NANCY BONVILLAIN

Language, Culture, & Communication

The Meaning of Messages

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Eighth Edition

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Contents

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Preface

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This book introduces students to the topics and theories of the broad field of linguistic anthropology. It explores the many ways that speakers use language in order to accomplish goals and express their intentions. These goals and intentions are primarily interactional and social. Through language structure and language use, speakers convey messages about their own identities, their understandings of the world, and their place in it. The book includes discussion of cultural and symbolic meanings conveyed by language and the social and political dimensions of language use. It emphasizes the themes of discourse, language ideologies, social identities, and intersectionalities throughout the text. It includes data from cultures and languages throughout the world in order to document both similarities and differences in human language.

NEW TO THIS EDITION

The updates to this eighth edition of *Language, Culture, and Communication* begin in Chapter 1 with the introduction of two themes that are elaborated in nearly all of the chapters: the theme of intersectionalities and the theme of discourse and texts.

New discussions of research and many new sections are included:

- Chapter 3, "Language and Cultural Meaning": expansion of discussion of the reexamination of linguistic relativity
- Chapter 5, "Communicative Interactions": expansion of discussion of politeness, especially how social stratification and racial differences can influence the way that politeness is interpreted and the contextual expression of politeness
- Chapter 6, "Digital Communication and Signed Languages":
  - New section on digital telephone technologies and innovative literacy practices using cell phones
  - New section on social media including the use of social media platforms with national and international statistics and practices
  - Expansion of discussion of Deaf communities as well as discussion of the controversy over cochlear implants

- Chapter 8, "The Acquisition of Communicative Competence": new section on the inclusions and exclusions of Moroccan immigrant children in Spain through communicative interactions and norms
- Chapter 9, "Societal Segmentation and Linguistic Variation: Class and Race":
  - Expansion of section on race
  - New section on the covert expression of racist meanings
- Chapter 10, "Language and Gender":
  - New section on gendered speech in Lakhota
  - New section on men's and women's speech in Yanyuwa, Australia
  - New section on conversational style and the gendering of workplaces
  - New section on language and sexuality
- Chapter 11, "Multilingual Nations":
  - Updates on the distribution of languages worldwide and in sections on Canada and the United States
  - New section on the development of the "American standard"
- Chapter 12, "Multilingual Communities":
  - Expansion of discussion of language and nation building
  - Expansion of discussion of language shift and language revitalization programs
- Chapter 13, "Language and Institutional Encounters": expansion of discussion of social ideologies and prejudices expressed in public media

FORMAT OF THE BOOK

This book contains 13 chapters that together present surveys of the field of linguistic anthropology and the study of language and culture. In addition to discussing research that is basic to the discipline, it focuses on the analysis of discourses as central to communicative interactions, revealing how social relations are produced and continually reproduced through speech. The text also highlights the analysis of language ideologies, that is, the beliefs that people have about language structure itself, about language usage, and about appropriate norms for producing and evaluating speech. These concepts are introduced in Chapter 1 and then discussed throughout the book.

Chapter 2 presents some of the structural features of language that are basic to an understanding of what language is. Chapter 3 discusses current issues in linguistic relativity, cultural and cognitive categorization, and the uses of metaphor. The next two chapters (Chapters 4 and 5) describe situational aspects of communication, including structural and interactional features of conversation and the social meanings conveyed through speech encounters. Chapter 6 deals with digital communication, that is, telephones and the Internet in personal communication, chats, and online courses. It also contains material on signed languages, drawing upon data from several countries. Chapters 7 and 8 describe the processes of language acquisition, including the learning of structural properties of language and of communicative competence. Chapter 9 focuses on speakers' class and race as significant influences on speech style. In Chapter 10, we discuss the role of gender identities on one's choices of speaking. Chapter 11 focuses on language use, loyalty,

and conflict in multilingual nations. Chapter 12 discusses multilingualism in communicative interactions, including both the micro level of individual choices and the national and international processes that affect local patterns of usage and meaning. The last chapter, Chapter 13, is devoted to analyzing inequalities of power in institutional encounters.

I express my thanks to the reviewers, both named and anonymous, who provided suggestions for the new edition: Bryan K. Crow, Southern Illinois University; Holly HK Didi-Ogren, the College of New Jersey; Amber A. Neely, Washington College; Suzanne Scheld, California State University, Northridge; Stephen David Siemens, California State University, Northridge; Saihua Xia, Murray State University.

I wish to thank Nancy Roberts for encouraging and supporting this new edition of *Language, Culture, and Communication*. And I happily recall that we worked together on the very first edition of the text as well as all of the subsequent editions.

Nancy Bonvillain

About the Author

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Nancy Bonvillain is a professor of anthropology and linguistics at Bard College at Simon's Rock. She is the author of more than 20 books on language, culture, and gender, including a series on Native American peoples. In her fieldwork she studied the Mohawk and Navajo, and she has published a grammar and dictionary of the Akwesasne dialect of Mohawk. She received her PhD from Columbia University and has taught at Columbia University, the New School, SUNY Purchase and Stonybrook, and Sarah Lawrence College.

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Introduction

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Language is an integral part of human behavior. It is the primary means of interaction between people. Speakers use language to convey their thoughts, feelings, intentions, and desires to others. Language links interlocutors in a dynamic, reflexive process. We learn about people through what they say and how they say it, we learn about ourselves through the ways that other people react to what we say, and we learn about our relationships with others through the give and take of communicative interactions.

Language is enriched by the different ways that people use it. These uses, and the meanings transmitted, are situational, social, and cultural. *Situational* meanings are conveyed through forms of language that occur or are excluded in various contexts. For example, in formal encounters, speakers pronounce sounds clearly, avoid slang or profanity, and employ elaborate grammatical constructions. *Social* meanings are signaled by linguistic alternatives chosen by different groups of people within a community. For example, women and men may pronounce sounds differently; workers in particular occupations employ special terminology or jargon; members of diverse social classes typically use more or less complex sentence patterns. Finally, *cultural* meanings are expressed both in the symbolic senses of words and by the ways that interlocutors evaluate communicative behavior.

