted time and time again as people create a variety of codes for different purposes. Different colored lights might be substituted at the dam. At certain times, it might be okay to let the dam overflow, and at other times the engineers may decide to let it drop without refilling.

The formal grammar of a language is an s-code; it is a structure that can be studied apart from its actual use. As we will see later in the chapter, linguists do this all the time. The way people adapt and use the grammar in everyday life, however, is rich with human variation. Eco discusses four ways in which people use signs. First, there is *recognition*, in which a person sees a sign as an expression of something tangible. A doctor's recognition of symptoms and a detective's use of clues are examples. Second, there is *ostension*, in which a person points to an example to represent something. For example, you might hold up an empty soda can to signal a friend to buy you a soda at the store. Third, *replica* is the use of arbitrary signs in combination with other signs. The use of language, certain gestures, emblems, musical notes, and so forth are replicas. Finally, there is *invention*, or proposing a new way to organize a code. Art is a good example of invention.

A *sign function* is the association of a sign with its referent according to a rule (red light—too full). The sign function is the relationship between the sign and the signified, between an expression and a content. It is tempting to think of the content as an existing thing or a referent; however, Eco is careful to point out that the content is never the thing itself but a cultural conception of the thing. He designates a sign with slashes, as in /dog/, and the actual object with double slashes, as in //dog//.

The content of the sign function, however, is designated <*dog*>, which is a concept of "dog-ness." For certain North Americans, the concept is one of being a pet, while for certain Southeast Asians, it is one of being food. Sometimes the referent simply does not exist, as in the case of fantasies like mermaids, lies, and jokes. In the example of the dam, the real content of the sign function is not the water level per se but one's meanings for the water level—for example, <*safe*>, <*danger*>, and <*flood*>.

Codes are organized sets of rules that relate to and define one another. Signs as expressions can be broken down into further expressions and contents, and contents, too, can be subdivided in this way. So the expression /red light/ has the subcode of /flood/, which means <*danger*>. The content <*high water*> can also be broken down into a subcode of /open valve/ with a meaning of <*let water out*>. In fact, code systems are completely defined in terms of their internal relations. *All sign functions are defined ultimately in terms of other sign functions.*

Eco defines *denotation* as a simple sign–content relation. *Connotation* is a sign that is related to a content via one or more other sign functions. For example, the sign function /dog/—<*dog*> is a denotation; a connotation would be /dog/—<*stinky*>, which is derived from a more complicated link: <*dog*>—/hairy/—/smells/—<*stinky*>.

Any system of contents, signs, and responses can be related to one another in innumerable ways. Any sign can have many possible contents or sign functions. Complex combinations of sign functions are often used to elaborate an idea or feeling, which Eco calls text, message, or discourse. Because of the possibility of multiple meanings, then, communication always involves interpretation, which is the use of sign functions to translate and explain other sign functions.

To continue this analysis, an *interpretant* is the relationship between one sign function and another; it is the means by which people understand and interpret language. For example, I might ask you, "What is a /fire/?" You would then answer, "/Fire/ is <*burning*>." "What," I then ask, "is /burning/?" "/Burning/ is <*hot*>." Children in the process of learning codes drive parents crazy by their interminable search for

interpretants. Eco shows how dictionaries are simple catalogs of interpretants, one sign being related to another. Human interpretation, however, is more similar to the working of an encyclopedia than a dictionary because of the nearly infinite number of possible sign functions that are related to one another in a complex web of actual and possible relations. Remember, interpretants are not facts or truths but cultural conceptions that establish the representational meaning of signs.

In sum, then, codes establish what correspondence rules are in force in a particular context. These codes are established by convention within cultural groups. Meanings are therefore cultural units. Not only is meaning cultural, but cultures are semiotic.

## THE STRUCTURE OF LANGUAGE

The study of language has been heavily influenced by semiotics and vice versa.[20] The modern founder of structural linguistics was Ferdinand de Saussure, who along with figures such as Peirce, Ogden, Morris, Langer, and Eco made substantial contributions to the structural tradition in communication early in this century. Later, significant questions arose concerning the ways language is actually produced, understood, and acquired, leading to newer cognitive approaches. We will review both the classical structural and cognitive theories briefly in the following pages.

### Classical Foundations

Saussure taught that signs, including language, are arbitrary.[21] He noted that different languages use different words for the same thing and that there is usually no physical connection between a word and its referent. Therefore, signs are conventions governed by rules. Not only does this assumption support the idea that language is a structure, but it also reinforces the general idea that language and reality are separate. Saussure, then, saw language as a structured system re
senting reality. He believed that linguistic
searchers must pay attention to language fo
such as speech sounds, words, and grammar.
though language structure is arbitrary, langu
*use* is not at all arbitrary, because it requires
tablished conventions. You cannot choose
word you wish, nor can you rearrange gramm
at a whim.

Language described in structural terms, th
is strictly a system of formal relations witho
substance. The key to understanding the stru
ture of the system is *difference*. The elements an
relations embedded in language are distin-
guished by their differences. One sound differ
from another (like *p* and *b*); one word differ
from another (like *pat* and *bat*); one grammatical
form differs from another (like *has run* and *will
run*). This system of differences constitutes the
structure of the language. Both in spoken and
written language, distinctions among signified
objects in the world are identified by corresponding distinctions among linguistic signs. No linguistic unit has significance in and of itself; only in contrast with other linguistic units does a particular structure acquire meaning.