When situational, social, and cultural factors are considered, the apparent variation in speaking actually becomes quite systematic. Consistent patterns of speech emerge in given situations, and consistent cultural norms are used to interpret communicative behavior.

Speaking is an action through which meaning is contextually created. Its complex functions are best studied ethnographically. An *ethnography of communication* (Hymes 1974) includes analysis of speech, situational contexts, and cultural norms used in evaluating talk. An ethnographic perspective that emphasizes the vital links between language and culture is important in the fields of linguistics, anthropology, and sociology. It enables linguists to appreciate the range of social and cultural meanings conveyed

by words and grammatical constructions. It enables anthropologists and sociologists to appreciate the contribution that communication makes to all human activity. For social scientists to understand how people organize their lives, carry out work, practice religions, and the like, they need to be aware of how people talk to each other. Studying behavior within one's own or another culture is limited if it ignores a critical aspect of behavior—namely, speech—just as studying language is limited if it ignores the cultural contexts in which language is produced.

In subsequent chapters of this book, we will explore the many interconnections among language, culture, and communicative meaning. We will stress interactional, situational, and social functions of language as they take place and are actively created within cultural contexts. The notion of cultural models will be relevant to much of the ensuing discussion. A *cultural model* is a construction of reality that is created, shared, and transmitted by members of a group. It may not be explicitly stated by participants, but it is, nevertheless, used to guide and evaluate behavior. For example, people in all cultures construct models expressing their views of the dimensions of the physical universe, the structure and functioning of their society, and proper ways for people to live and to treat each other. Because cultural models are shared and accepted, they are assumed by members to be natural, logical, necessary, and legitimate. As they become a background for behavior, they are not recognized as culturally constructed but rather are considered the natural order of life. According to Naomi Quinn and Dorothy Holland, "Largely tacit and unexamined, [cultural] models embed a view of 'what is' and 'what it means' that seems wholly natural—a matter of course. Alternative views are not even recognized, let alone considered" (1987:11). As we shall see, language and language use express, reinforce, and thus perpetuate underlying cultural models.

Although people within a given culture share many assumptions about the world, they are not a completely homogeneous group. People are differentiated on the basis of gender, age, and status in all societies. In addition, distinctions of class, race, and ethnicity are used to segment populations in most modern nations. All these factors contribute to diversity in communicative behavior and to disparities in evaluations given to the behavior of different groups of people. Interrelationships between social differentiation and communication are relevant to many topics pursued in subsequent chapters and will be discussed accordingly.

Another concept that we will be referring to in many sections of this text is *intersectionality*. This term refers to the ways that people's identities are created, maintained, and expressed in a complex aggregate of social constructs. That is, people are not simply a particular gender, a particular class, or a particular race or ethnicity. These and other social constructs combine and recombine in various and changing ways depending on the contexts, the situations, and the goals of the speaker. In other words, a person who is a woman is not only embodying that gender but also embodying her class, her race, her age, and her ethnicity. In any given communicative interaction, she may enact these various constructs to emphasize one or another or a complex aggregate of identities, but in other situations, other of her various embodiments might be emphasized while others are de-emphasized. This concept of intersectionality is an important focus in the social sciences as it more accurately captures the meanings of our social lives.

Speech norms and evaluations are molded and interpreted within *communities of practice*. A community of practice is a social group whose members share assumptions about the kind of speaking that is appropriate within its scope. A community of practice might be as large as a society or social group, but it might be small and dense in terms of the networks that bind people together. So, an individual may participate in numerous communities of practice. For example, the individual might participate in a given community of practice at work and in others in their leisure time activities or at home with their family. Each of these communities of practice will have particular norms that shape the way that people interact, the way that they speak to each other or don't speak to each other, and the way that they define rights to speak, allocating certain rights to some participants while denying them to others. The form of the language used itself, including what language to speak in a multilingual setting or the style of language chosen, may be shaped in various ways depending again on the norms of the given community of practice. And, of course, these norms may change, sensitive to developing norms in the society at large and to local innovations.

SPEECH COMMUNITIES

Talk takes place within a *speech community* consisting of people who, although heterogeneous, are united in numerous ways. Several researchers have taken pains to define such a community. Leonard Bloomfield described it as "a group of people who interact by means of speech" (1933:42). Bloomfield recognized that, in addition to speaking the same language, these people also agree about what is considered "proper" or "improper" uses of language (ibid.:155). Dell Hymes stressed the fact that members of a speech community are unified by norms about uses of language: "A speech community is defined as a community sharing knowledge of rules for the conduct and interpretation of speech. Such sharing comprises knowledge of at least one form of speech, and knowledge also of its patterns of use" (1974:51). And "a person who is a member of a speech community knows not only a language but also what to say … sharing of grammatical knowledge of a form of speech is not sufficient. There may be persons whose English I could grammatically identify, but whose messages escape me. I may be ignorant of what counts as a coherent sequence, request, statement requiring an answer, situation requiring a greeting, requisite or forbidden topic" (ibid.:49, 123).

In discussing speech communities, William Labov emphasized the social and evaluative norms shared by members: "A speech community cannot be conceived as a group of speakers who all use the same forms; it is best defined as a group who share the same norms in regard to language … who share a set of social attitudes toward language" (1972:158, 248). In Labov's view, norms are revealed by the ways that members of a community evaluate their own and others' speech.