Saussure believed that all a person knows of the world is determined by language. Unlike other semioticians, then, Saussure does not see signs as referential. Signs do not *designate* objects but *constitute* them. There can be no object apart from the signs used to designate it. In this regard, Saussure's work set the stage for much

20 Leeds-Hurwitz, *Semiotics and Communication*, p. 13. For good brief overviews of the study of language, see Scott Jacobs, "Language and Interpersonal Communication," in *Handbook of Interpersonal Communication*, eds. Mark L. Knapp and Gerald R. Miller (Thousand Oaks, CA: Sage, 1994), pp. 199–228; Irwin Weiser, "Linguistics," in *Encyclopedia of Rhetoric and Composition*, ed. Theresa Enos (New York: Garland, 1996), pp. 386–391; David Graddol, Jenny Cheshire, and Joan Swann, *Descriptive Language* (Buckingham, England: Open University Press, 1994), pp. 65–101; Adrian Akmajian, Richard A. Demers, Ann K. Farmer, and Robert M. Harnish, *An Introduction to Language and Communication* (Cambridge, MA: MIT Press, 1994), pp. 123–192.

21 Ferdinand de Saussure's primary work on this subject is *Course in General Linguistics* (London: Peter Owen, 1960). Excellent secondary sources include Stewart, *Language as Articulate Contact*, pp. 81–87; Anthony Giddens, *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis* (Berkeley: University of California Press, 1979); and Fred Dallmayr, *Language and Politics* (Notre Dame, IN: University of Notre Dame Press, 1984).

twentieth-century thought not only in structural linguistics but also interactionist theory (Chapters 8 and 9) and interpretive and critical theories (Chapters 10 and 11).[22]

Saussure made an important distinction between formal language, which he called *langue*, and the actual use of language in communication, which he referred to as *parole*. These two terms correspond to language and speech. Language (langue) is a formal system that can be analyzed apart from its use in everyday life. Speech (parole) is the actual use of language to accomplish purposes. Language is not created by users, but speech is. Indeed, speech makes use of language, but it is less regular and more variable than the formal system of language from which it derives. In other words, when you speak you are using language, but you are also adapting it to enable you to achieve goals.

Linguistics, to Saussure, is the study of langue, not parole: "Taken as a whole, speech [parole] is many-sided and heterogeneous; straddling several areas simultaneously . . . we cannot put it into any category of human facts, for we cannot discover its unity. Language [langue], on the contrary, is a self-contained whole and a principle of classification."[23]

One difference between langue and parole, according to Saussure, is stability. Language is characterized by *synchrony*, meaning that it changes very little over time. Speech, on the other hand, is characterized by *diachrony*, meaning that it changes constantly from situation to situation.

Because of its constant flux, some believe that speech is not particularly suitable for scientific study, which is why linguistics must take a language-oriented, synchronic focus. The point here is not that language never changes, only that language form cannot be understood unless a synchronic perspective is adopted.

As we will see in Chapters 8 and 9, however, the distinction between language and speech, and that between synchrony and diachrony, is often criticized by theorists from other traditions. We return to the topic of language in Chapter 8, where we explore in more detail theories of how language functions in discourse, or speech.

## Structural Linguistics

Let us turn now to a more detailed discussion of language structure itself. Influenced by the work of Saussure, theorists developed the standard model of sentence structure between about 1930 and 1950.[24] Basically, this model breaks down a sentence into components in hierarchical fashion. Sounds and sound groups combine to form word roots and word parts, which in turn combine to form words, then phrases. Phrases are put together to make clauses or sentences. Thus, language can be analyzed on various levels, roughly corresponding to sounds, words, and phrases.

The first level of analysis involves the study of *phonetics*, or speech sound. A particular speech sound is a *phone*. Phones that sound very similar are grouped into a sound family called *phoneme*, which is the basic building block of any language. Any dialect of a language contains a number of phonemes, which are combined according to rules to produce *morphemes*, the smallest meaningful linguistic unit. Words are combined according to the rules of grammar to form *phrases*, which are linked together into *clauses* and *sentences*.

This structural approach provides an orderly classification of language parts, and segments are sequenced in a sentence-building process. At each level of analysis is a set of classes (for example, phonemes or morphemes) that can be observed in the native language. Sentences are always built up from the bottom of the hierarchy, so that succeeding levels depend on the formation of lower levels. This scheme is known as phrase-structure grammar, a set of rules called *syntax*. Phrase-structure grammar consists of

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22 See Art Berman, *From the New Criticism to Deconstruction* (Urbana: University of Illinois Press, 1988), pp. 114–143.

23 de Saussure, *Course*, p. 9.

24 The major writings of this period include Leonard Bloomfield, *Language* (New York: Holt, Rinehart & Winston, 1933); Charles Fries, *The Structure of English* (New York: Harcourt, Brace & World, 1952); Zellig Harris, *Structural Linguistics* (Chicago: University of Chicago Press, 1951). An excellent summary and critique of this period can be found in J. A. Fodor, T. G. Bever, and M. F. Garrett, *The Psychology of Language: An Introduction to Psycholinguistics and Generative Grammar* (New York: McGraw-Hill, 1974).

*rewrite rules* that "re-write" the sentence or other unit into its parts.

For example, a sentence can be broken down according to the following rewrite rule:

sentence = noun phrase (NP) + verb phrase (VP)

The verb phrase can be broken down further according to the following rewrite rule:

VP = verb (V) + noun phrase (NP)

This process continues until all units of the sentence are accounted for. Phrase structures are often illustrated by a tree diagram, as shown in Figure 4.3.

Although this approach provides a useful description of the structure of language, it fails to explain how people produce and understand language. This latter question, far more central to communication than language structure, has captured the attention of psycholinguists and sociolinguists since about 1950.

We know that people must possess an intuitive knowledge of their language in order to produce meaningful, grammatical speech. What is the nature of this knowledge? How is it acquired? How is it used? The literature that has emerged from this work is extensive, controversial, and at times highly technical.

Old-fashioned phrase-structure grammar is no longer believed to be adequate by itself to explain the generation of sentences.[25] The primary objection to classical linguistics is that although it is useful as a descriptive tool, it is powerless to explain how language is generated. For example, phrase-structure grammar would analyze the following two sentences exactly the same way, even though their syntactic meanings are different.[26]

John is easy to please.

John is eager to please.

These sentences have entirely different syntactic meanings. In the first sentence, John is the object of the infinitive *to please.* In the second John is the noun phrase of the sentence. Regular phrase structure provides no way to explain

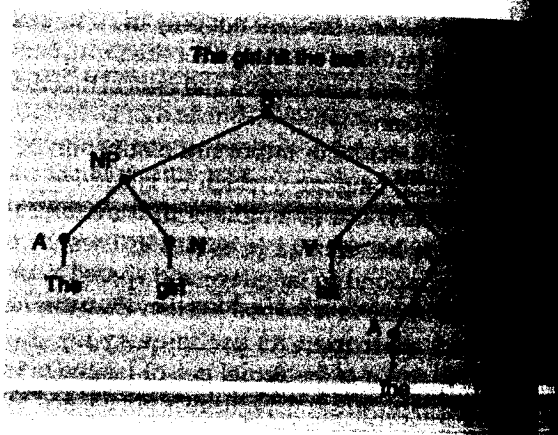


FIGURE 4.3
**A Simple Tree Diagram**

these different grammatical meanings by examining the sentences themselves.

Problems like this lead to a series of questions that traditional phrase-structure grammar cannot answer:

- How can a speaker produce an infinite number of novel sentences from just a few rules?
- By what cognitive process are sentences generated and understood?
- How is syntactic ambiguity to be accounted for?
- How is language acquired?

To answer questions such as these, linguists developed generative grammar.[27]

25 For an explanation and critique of finite-state and phrase-structure grammar, see Noam Chomsky, "Three Models for the Description of Language," *Transactions on Information Theory* IT-2 (1956): 113–124; and Jerry Fodor, James Jenkins, and Sol Saporta, "Psycholinguistics and Communication Theory," in *Human Communication Theory,* ed. F. E. X. Dance (New York: Holt, Rinehart & Winston, 1967), pp. 160–201.

26 Examples from Gilbert Harmon, *On Noam Chomsky: Critical Essays* (Garden City, NY: Anchor, 1974), p. 5.

27 For a brief overview of generative grammar, see Jacobs, "Language and Interpersonal Communication"; and Thomas Wasow, "Grammar," in *International Encyclopedia of Communications,* vol. 2, eds. Erik Barnouw et al., (New York: Oxford University Press, 1989), pp. 234–238; Graddol, Cheshire, and Swann, *Descriptive Language,* pp. 85–89.

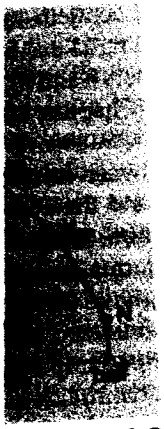

FIGURE 4.3

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## Generative Grammar

Noam Chomsky is the primary force behind generative grammar. As a young linguist in the 1950s, Chomsky parted company with the classical theorists to develop an approach that since has become the mainstay of contemporary linguistics.[28] Like any theoretical tradition, generative grammar now has several positions within it, although the tradition as a whole is built on a cluster of essential ideas.

First, generative grammar rests on the assumption that sentence generation is central to sentence structure. The form of a sentence cannot be separated from the process by which it is generated. Old-style linguistics was powerful in *describing* the structure of a sentence, but it did not explain how sentences are actually produced by the speaker. Further, there is the suspicion that the surface structure of a sentence may actually mislead us about how sentences are really structured within the mind.

Second, the objective of generative grammar is to isolate a set of rules that explains how any sentence could be generated. Inventing a new rule for each construction is not workable because the brain cannot operate by an infinite set of rules, though people can produce and understand an infinite number. An adequate grammar must explain this paradox. The answer lies in a relatively small number of rules that can be used over and over again to produce novel sentences.

The third essential feature of generative grammar is the transformation. (In fact, generative grammar is also named *transformational grammar.*) At some point the surface structure of a sentence must have been transformed from some other deeper form, and generative grammar seeks to explain this transformation process.

In treating the study of mind as a natural science, Chomsky believes that principles of language and mind are universal and can be discovered by scientists. He is analytical in approach and seeks inherent mechanisms of mind. However, he also sees the individual as creative, so he promotes the idea that knowledge arises from a projection of innate categories onto the world of actual experience.[29] In short, Chomsky is a champion of rationalism, a point of view that until the past decade or two has not been popular in this century.[30]

Generative grammar is highly technical, and we will not cover it in detail here.[31]

Language is a fascinating and important subject, but the signs used in communication are certainly not limited to the linguistic. Much of the nuance of meaning is communicated nonverbally.

# THEORIES OF NONVERBAL COMMUNICATION

Scholars disagree about what nonverbal communication is, as Randall Harrison points out:

> The term "nonverbal communication" has been applied to a bewildering array of events. Everything from the territoriality of animals to the protocol of diplomats. From facial expression to muscle twitches. From inner, but inexpressible, feelings to outdoor public monuments. From the message of massage to the persuasion of a punch. From dance and drama to music and mime. From the flow of affect to the flow of traffic. From extrasensory perception to the economic policies of international power blocks. From fashion and fad to architecture and analog computer. From the smell of roses to the taste of steak. From Freudian symbol to astrological sign. From the rhetoric of violence to the rhetoric of topless dancers.[32]

28 For a list of Chomsky's works, see the Bibliography.

29 Chomsky discusses features of his epistemology in *Rules and Representations* (New York: Columbia University Press, 1980).

30 The philosopher most associated with rationalism is René Descartes (seventeenth century). See *Meditations on First Philosophy,* trans. Laurence J. LaFleur (Indianapolis, IN: Bobbs-Merrill, 1960).

31 For a brief summary, see previous editions of this book: Stephen W. Littlejohn, *Theories of Human Communication,* 5th ed. (Belmont, CA: Wadsworth, 1996), pp. 75–77; 4th ed. (Belmont, CA: Wadsworth, 1992), pp. 74–77. See also Jacobs, "Language and Interpersonal Communication"; and Wasnow, "Grammar."