Although the notion of speech community is useful in delineating a group of speakers, it is an abstraction in the sense that individuals do not interact with all other members. To focus on people who actually do interact, Lesley Milroy and James Milroy developed the concept of *speech network* (Milroy 1980; Milroy and Milroy 1978). People in a speech network have contact with each other on a regular basis, although the frequency of their interactions and the strength of their association vary. Thus, people in "dense networks" have daily, or at least frequent, contact. They are

likely to be linked by more than one type of bond—that is, they may be related, live in the same neighborhood, and work together. In addition, all of their associates also know each other. People in "weak networks" have less regular contact and do not know all of each other's associates.

Dense networks exert pressure on members to conform because values are shared and individuals' behavior can be readily known. Because linguistic usage is one type of behavior that is monitored and regulated within dense networks, members tend to maintain speech norms with little variation (Milroy and Milroy 1992:13). In contrast, members of weak networks do not share values as consistently. And weak networks do not have mechanisms that can apply social sanction against nonconformists on an individual basis, although the society as a whole does exert pressures for conformity through the transmission of cultural models on both conscious and nonconscious levels.

The concept of speech network is useful because it focuses on actual speakers and explains the mechanisms of control that lead to establishing and maintaining group norms in small-scale, daily interactions. Speech is constantly, although nonconsciously, evaluated. Therefore, speakers are always vulnerable to the judgments of their peers.

Throughout this book, we frequently return to issues of language use and evaluation of talk within speech communities and networks because they reveal social and cultural beliefs about how society is structured and the ways that people are expected to act and interact.

Ethnolinguistics

Studies in language, culture, and communication are based on two different, but compatible, methodologies. One, an ethnographic or *ethnolinguistic* approach, employs anthropological techniques of gathering data from observations of people's daily lives and of attempting to understand behavior from the participants' point of view. Ethnolinguists try to extract communicative rules by observing the behaviors that do or do not occur in various contexts and the reactions of members of a community to each other's actions. They attempt to understand what one needs to know in order to function appropriately in a given culture—how to make requests, issue commands, and express opinions, for example.

Studying language use within speech communities from an ethnolinguistic approach includes analysis of contexts, norms of appropriateness, and knowledge of language and its uses. Analyses of these facets of communicative behavior reveal underlying cultural models and demonstrate the cognitive and conceptual bonds that unify people within their culture.

Ethnolinguists also use elicitation techniques for obtaining linguistic data. They work with individual native speakers to collect material dealing with specific categories of vocabulary or types of grammatical constructions.

Sociolinguistics

The second approach to studying communicative behavior is *sociolinguistic*. This method is concerned with discovering patterns of linguistic variation. Variation in language use is derived from differences in speech situations and from social distinctions within a community that are reflected in communicative performance. Although some

speech differences are idiosyncratic, it is possible to study intracommunity variables by recording and analyzing the actual speech behavior of members of distinct sectors of a population.

A basic assumption in sociolinguistics is that two complementary processes operate in the dynamic connection between language and social factors. From one viewpoint, social differentiation among people is correlated with differences in their speech; from the other viewpoint, divergence in the way language is used is a gauge of social segmentation. Factors such as gender, age, class, region, race, ethnicity, and occupation frequently account for linguistic differences. Interrelationships between societal factors and language use are extremely complex for several reasons. First, sociolinguistic behavior is inherently variable; that is, each speaker uses the full range of options available in the community, such as alternatives of pronunciation, vocabulary, and sentence construction. However, options chosen in a particular instance of speech cannot be predicted. Sociolinguistic "rules" therefore are actually statements of probability rather than rules that can predict any single speech occurrence. Both individual and societal patterns are based on behavior exhibited over time and in diverse situations.

The second reason is that individuals are not isolates of sociological factors. A person is not simply female or male, child or adult, employer or worker. Rather, each person embodies an aggregate of factors, for example, a female adult worker with two children. Choices in speech style are motivated by many aspects of one's identity. Sociolinguistic studies consider the ways that specific attributes influence a speaker's selection in any given situation.

A third complication in sociolinguistic analysis is that of context itself. Components of speech contexts, such as setting, participants, topics, and goals, all influence speech. In some cultures, the styles of speech used in different contexts are sharply distinguished, whereas in others, linguistic styles are less differentiated. Even within a culture, some people are more sensitive than others to contextual cues and adjust their speech accordingly. Sensitivity to context may be related to social factors such as gender or class, or it may be related to an individual's participation in many different types of situations.

Because sociolinguistic patterns are discoverable on the basis of frequencies of usage, research methodologies emphasize interviews, experimental and situational observations, and quantitative analysis. Sociolinguists ideally collect large samples of ongoing communicative behavior and then try to isolate determining factors that result in linguistic variation.

Discourse

An additional, overarching approach to the study of language use centers on *discourse*, the connected stretches of speech that occur in informal as well as formal contexts. A focus on discourse allows for analyses of multiple interrelated layers of communication. Discourse analysis examines the speech that speakers produce and the complex arrays of meaning produced and interpreted from perspectives of form, content, and interactional dynamics. That is, we need to understand what speakers say, what they intend to mean, what they intend to do, and how their speech is interpreted by other participants in the conversation. We need to analyze the cultural contexts in which

speech occurs, the norms of production and interpretation that give it meaning, and the ways that social processes affect what is done and what is not done in communicative interactions. A field referred to as critical discourse analysis adds to this study an emphasis on the sociopolitical relations of power that inform both the production and interpretation of discourse. Not all members of society and not all participants in a given interaction have equal rights to contribute or equal power to determine or influence specific features of the interaction.

Discourse analysis focuses on texts, emphasizing the production of many different forms, including spoken discourse and printed matter. The latter may be as long as a book or as short as a paragraph or sentence. Texts also include any stretch of speech, such as a phrase or even a word, a narrative of personal experience, or a recital of a poem. Photographs or graphics are also texts that can be analyzed and their meanings uncovered.