32 Randall Harrison, *Beyond Words: An Introduction to Nonverbal Communication* (Englewood Cliffs, NJ: Prentice-Hall, 1974), pp. 24–25. Conceptual issues are discussed in Judee K. Burgoon, "Nonverbal Signals," in *Handbook of Interpersonal Communication,* eds. Mark

As the above quotation shows, there is little agreement on what counts as nonverbal communication. To make this question even more challenging, research on nonverbal behavior is extensive and comes from many fields.[33] For these reasons, classifying and organizing this material is difficult. Various topics relevant to nonverbal communication are covered later in the book; for now, let's concentrate on structural approaches to nonverbal coding.

Burgoon characterizes nonverbal code systems as possessing several structural properties. First, nonverbal codes tend to be *analogic* rather than digital. Whereas digital signals are discrete, like numbers and letters, analogic signals are continuous, forming a spectrum or range, like sound volume and the brightness of light. Therefore, nonverbal signals like facial expression and vocal intonation cannot simply be classed into one category or another—like loud or soft, bright or dim—but are gradations.

A second feature found in some, but not all, nonverbal codes is *iconicity*, or resemblance. Iconic codes resemble the thing being symbolized (like depicting the shape of something with your hands). Third, certain nonverbal codes seem to elicit *universal meaning*. This is especially the case with such signals as threats and emotional displays, which may be biologically determined. Fourth, nonverbal codes enable the *simultaneous transmission* of several messages. With the face, body, voice, and other signals, several different messages can be sent at once. Fifth, nonverbal signals often evoke an *automatic response* without thinking. An example would be stepping on the brake at a red light. Sixth, nonverbal signals are often emitted quite *spontaneously*, as when you let off nervous energy.

We can use Morris's three dimensions of semantics, syntactics, and pragmatics, defined earlier in the chapter, to characterize nonverbal forms (as well as language). *Semantics* refers to the meanings of a sign. For example, two fingers held up behind someone's head is a way of calling him a "devil." *Syntactics* refers to the ways signs are organized into systems with other signs. One might, for example, hold up two fingers behind someone's head, laugh, and say "Joke's on you!" Here a gesture, a vocal sign (laughing), facial expressions, and language combine to create an overall meaning. *Pragmatics* refers to the effects or behaviors elicited by a sign or group of signs, as when the "devil" sign is taken as a joke rather than an insult.

The meanings attached to both verbal and nonverbal forms are context-bound, or determined in part by the situation in which they are produced. Both language and nonverbal forms allow communicators to combine relatively few signs into an almost limitless variety of complex expressions of meaning.

Nonverbal code systems are often classed according to the type of activity used in the code. Burgoon suggests seven types: kinesics (bodily activity); vocalics, or paralanguage (voice); physical appearance; haptics (touch); proxemics (space); chronemics (time); and artifacts (objects).[34]

As examples, we will look at three well-established theories of kinesics and proxemics.

## Birdwhistell on Kinesics

Ray Birdwhistell is considered the originator of kinesics.[35] An anthropologist interested in language, Birdwhistell uses linguistics as a model for his kinesic work. In fact, kinesics is popularly referred to as "body language." Let us look at the foundational ideas of Birdwhistell's theory.

In *Kinesics and Context* Birdwhistell lists seven assumptions on which he bases his theory:[36]

1. All body movements have potential meaning in communicative contexts. Somebody can always assign meaning to any bodily activity.

L. Knapp and Gerald R. Miller (Thousand Oaks, CA: Sage, 1994), pp. 229–285; see also Mark Knapp and Judith Hall, *Nonverbal Communication in Human Interaction* (New York: Holt, Rinehart & Winston, 1992).

33 For a broad overview of research, see Burgoon, "Nonverbal Signals."

34 Burgoon, "Nonverbal Signals," p. 232.

35 Birdwhistell's major works include *Introduction to Kinesics* (Louisville, KY: University of Louisville Press, 1952); *Kinesics and Context* (Philadelphia: University of Pennsylvania Press, 1970).

36 Birdwhistell, *Kinesics and Context*, pp. 183–184.

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cial groups."[38]

2. Behavior can be analyzed because it is organized, and this organization can be subjected to systematic analysis.
3. Although bodily activity has biological limitations, the use of bodily motion in interaction is considered to be a part of the social system. Different groups will therefore use gestures differently.
4. People are influenced by the visible bodily activity of others.
5. The ways in which bodily activity functions in communication can be investigated.
6. The meanings discovered in research on kinesics result from the behavior being studied as well as the methods used for research.
7. A person's use of bodily activity will have idiosyncratic features but will also be part of a larger social system shared with others.

Birdwhistell's work is based largely on the perceived similarities between bodily activity and language, which has been called the *linguistic-kinesic analogy.*

> This original study of gestures gave the first indication that kinesic structure is parallel to language structure. By the study of gestures in context, it became clear that the kinesic system has forms which are astonishingly like words in language. The discovery in turn led to the investigation of the components of these forms and to the discovery of the larger complexes of which they were components. . . . It has become clear that there are body behaviors which function like significant sounds, that combine into simple or relatively complex units like words, which are combined into much longer stretches of structured behavior like sentences or even paragraphs.[37]

The similarity of hierarchical structure in kinesics to that of linguistics is striking, and the problem of the kinesicist is similar to that of the linguist: "Kinesics is concerned with abstracting from the continuous muscular shifts which are characteristics of living physiological systems the groupings of movement which are of significance to the communicational process and to the interactional systems of particular social groups."[38]

Out of the thousands of perceptible bodily motions produced in a short period of time, certain of these emerge as important in communication. Such movements are called kines. A *kine* is a range of motions or positions seen as a single motion or position. A perceptible movement of the eyelid or a turn of the hand would be an example of a kine. What is defined as a kine in one cultural group may not be in another.