Language Ideologies

Finally, we will consider topics that reflect anthropological and linguistic interest in *language ideologies*. These are ideologies, or beliefs, about language, about what constitutes a language, and about what is acceptable or appropriate language use. Every society has systems of beliefs about the world, including ideas about human beings, their abilities and rights, and the ways they interact with each other. These ideas are contextually created and serve specific social functions. As conditions change through historical processes, cultural beliefs change too—and so do the linguistic behaviors that reflect them.

Belief systems not only explain but also legitimate social orders and constructions of reality. Meaning is never divorced from the society that creates it. And once created, it becomes part of the consciousness of individuals. This consciousness is formed in a reflexive process, interacting with the view of reality that society constructs. V. N. Volosinov believed that by the process of social interaction, organized groups create external and material signs that serve as a foundation for individual consciousness. Thus, consciousness can be defined as rooted in the sociological framework. The individual consciousness grows from and reflects a society's belief system as evidenced in cultural norms. (1973:12–13).

Belief systems, or ideologies, are transmitted through many social modes, such as religious rituals, moral and aesthetic values, political displays, and the like. And they are expressed in and through language. Words in themselves are neutral, but their use gives them social and symbolic content. Words and the beliefs they express form a coherent cultural system or, as Volosinov stated, "a unity of the verbally constituted consciousness" (ibid.:15).

Linguists and anthropologists have increasingly focused on the ways that social power and control are reflected in language, language use, and language ideologies. Speech communities, whether small, homogeneous villages or large, heterogeneous state societies, develop ideologies about language and language use that are transmitted through communicative behavior and through the ways in which people talk about language and linguistic activities.

As Kathryn Woolard points out, "ideologies of language are not about language alone. … Through linkages [to identity, to aesthetics, to morality], they underpin not only linguistic form and use but also the very notion of the person and the social

group, as well as such fundamental social institutions as religious ritual, child social-ization, gender relations, the nation-state, schooling, and law" (1998:3). In various sections throughout the text, we will investigate the ways in which these notions of language ideology relate to cultural meanings and worldview; speakers' rights and obligations to co-participants; societal segmentation and issues of class, race, and gen-der; national language policies and attitudes; and institutional power and resistance.

PLAN OF THE BOOK

We will review many studies of linguistic behavior that are based on a variety of methodological and analytic approaches. Each reveals a different aspect of the com-municative process. Taken together, they allow us to understand the full range of inter-actional, social, and cultural meanings conveyed by talk.

Chapter 2 presents structural properties of language and nonverbal behavior, then analyses of cultural and social meanings, contexts, and uses of language. In Chapters 3 and 4, we focus on connections between language and cultural models. Rules of conversation and linguistic means for expressing politeness are discussed in Chapter 5. Chapter 6 discusses several specialized communicative practices, includ-ing those made possible by modern technologies (telephones and computers) and signing communication used by Deaf conversationalists. Topics related to acquisition of linguistic and communicative skills are treated in Chapters 7 and 8. The next two chapters present analyses of linguistic variation and societal segmentation: In Chapter 9, we discuss factors of class and race; in Chapter 10, gender differences in language and speech are considered, with data from numerous societies throughout the world. Chapters 11 and 12 present reviews of language and its functions in multi-lingual communities. Finally, in Chapter 13, we discuss the ways that talk is managed in several institutional settings.

The diversity of topics dealt with in this book is an indication of the breadth of the field of language, culture, and communication, and a demonstration of the importance of language in human behavior.

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The Form of the Message

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L anguage is a communicative system consisting of formal units that are integrated through processes of combination. Components of sound, structure, and meaning are obviously interrelated and expressed simultaneously, but they can be separated for analytic purposes. In this chapter, we present descriptions of formal properties of language and introduce relevant concepts and terminology in the field of linguistics. We then discuss some aspects of nonverbal communication as they contribute to transmission of speakers' messages.

Structural linguistic topics are presented here as background for the following two chapters, which directly explore relationships among language, communication, and culture. Although the focus of this text is on cultural, social, and interactional functions of communication, it is important to understand what it is that people do when they speak.

PHONOLOGY: THE SOUNDS OF LANGUAGE

Phonology is the study of sound systems in language. It includes *phonetics*, the description of sounds occurring in a language, and *phonemics*, the analysis of the use of these sounds to differentiate meanings of words.

Phonetics

The first task of phonology is to describe how sounds are produced, or *articulated*. Human language is made possible by manipulation of the vocal apparatus, which consists of lungs, pharynx, larynx, glottis, vocal cords, nose, mouth, tongue, teeth, and lips (Figure 2.1).

Components of the vocal apparatus can be modified by speakers to produce sounds of different qualities. Several kinds of contrasts serve to distinguish sounds, and we discuss them in subsequent sections. (Note that examples given to illustrate linguistic structure are obtained from a number of sources, including Bonvillain 1973;
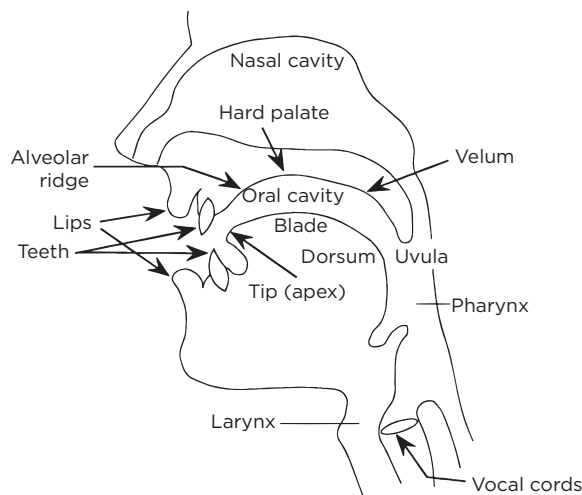
Figure 2.1 The Vocal Apparatus. (Adapted from Wardhaugh 1977:33.)