Kines are further grouped into *kinemes,* elements that have distinct meanings. Like the phoneme in linguistics, the kineme is a group of relatively interchangeable kines. For example, up to twenty-three different positions (kines) of the eyelids can be discerned, but they can be grouped into about four kinemes. Kinemes, like phonemes, occur in context. A complex combination of kinemes throughout the body such as a wink, a smile, and a wave of the hand is called a *kinemorph.*

## Ekman and Friesen on Kinesics

For many years Paul Ekman and Wallace Friesen collaborated on research that led to an excellent general model of kinesic behavior, concentrating their work on the face and hands.[39] Their goal was ambitious: "Our aim has been to increase understanding of the individual, his feelings, mood, personality, and attitudes, and to increase understanding of any given interpersonal interaction, the nature of the relationship, the status or quality of communication, what impressions are formed, and what is revealed about interpersonal style or skill."[40]

These authors analyzed nonverbal activity three ways: by origin, by coding, and by usage.

37 Birdwhistell, *Kinesics and Context,* p. 80.
38 Birdwhistell, *Kinesics and Context,* p. 192.
39 Ekman and Friesen's major works include "Nonverbal Behavior in Psychotherapy Research," in *Research in Psychotherapy,* vol. 3, ed. J. Shlien (Washington, DC: American Psychological Association, 1968), pp. 179–216; "The Repertoire of Nonverbal Behavior: Categories, Origins, Usage, and Coding," *Semiotica* 1 (1969): 49–98; *Emotion in the Human Face: Guidelines for Research and an Integration of Findings* (New York: Pergamon, 1972); *Unmasking the Face* (Englewood Cliffs, NJ: Prentice-Hall, 1975).
40 Paul Ekman and Wallace Friesen, "Hand Movements," *Journal of Communication* 22 (1972): 353.

*Origin* is the source of an act. A nonverbal behavior may be *innate* (built into the nervous system), *species-constant* (universal behavior required for survival), or *variant* across cultures, groups, and individuals. As examples, one could speculate that eyebrow raising as a sign of surprise is innate, that marking territory is species-constant, and that shaking the head back and forth to indicate no is culture-specific.

*Coding* is the relationship of the act to its meaning. An act may be *arbitrary*, with no meaning inherent in the sign itself. By convention in our culture, for example, we agree that head nodding is an indication of yes, but this coding is purely arbitrary. Other nonverbal signs are *iconic* and resemble the thing being signified. For instance, we often draw pictures in the air or position our hands to illustrate what we are talking about. The third category of coding is *intrinsic.* Intrinsically coded cues contain their meaning within them and are themselves part of what is being signified. Crying is an example of intrinsic coding. Crying is a sign of emotion, but it is also part of the emotion itself.

The third way to analyze a behavior is by *usage*. Usage also includes the degree to which a nonverbal behavior is intended to convey information. A *communicative act* is used deliberately to convey meaning. *Interactive acts* actually influence the behavior of the other participants. An act is both communicative and interactive if it is intentional and influential. For example, if you deliberately wave to a friend as a sign of greeting and the friend waves back, your cue is communicative and interactive. Some behaviors are not intended to be communicative but nevertheless provide information for the perceiver. Such acts are said to be *informative.* On a day when you are feeling less than friendly, you may duck into a hallway to avoid meeting an acquaintance coming your way. If the other person sees the avoidance, your behavior has been informative even though you did not intend to communicate.

All nonverbal behavior is one of five types, depending on origin, coding, and usage. The first type is the *emblem.* Emblems have a verbal translation of a rather precise meaning. They are normally used in a deliberate fashion to comm
nicate a particular message. The victory "V"
the black power fist are examples. The origin
emblems is cultural learning, and emblems m
be either arbitrary or iconic.

*Illustrators* are the second kind of nonverb
cues. Illustrators are used to depict what is bein
said verbally. They are intentional, though w
may not always be directly aware of them. The
include eight types:

*batons*—movements that accent or emphasize

*ideographs*—"sketching" the direction of a thought

*deictic movements*—pointing

*spatial movements*—depicting or outlining space

*rhythmic movements*—pacing motions

*kinetographs*—depicting physical actions

*pictographs*—drawing a picture in the air

*emblematic movements*—illustrating a verbal statement

These types can be combined, since some motions are combinations of types. Illustrators are informative or communicative in use and occasionally may be interactive. They are learned.

The third type of nonverbal behavior is the *adaptor,* which serves to facilitate release of bodily tension. Examples are hand wringing, head scratching, or foot jiggling. *Self-adaptors* are directed to one's own body. They include scratching, stroking, grooming, squeezing. *Alter-adaptors,* like slapping someone on the back, are directed to another's body. *Object-adaptors,* such as twisting a paper clip, are directed at things. In any case, adaptors can be iconic or intrinsic. Rarely are they intentional, and one is usually not aware of one's own adaptive behaviors. Although they are rarely communicative, they are sometimes interactive and often informative.

*Regulators,* the fourth type of behavior, are used to control or coordinate interaction. For example, we use eye contact to signal speaking and

## Generative Grammar

Noam Chomsky is the primary force behind generative grammar. As a young linguist in the 1950s, Chomsky parted company with the classical theorists to develop an approach that since has become the mainstay of contemporary linguistics.[28] Like any theoretical tradition, generative grammar now has several positions within it, although the tradition as a whole is built on a cluster of essential ideas.

First, generative grammar rests on the assumption that sentence generation is central to sentence structure. The form of a sentence cannot be separated from the process by which it is generated. Old-style linguistics was powerful in *describing* the structure of a sentence, but it did not explain how sentences are actually produced by the speaker. Further, there is the suspicion that the surface structure of a sentence may actually mislead us about how sentences are really structured within the mind.

Second, the objective of generative grammar is to isolate a set of rules that explains how any sentence could be generated. Inventing a new rule for each construction is not workable because the brain cannot operate by an infinite set of rules, though people can produce and understand an infinite number. An adequate grammar must explain this paradox. The answer lies in a relatively small number of rules that can be used over and over again to produce novel sentences.

The third essential feature of generative grammar is the transformation. (In fact, generative grammar is also named *transformational grammar*.) At some point the surface structure of a sentence must have been transformed from some other deeper form, and generative grammar seeks to explain this transformation process.

In treating the study of mind as a natural science, Chomsky believes that principles of language and mind are universal and can be discovered by scientists. He is analytical in approach and seeks inherent mechanisms of mind. However, he also sees the individual as creative, so he promotes the idea that knowledge arises from a projection of innate categories onto the world of actual experience.[29] In short, Chomsky is a champion of rationalism, a point of view that until the past decade or two has not been popular in this century.[30]

Generative grammar is highly technical, and we will not cover it in detail here.[31]

Language is a fascinating and important subject, but the signs used in communication are certainly not limited to the linguistic. Much of the nuance of meaning is communicated nonverbally.

## Theories of Nonverbal Communication

Scholars disagree about what nonverbal communication is, as Randall Harrison points out:

> The term "nonverbal communication" has been applied to a bewildering array of events. Everything from the territoriality of animals to the protocol of diplomats. From facial expression to muscle twitches. From inner, but inexpressible, feelings to outdoor public monuments. From the message of massage to the persuasion of a punch. From dance and drama to music and mime. From the flow of affect to the flow of traffic. From extrasensory perception to the economic policies of international power blocks. From fashion and fad to architecture and analog computer. From the smell of roses to the taste of steak. From Freudian symbol to astrological sign. From the rhetoric of violence to the rhetoric of topless dancers.[32]

28 For a list of Chomsky's works, see the Bibliography.

29 Chomsky discusses features of his epistemology in *Rules and Representations* (New York: Columbia University Press, 1980).

30 The philosopher most associated with rationalism is René Descartes (seventeenth century). See *Meditations on First Philosophy*, trans. Laurence J. LaFleur (Indianapolis, IN: Bobbs-Merrill, 1960).

31 For a brief summary, see previous editions of this book: Stephen W. Littlejohn, *Theories of Human Communication*, 5th ed. (Belmont, CA: Wadsworth, 1996), pp. 75–77; 4th ed. (Belmont, CA: Wadsworth, 1992), pp. 74–77. See also Jacobs, "Language and Interpersonal Communication"; and Wasnow, "Grammar."

32 Randall Harrison, *Beyond Words: An Introduction to Nonverbal Communication* (Englewood Cliffs, NJ: Prentice-Hall, 1974), pp. 24–25. Conceptual issues are discussed in Judee K. Burgoon, "Nonverbal Signals," in *Handbook of Interpersonal Communication*, eds. Mark

as walls and rooms. *Semifixed-feature space* includes movable objects like furniture. *Informal space* is the personal territory around the body that travels with a person, which determines the interpersonal distance between persons. Anglo-American culture, for example, uses four discernible distances: intimate (0 to 18 inches), personal (1 to 4 feet), social (4 to 12 feet), and public (over 12 feet).

When people are engaged in conversation, eight factors may be involved in how they use their space:

1. *Posture-sex factors*: These include the sex of the participant and the basic position (standing, sitting, lying).
2. *Sociofugal-sociopetal axis*: The word *sociofugal* means discouragement of interaction and *sociopetal* implies encouragement. Axis is the angle of the shoulders relative to the other person. The speakers may be facing each other, may be back to back, or may be positioned toward any other angle in the radius. Thus, some angles, like face to face, encourage interaction, while others, like back to back discourage it.
3. *Kinesthetic factors*: This is the closeness of the individuals in terms of touchability. Individuals may be in physical contact or within close distance, they may be outside body contact distance, or they may be positioned anywhere in between these extremes. This factor also includes the positioning of body parts as well as which parts are touching.
4. *Touching behavior*: People may be involved in caressing and holding, feeling, prolonged holding, pressing against, spot touching, accidental brushing, or no contact.
5. *Visual code*: This category includes the manner of eye contact ranging from direct (eye-to-eye) to no contact.
6. *Thermal code*: This element involves the perceived heat from the other communicator.
7. *Olfactory code*: This factor includes the kind and degree of odor perceived in the conversation.
8. *Voice loudness*: The loudness of speech can affect interpersonal space.

## Commentary and Critique

The study of signs and language is an impor
core of communication theory. It not only p
vides a way of looking at communication but a
has had a powerful impact on almost all persp
tives now employed in communication theory.
the heart of semiosis is the basic notion of t
triad of meaning. Although various theorists ha
defined the elements of the triad somewhat diff
ently or have stressed different aspects of it, th
triad constitutes the heart of semiotic thinking.

Semiotic thinking has gone through a variet
of versions. Peirce was primarily responsibl
for developing the idea of the sign-referent
interpretation unit, and others have built on thi
basic notion. Saussure applied semiotics to lan
guage, whereas Birdwhistell, Hall, and others
emphasized nonlanguage forms.

Saussure's idea of difference has been a key concept in our understanding of language, but it applies equally well to all sign systems. Signs do not have a life of their own as independent markers. They assume significance only by virtue of the difference among signs. Semiotics, then, always makes distinctions.

For Morris, signification is a behavioral phenomenon, and a sign is understood in terms of how it predisposes people and animals to respond in certain ways. Much of human life, including meaning, action, interaction, and values, constitutes behavioral semiotic processes for Morris. If Morris's semiotics is behavioristic, Langer's is cognitive and emotive. For Langer, meaning consists of feeling and conception. For Langer symbols are tools of thought.

Morris's threefold division of semiotics into semantics, syntactics, and pragmatics has been especially useful in understanding the structural tradition. Many semioticians, including Morris, Langer, and Eco, have been preoccupied with the semantic dimension, in which the sign brings an idea, feeling, or conception into the mind of the person.