Bonvillain n.d.; Cowan and Rakusan 1987; Finegan and Besnier 1989; Gleason 1955; Ladefoged 1982; and O'Grady, Dobrovolsky, and Aronoff 1989.)

I.   Sounds are either voiced or voiceless, depending on activity of the vocal cords, a pair of small muscular bands in the throat. If the vocal cords are close together when air passes through, the cords vibrate and produce *voiced* sounds; if they are apart and stationary, resulting sounds are *voiceless*. Voiced/voiceless contrasts can be illustrated by *minimal pairs*, two words composed of sounds that are identical except for one feature of significant difference. The following list contains some voiceless/voiced consonant pairs in English (examples written in standard orthography):

Voiceless	*Voiced*
p : <u>p</u>it	b : <u>b</u>it
ta<u>p</u>	ta<u>b</u>
t : <u>t</u>en	d : <u>d</u>en
bi<u>t</u>	bi<u>d</u>
f : <u>f</u>an	v : <u>v</u>an
grie<u>f</u>	grie<u>v</u>e
s : <u>s</u>ap	z : <u>z</u>ap
hi<u>ss</u>	hi<u>s</u>

All vowels in English are voiced. However, voiceless vowels occur in many other languages, including Japanese, Totonac (Mexico), and Chatino (Mexico). In Totonac, voiceless vowels always occur at the ends of words (voicelessness is indicated by a small circle [V̥] beneath a vowel):

/kuku̥/	"uncle"
/miki̥/	"snow"
/snapapḁ/	"white"

II. Sounds are either *oral* or *nasal*—the former produced by raising the velum to the back of the throat and expelling air only through the mouth (oral cavity), the latter by relaxing the velum and allowing air to pass through the nose. For instance, *m* and *n* are nasal consonants. All languages have some nasal consonants, and many have nasal vowels as well. The latter group includes French, Portuguese, Hindi (India), Tibetan, Yoruba (Nigeria), and Navajo (North America).

III. In addition to binary characteristics relevant for all sounds (voiced/voiceless, oral/nasal), each sound is produced by manipulating parts of the vocal apparatus. Figure 2.2 illustrates most consonants found in human language and classifies sounds according to two dimensions: place of articulation and manner of articulation. The first dimension, *place of articulation*, refers to where the sound is formed ("articulated") in the mouth; for example, *bilabial* sounds are formed with the help of two lips, and *apicoalveolar* sounds are made with the tip of the tongue (apico = apex) and the alveolar ridge. The second dimension, *manner of articulation*, refers to the degree of interference or modification made of the airstream as it passes through the oral cavity; for example, *stops* are produced by momentary complete blockage of air, and *fricatives*

Place of Articulation

Manner of Articulation		Bilabial	Labiodental	Apicodental	Apicoalveolar	Retroflex	Alveopalatal	Palatal	Dorsovelar	Uvular	Pharyngeal	Glottal
Stops												
Plain	vl.	p			t	ṭ	tʸ	ḳ	k	q		ʔ
	vd.	b			d	ḍ	dʸ	g̣	g	G		
Aspirated	vl.	pʰ			tʰ				kʰ			
	vd.	bʰ			dʰ				gʰ			
Glottalized	vl.	p'			t'				k'			
Labialized	vl.	pʷ			tʷ				kʷ			
	vd.	bʷ			dʷ				gʷ			
Nasals	vl.	m̥			n̥		ñ̥		ŋ̊	N		
	vd.	m			n		ñ		ŋ			
Affricates	vl.				c		č	ç				
	vd.						ǰ					
Fricatives	vl.	Φ	f	θ	s	ṣ	š		x		ħ	h
	vd.	β	v	ð	z		ž		ɣ		ʕ	
Liquids												
Laterals					l	ḷ	ł					
Central					r	ṛ						
Flaps					ř							
Trills					r̃					R		
Glides							y		w			

Figure 2.2   Classification of Consonants.
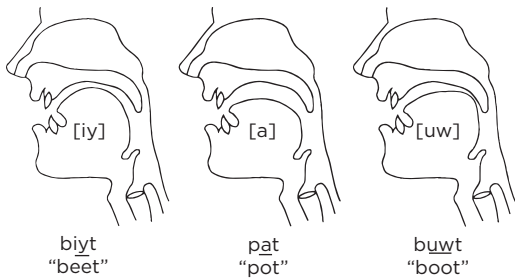
Figure 2.3 Tongue Positions for Three English Vowels. (Adapted from O'Grady et al. 1989:28.)

by narrowing the vocal channel and thus creating turbulence or friction in the airstream. Each difference in place and/or manner of articulation results in a difference in sound quality. Symbols in the chart in Figure 2.2 are written in phonetic transcription adapted from the International Phonetic Alphabet, a system of standardized notation applicable to all languages. (For a detailed discussion of phonetic notational systems, see Pullum and Ladusaw 1986.) In some cases, symbols in the chart correspond to English letters, but in others they do not. Note also, vd. = voiced, vl. = voiceless.

Vowels are produced with relatively greater openness of the vocal tract and relatively less interference with the airstream than is characteristic of consonants. Differences in vocalic quality are made by movement of the tongue and rounding or unrounding of the lips, resulting in changes in resonance. Additionally, voicing/unvoicing or oral/nasal contrasts are significant in many, but not all, languages. Figure 2.3 illustrates the physical manipulations involved in vowel production. Tongue positions are depicted for three English vowels: [iy], as in the word "beet," [a] as in "pot," and [uw] as in "boot."