Syntactics, or the relationship among signs, has dominated the study of language and non-

verbal communication. Saussure's idea of difference is especially important because it captures that character of signs making organization possible. Individual signs differ, making it possible to distinguish one from another; and organizational patterns differ as well, causing any grammatical structure to imply a meaning different from that implied by other structures.

Pragmatics is the study of how signs make a difference in people's lives. It is the study of the practical effects of signs. In a general sense, many communication theories are pragmatic because they deal with the outcomes or effects of communication. We begin looking at some pragmatic elements in the next chapter, and we will encounter them again at various points in this book.

Classical semiotics, which today may seem self-evident and simplistic to anyone with a modicum of background in language or communication, laid the foundation for more sophisticated linguistic and communication theories in the twentieth century.

Leeds-Hurwitz shows that because semiotics studies relationships within a complex network of things, it is at the heart of a number of broad communication concerns.[43] The semiotician may begin with individual signs, but the function of a sign can only be known by its connection with other signs in complex codes, and indeed even culture, with all that this broad concept entails, is viewed by some as a system of connected codes. Eco himself wrote: "Every act of communication to or between human beings—or any other intelligent biological or mechanical apparatus—presupposes a signification system as its necessary condition."[44] Thomas Sebeok added: "The subject matter of semiotics, it is often credited, is the exchange of any messages whatsoever, in a word, *communication*. . . . Semiotics is therefore classifiable as that pivotal branch of an integrated science of communication."[45]

Although the ideas covered in this chapter have a certain intuitive appeal, they have been criticized.[46] Most critics agree that language is certainly conventional, but its arbitrariness is more in question. Arbitrariness makes sense only if one accepts that language and speech are separate and that signs are separate from their referents.

Visual signs create special problems in this regard. Most people live constantly in a world of images, and with the electronic media, especially video, imagery becomes increasingly important as central signs in our culture. Yet, visual images do not quite fit the semiotic norm of representation. Surely, images can be understood as representing things, but they are not arbitrary or separate from what is represented. Images resonate with deep levels of actual experience in a way that arbitrary signs do not.[47]

Because visual codes are more open in their potential meanings, their interpretation is ultimately subjective and more connected to the internal perceptual and cognitive processes of the viewer than to conventional restricted representations. This is not to say that a person's meaning for an image is entirely individual. Visual means can and are affected by social learning too, but perceiving visual images is not the same as understanding language. Images require pattern recognition, organization, and discrimination, not just representational connections. Thus the meanings of visual images are a product of both individualized and social perception and knowledge.[48]

In a recent critique of semiotics, John Stewart challenges five commitments of semiotic theory.[49] The first is the *two worlds* commitment, the idea that signs and objects are separate with one representing the other. The second commitment is *atomism*, or the practice of analyzing sign

43 Leeds-Hurwitz, *Semiotics and Communication*, pp. 3–21.
44 Eco, *A Theory of Semiotics*, p. 9.
45 Thomas Sebeok, "The Doctrine of Sign," in *Frontiers in Semiotics*, eds. J. Deely, B. Williams, and F. E. Kruse (Bloomington: Indiana University Press, 1986), p. 36.
46 For a critique of structuralism, see Giddens, *Central Problems*.
47 Harry Redner, *A New Science of Representation: Towards an Integrated Theory of Representation in Science, Politics, and Art* (Boulder, CO; Westview, 1994).
48 Sandra E. Moriarty, "Abduction: A Theory of Visual Interpretation," *Communication Theory* 6 (1996): 167–187.
49 John Stewart, "The Symbol Model vs. Language as Constitutive Articulate Contact," in *Beyond the Symbol Model: Reflections on the Representational Nature of Language*, ed. John Stewart (Albany: SUNY Press, 1996), pp. 9–63; Stewart, *Language as Articulate Contact*. A similar argument is made by Pierre Bourdieu, *Language and Symbol Power* (Cambridge, MA: Harvard University Press, 1991).

systems, including language, by breaking them into small parts. The third commitment is *representation*, the belief that signs represent things other than themselves. Next, there is the *system* commitment, which leads to the depiction of signs in objective systems that can be examined and understood from outside. Finally, Stewart critiques the *tool* assumption, or the idea that signs and language are a way of transmitting thoughts and ideas from one place to another.

Stewart does not claim that all language and semiotic scholars explicitly accept these claims. Indeed, as we have seen in this chapter, several make attempts to expand semiotics beyond the simplistic word-thing relationship. Stewart's concern is the baggage that the vocabulary of "sign" and "symbol" bring with it. Once you use these terms, you are led to adopt the five commitments, even if tacitly, which may belie or distort the more complex vision held by the theorist.

Stewart's primary objection to the five commitments is that they just do not work out in practice. When you try to apply them to ongoing social interaction, you run into serious obstacles. Take the words *so, and, about,* and *sure* as examples. What do these represent? Certainly not objects. You might say they represent states of some kind or ideas, but states and ideas can only be represented by other words. In these cases, meaning is established not by the sign-object relationship, but by the sign-sign relationship; and the latter is determined by how the signs are used by communicators, not by any structural feature of the signs themselves.

Even the task of breaking down sign systems like language into units is problematic. Take a stop sign as an example. What, exactly, is the sign here? Is it the letter *S*, the word *STOP*, the shape of the sign, where it is placed on the road? Or some combination of these? The same difficulty is encountered in trying to analyze language. If you listen to language the way it is actually spoken, phonemes, morphemes, and grammatical rules become distorted and broken. The speech is still understandable, but not as neatly analyzed as formal linguistics leads us to believe.

Stewart shares the belief of many critics that the use of signs establishes and constructs the very thing those signs are said to represent. Even Saussure acknowledged that for all practical purposes our knowledge of the world is completely determined by language. These critics also believe that language and communication cannot be separated in the way that Saussure does with his langue-parole distinction because speech and other communicative forms are the mechanisms by which language and signs are created, maintained, and changed.[50] Later semioticians like Eco acknowledge this difficulty. At the same time, certain interactionists and interpretive scholars (Chapters 8, 9, and 10) attack the problem head-on by focusing on the uses of language and nonverbal forms in actual interaction rather than on the structure of the sign system itself.

As an alternative to semiotics, Stewart proposes that language is "constitutive articulate contact." Language is constitutive because its use *constitutes* or constructs the categories by which we understand the world, and it is *articulate contact* because our social worlds are made by human beings using language when they come into contact with one another. Language is a medium in which things get worked out through dialogue.

Donald Ellis takes yet another position on meaning.[51] He would agree with Stewart that signs are not simple representations of real objects, but in order for communication to occur, we must have an assumption of meaning. The system of relations among signs must allow communicators to find real meaning, or communication could not take place. We must share a sense of coherence in messages, or no amount of understanding will be possible, and we must assume that when we make use of the rules of language, large numbers of people who know those rules will be able to understand the meaning we intend.

50 This idea is more fully explored in Chapters 8 and 9 of this textbook and is elaborated by Robert Hodge and Gunther Kress, *Social Semiotics* (Ithaca, NY: Cornell University Press, 1988).

51 Donald G. Ellis, "Fixing Communicative Meaning: A Coherentist Theory," *Communication Research* 22 (1995): 515–544.

This does not mean that everyone will react the same way to a message or even think the same thoughts. Different people will connect meanings to one another in many different ways, but a basic coherent meaning is still necessary for understanding to occur.

Chomskian linguistics has been described as a true Kuhnian revolution (see Chapter 2). It is generally praised as providing answers to questions that classical and behaviorist linguistics could not handle. Its major strengths are usually seen as its parsimony and explanatory power. However, language is one of our most difficult intellectual puzzles, and even generative grammar has its weaknesses. Basically, generative grammar has been criticized on two fronts—its scope and its validity.

Two problems of scope warrant discussion here. First, generative grammar generally ignores or downplays semantics. Primarily, it is a theory of grammar, of syntax; problems of individual lexical units and their meanings are ignored as unimportant. Second, critics are bothered by the failure of generative grammarians to consider problems of language as used in everyday life. Generative grammar treats language as an abstraction, claiming that an understanding of the anomalies of language use is unimportant to an understanding of language itself.

Generative grammar makes a sharp distinction between language *competence* and language *performance*. The former is knowledge of grammar; the latter is language use. Staying within the tradition of structural linguistics, generative grammarians steadfastly maintain that performance is not a linguistic concern and are not very interested in how language is used in social interaction. The theory therefore does not account for local and cultural variations of language, nor does it account for the commonly observed phenomenon of ungrammatical speech.

Much of the criticism of generative grammar questions its validity. A good deal of disagreement exists within the generative movement itself about the locus of meaning. Where in the process of sentence generation is meaning established? Chomsky has shown that meaningfulness cannot reside strictly at the surface level, yet deep analysis by itself may not be adequate for the establishment of meaning.

Transformational theory's validity problems result from the difficulty of observing generative processes. Linguists must rely on inferences made from observing spoken sentences. Classical linguistics failed to make this inferential leap from observed behavior to hidden processes, and thus it fell short. As a result of its strong reliance on inference, generative theory operates primarily from logical force (see Chapter 2), relying mostly on the strength of the logical connections among inferences. It also relies heavily on reasoning from "residues." In other words, alternative explanations are attacked and shown to be inadequate. What cannot be disproved—the residue—is taken as the best explanation. Linguistic writings are filled with demonstrations of how a given explanation will not work in explaining a particular construction. The use of inference, logical necessity, and residues in the development of generative theory is not inherently weak, however, for it is the only available method for developing theory in the absence of direct observation.

The work on nonverbal communication has been important because it shows that communication consists of many types of signs. At the same time, by emphasizing the nonverbal, most of these theories distract us from the holistic nature of the communication code. Indeed, the analytical nature of both linguistics and nonverbal research belies the complexity of the communication process.[52] This problem is the *fallacy of analysis*. Leeds-Hurwitz describes the problem in these terms: "[Nonverbal codes] are separated only temporarily by analysts in order to make research easier. But we as analysts have gone perhaps too far in our efforts to make research easy, forgetting to ever recombine the separate elements again. To

52 For a discussion of the limitations of nonverbal communication theories, see Judee Burgoon and Thomas Saine, *The Unspoken Dialogue: An Introduction to Nonverbal Communication* (Boston: Houghton Mifflin, 1978), chap. 2; and Mark Knapp, John Wiemann, and John Daly, "Nonverbal Communication: Issues and Appraisal," *Human Communication Research* 4 (1978): 271–280.

me, the purpose of studying nonverbal communication is to aid the understanding of social interaction as a whole."[53]

Ironically, as nonverbal communication research separates language from other behavior, much of it has relied heavily on a linguistic analogy. In other words, nonverbal codes are believed by some to be organized essentially the same way as language. This belief is not surprising because of the common semiotic heritage of the two lines of research. As the early semioticians so clearly spelled out, the syntax or organization among signs is the most important constituent of meaning. Saussure applied this idea to language, and theorists like Birdwhistell adopted linguistic ideas about syntax to nonlinguistic signs.

53 Leeds-Hurwitz, *Semiotics and Communication*, p. xvii.

This problem is the *fallacy of the linguistic a*
*ogy*. Although some superficial similarities m
be observed between language and bodily
havior, more differences than similarities ex
Language is presented sequentially and involv
discrete signs; nonverbal codes are not presen
in a sequential manner and usually do not con
of discrete behaviors. Although language is org
nized hierarchically, no good evidence show
that nonverbal acts are organized in this wa
Language tends to be used consciously, and no
verbal signs are often displayed unconsciously.

One of the limits of most of the theories in thi
chapter is that they focus on the smallest units of
meaning and low-level organizations of signs.
The true richness of communication occurs at a
higher level, when signs are combined into com-
plex messages. We turn to this concern in Chap-
ter 5 in our discussion of discourse.

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