Common vocalic segments, represented by phonetic symbols, are classified in Figure 2.4. Dimensions of vowel production are positioned in the mouth from front to back and height from high to low. Lip-rounding (rd.) or unrounding (unrd.) is also significant.

Each language selects its phonetic inventory from among the possible human sounds. No language contains all sounds because requiring speakers to make too many or too fine articulatory distinctions is not feasible. Languages vary in the number of their sounds, ranging from as few as 8 consonants in Hawaiian to as many as 96 in !Kung (spoken in Namibia). Some languages have only three vowels, although about half of all languages contain five vowels, and others, such as English and French, have more than a dozen. Shown here are representative English words illustrating some of the symbols in the consonant (Figure 2.2) and vowel (Figure 2.4) charts.

		Front		*Central*		*Back*	
		Unrd.	*Rd.*	*Unrd.*	*Rd.*	*Unrd.*	*Rd.*
High	Upper	i	ü	ɨ		w	u
	Lower	I	ü	ɫ			ʊ
Mid	Upper	e	ö	ə			o
	Lower	ɛ	æ	ʌ			ɔ
Low		æ		a		d	

Figure 2.4 Classification of Vowels.

1. *Oral stops* (complete closure or blockage of airstream):

Bilabial:	p :	pɪn	(pin)	Dorsovelar:	k :	kat	(cot)
	b :	bɪn	(bin)		g :	gat	(got)
Apicoalveolar:	t :	tɛfn	(ten)				
	d :	dɛn	(den)				

2. *Nasals* (velum is lowered to allow air to pass through the nose):

Bilabial:	m:	mʌt	(mutt)
Apicoalveolar:	n :	nʌt	(nut)
Dorsovelar:	ŋ :	hʌŋ	(hung)

3. *Affricates* (complete closure followed by narrow opening for air to pass through):

Palatal:	č :	čɪn	(chin)
	ǰ :	ǰɪn	(gin)

4. *Fricatives* (narrowing and partial obstruction of vocal passage resulting in turbulence or friction):

Labiodental:	f :	fæn	(fan)	Palatal:	š :	šap	(shop)
	v :	væn	(van)		ž :	ruwž	(rouge)
Interdental:	θ :	θay	(thigh)	Glottal:	h :	hɛd	(head)
	ð :	ðay	(thy)				
Apicoalveolar:	s :	sæp	(sap)				
	z :	zæp	(zap)				

5. *Liquids* (relatively less obstruction of airstream resulting in modification of air but no turbulence):

Lateral:	l :	lɛd	(led)
Central:	r :	rɛd	(red)

6. *Glides or semivowels* (little obstruction; intermediate between consonants and vowels):

Palatal:	y :	yɛt	(yet)
Velar:	w:	wɛt	(wet)

7. *Vowels:* In English, some vowels are *monophthongs* produced in one place in the mouth; others are *diphthongs* or *glides*, involving movement of the sound from one position to another. Diphthongs are noted by a *y* or *w* following the vocalic symbol:

   Front (all unrounded):

iy :	biyt	(beet)
ɪ :	bɪt	(bit)
ey :	beyt	(bait)
ɛ :	bɛt	(bet)
æ :	bæt	(bat)

   Back (all rounded):

uw :	buwt	(boot)
ʊ :	bʊk	(book)
ow :	bowt	(boat)
oy :	boy	(boy)
ɔ :	bɔt	(bought)

   Central (all unrounded):

ʌ :	bʌt	(but)
ay :	bayt	(bite)
aw :	bawt	(bout)

Phonemic Analysis

Every language organizes its phonetic inventory into a system of phonemes. A *phoneme* is a minimal unit of sound that functions to differentiate the meanings of words. It may have only one phonetic representation, or it may contain two or more sounds, called *allophones*, that occur in predictable linguistic environments based on rules of allophonic patterning. For example, in English, each of the voiceless stops /p/, /t/, and /k/ has two allophones: One is *aspirated*, produced with a strong release of air; the other is *unaspirated*. Allophones for English voiceless stops are produced with aspiration when they occur at the beginning of a syllable, whereas they are unaspirated following /s/ in the same syllable. Aspirated and unaspirated allophones are illustrated in the following words:

/p/	aspirated:	[pʰɪn]	(pin)	/k/	aspirated:	[kʰɪn]	(kin)
	unaspirated:	[sp⁼ɪn]	(spin)		unaspirated:	[sk⁼ɪn]	(skin)
/t/	aspirated:	[tʰʌn]	(tun)				
	unaspirated:	[st⁼ʌn]	(stun)				

Native speakers of English are likely unaware of the fact that the *p*'s, *t*'s, and *k*'s in the words above have slightly different articulations. Speakers learn to make nonconscious allophonic distinctions in early stages of language acquisition. Because the rules are applied consistently thereafter, without exception, they become automatic patterns not requiring conscious thought.

Liquids and glides in English also have allophones that occur in accordance with conditioning rules. Voiceless counterparts of /l, r, w, y/ occur following voiceless stops /p, t, k/. In all other environments, liquids and glides are voiced. Compare the following contrasts (voicelessness is indicated by a small circle [C̥] beneath a consonant):

/r/	voiceless:	[tr̥ɪp]	(trip)
	voiced:	[drɪp]	(drip)
/l/	voiceless:	[pl̥ayt]	(plight)
	voiced:	[blayt]	(blight)
/w/	voiceless:	[tw̥ɪn]	(twin)
	voiced:	[dwɪndl]	(dwindle)
/y/	voiceless:	[ky̥uwt]	(cute)
	voiced:	[ar̥gyuw]	(argue)

Specific allophonic patterns are not universal but instead operate within each language according to its own rules. In some languages, the difference between aspirated and unaspirated stops is not allophonic, as in English, but phonemic. *Phonemic* contrasts signal differences in meanings of words. The following words in Korean constitute minimal pairs for plain /k/ and aspirated /kʰ/ and have separate meanings:

/keda/   "fold"
/kʰeda/   "dig out"

Similarly, Chinese contrasts /p/ and /pʰ/ (note that high pitch is indicated by a [V̄] above a vowel):

/pā/	"trumpet"	/pī/	"compare"
/pʰā/	"strip"	/pʰī/	"indigestion"

Finally, aspirated /tʰ/ and unaspirated /t/ are separate phonemes in Hindi (a language of India):

/táli/	"key"	/tórn̩a/	"pluck"
/tʰáli/	"dish"	/tʰōra/	"little"

Some sounds that are separate phonemes in English are allophones in other languages. As we have seen, English distinguishes between voiceless and voiced stops, p/b, t/d, k/g, but in the Mohawk language (spoken in New York state and in Ontario and Quebec, Canada), these sounds are allophones rather than phonemes. They occur in predictable environments. In Mohawk, voiceless stops are produced at the ends of words or preceding other consonants (except glides), whereas voiced stops occur preceding vowels or glides.

As evidence of the automatic, nonconscious nature of allophones, when Mohawk speakers use English, they frequently follow Mohawk allophonic patterns so that, for example, the English word "chicken" /cɪkɪn/ is pronounced [cɪgɪn]. This pronunciation is consistent with Mohawk rules requiring voiced stops preceding vowels. In fact, a "foreign accent" in any language consists, in part, of the application of native allophonic rules when speaking foreign languages.

Prosodic Features

In addition to consonants and vowels, sound systems use *prosodic*, or *suprasegmental*, features to alter and therefore contrast the sounds or rhythms of speech. Three prosodic features that often affect meaning are stress, pitch, and length.

STRESS. The term *stress* or *accent* refers to the degree of emphasis placed on the syllables of words. In multisyllabic words, stress is not evenly distributed on all syllables. Rather, different syllables receive different degrees of stress. In some languages, stress rules are automatic. For example, in Czech, Finnish, and Hungarian, every word is accented on the first syllable; in French and Mayan (Mexico), words are accented on the final syllable; and in Polish, Swahili (Africa), and Samoan (Polynesia), the penultimate (next to last) syllable is always stressed. Stress placement in other languages is unpredictable; therefore, changes in stress can serve to differentiate meanings or functions of words. Note the following contrasts in some English words, where the difference in stress signals the difference between a noun and a verb: Nouns are stressed on the first syllable; verbs are stressed on the second syllable. (Note that there are slight differences in the vowels when they are in unstressed positions, but for simplicity these are not marked here.)

	Noun	*Verb*
present	prézɛnt	prɛzént
object	ábjɛkt	abjékt
construct	kánstrʌkt	kanstrʌ́kt
implant	ímplænt	implǽnt

PITCH. *Pitch* or *tone* refers to the voice pitch accompanying a syllable's production. Variation in pitch results from changes in relative tension of the vocal cords. Pitch

generally occurs with vowels, although some consonants (e.g., /l, r, m, n/) can function as syllable nuclei and carry tone. Many languages use pitch to distinguish meanings of words—for example, Asian languages, such as Chinese and Thai; African languages, including Yoruba, Zulu, and Luganda; Native American languages, such as Navajo (Southwest) and Sarcee (western Canada); and the European Latvian.

The following sets of Chinese words have separate meanings, each signaled by patterns of pitch:

high level:	mā	"mother"	fū	"skin"
high rising:	má	"hemp"	fú	"fortune"
low falling/rising:	mä	"horse"	fǔ	"axe"
falling:	mà	"scold"	fù	"woman"

In some languages, changes in tone function to signal different grammatical meanings. Compare verbs from Bini, a language spoken in Nigeria:

low pitch:	ìmà	"I show" (timeless)
high/low:	ímà	"I am showing" (continuous)
low/high:	ìmá	"I showed" (past)

Pitch is a feature of all languages on units of clauses and/or sentences. It is one of the components of intonation. In English, declarative statements and questions are characterized by contrastive pitch contours. Level or falling pitch appears at the ends of statements, whereas rising pitch terminates questions:

Statement: They came in.
Question: They came in?

LENGTH. *Length* refers to continuation of a sound during its production. Some languages use length to differentiate meanings of words. Short and long vowel contrasts occur in Danish, Czech, Finnish, Arabic, Japanese, Korean, Cree (Canada), Yap (Pacific), and others. Here are some examples from Korean (long vowels are indicated by [V:] following a vowel):

/il/	"day"	/i:l/	"work"
/seda/	"to count"	/se:da/	"strong"
/pam/	"night"	/pa:m/	"chestnut"

Contrastive length for consonants is less common than for vowels, but it is found in several languages, including Turkish, Finnish, Hungarian, Luganda (Africa), and Arabic. In Luganda, the word /kúlà/ "grow up" contains a short /k/, whereas /kkúlà/ "treasure" has a long /k/.

Although not all languages use length to distinguish meanings, changes in the duration of sounds can serve as markers of emphasis or exaggeration. Lengthening a vowel in English can indicate exaggeration, as in "He is bi-i-i-i-ig!" This utterance implies greater size than would be conveyed by simply saying "he is big" (Lakoff and Johnson 1980:127–128).

MORPHOLOGY: THE STRUCTURE OF WORDS

Morphological Analysis

Morphology is the analysis of word structure. Words are composed of units of sound and meaning called *morphemes*. A word may contain one morpheme—{kæt} "cat"—or it may contain two or more morphemes:

    cat-s   /kæt-s/
    sing-ing   /sɪŋ-ɪŋ/
    good-ness   /gʊd-nɛs/
    un-happi-ly   /ʌn-hæpɪ-liy/

Morphemes can be added to words in cycles, producing longer and more complex sequences:

    act
    active (act-ive)
    inactive (in-act-ive)
    inactivity (in-act-iv-ity)

Some morphemes, called *roots* or *stems*, represent basic lexical or referential meanings of words (e.g., cat, sing, good, happy). They refer to or name objects, events, qualities, ideas, and the like. Other morphemes, called *affixes*, are attached to roots or stems (e.g., un-, -s, -ing, -ness, -ly). They express grammatical or relational meanings, such as number, tense, aspect, person, gender, or case. Affixes are of three varieties: *Prefixes* precede stems (*un*-happy), *suffixes* follow stems (happi-*ness*), and *infixes* appear within the stem itself.

The infix is absent from English but occurs elsewhere. Infixes are especially productive in Malayo-Polynesian languages, spoken in parts of Asia and the Pacific. Note the following words from Tagalog (a language of the Philippines):

1. stem: {-basa-} "read"

    with infix {-um-}:   /b<u>um</u>ása   akó   naŋ   libró/
                           read   ɪ   the   book
                           "I read the book" (completed)
    with infix {-in-}:   /b<u>in</u>ása   aŋ   libró/
                           was read   the book
                           "the book was read"

2. stem: {-kaʔ(ɪn-} "eat"

    with infix {-um-}:   /k<u>um</u>áʔ(ɪn   akó/
                           ate   I
                           "I ate (it)"
    with infix {-in-}:   /k<u>in</u>áʔɪn   aŋ   mansánas/
                           was eaten   the   apple
                           "the apple was eaten"

In Bontoc, another Philippine language, an infix {-um-} denotes change from a noun or adjective into a verb of becoming:

/fikas/	"strong"	/f<u>um</u>ikas/	"he is becoming strong"
/fusul/	"enemy"	/f<u>um</u>usul/	"he is becoming an enemy"

Morphemes may occur in one constant form, or they may have two or more shapes, called *allomorphs*. Allomorphs of each morpheme have the same meaning but vary in phonological form. They occur in predictable, conditioned environments. The English plural suffix {-s} has three allomorphs, accounted for by these rules:

{-s} →	/-iz/	following sibilants (/s, z, š, ž, č, ǰ/)
	/-s/	following voiceless consonants (except sibilants)
	/-z/	following voiced consonants (except sibilants); following all vowels

Application of this set of rules is illustrated in these examples:

klæs/klæsiz	(class/classes)
kæt/kæts	(cat/cats)
tʌb/tʌbz	(tub/tubs)
biy/biyz	(bee/bees)

The fit between form and meaning in construction of words is not always consistent. Irregularities or exceptions to morphological patterns sometimes occur. For instance, the rules given above for English plural marking account for the overwhelming majority of nouns, but unpredictable exceptions exist. Some plurals are signaled by vowel changes in stems:

maws/mays	(mouse/mice)
fʊt/fiyt	(foot/feet)
wumɪn/wɪmɪn	(woman/women)

Three nouns take a restricted, nonproductive suffix, {-ɪn} (spelled "en"): child/children, ox/oxen, and the somewhat archaic brother/brethren. Additionally, a set of words having foreign sources retains the original plural markers—for example, datum/data (from Latin), phenomenon/phenomena (from Greek), cherub/cherubim (from Hebrew). A final class of nouns does not change at all, and therefore singular or plural meaning must be inferred entirely from context: deer, sheep, caribou.

Irregular forms must be learned for each individual case. Because it is much easier to learn a standard rule and apply it systematically than to memorize specific exceptions, languages limit the proliferation of irregularities. Preference for consistency accounts for children's tendency to overgeneralize morphological rules when acquiring language, as in mouse/mouses and foot/foots.

Morphological Typologies

Languages differ in their methods of creating words out of morphemes. Three types of language will first be defined, and then examples will be given.

Languages are often described as either isolating, agglutinating, or synthetic. *Isolating* languages (such as English or Chinese) allow comparatively few morphemes per word and have relatively simple methods of combining morphemes within words. *Agglutinating* languages have words containing many morphemes that are combined according to highly regular rules. *Synthetic* (or polysynthetic) languages also have words containing many morphemes, but their rules for combining morphemes may be quite complex. The form of morphemes is often altered considerably when morphemes are combined within words. A few examples from isolating, agglutinating, and polysynthetic languages are given below.

MANDARIN CHINESE (AN ISOLATING LANGUAGE). In Mandarin Chinese, most words consist of only one morpheme. Lexical meanings are expressed by using separate words. Grammatical meanings are conveyed either by separate words, by the order of words within sentences, or simply by context.

1a. wǒ   gāng   yào   gěi   ní   ná   yì   bēi   chá
      I   just   want   for   you   bring   one   cup   tea
      "I am about to bring you a cup of tea."

1b. Xià   yǔ
      down   rain
      "It was/is/will be raining."

SWAHILI (AN AGGLUTINATING LANGUAGE). Swahili permits many morphemes to combine within a word. These morphemes express different kinds of lexical and grammatical meanings. To translate a single Swahili word into English, several words and sentences are required. (Note abbreviations used in examples: PRES = present; PERF = perfect; FUT = future.)

2a. ni-na-pika "I hit" (I-PRES-hit)
      ni-na-wa-pika "I hit them" (I-PRES-them-hit)
      ni-li-wa-pika "I have hit them" (I-PERF-them-hit)
      ni-taka-pik-iwa "I will be hit" (I-FUT-hit-PAS)
      wu-taka-ni-pik-iz-wa "you(sg.) will cause me to be hit" (you-FUT-me-hit-cause-PAS)

MOHAWK (A POLYSYNTHETIC LANGUAGE). Mohawk combines many morphemes within a word. As in agglutinating languages such as Swahili, morphemes in Mohawk may express different kinds of lexical and grammatical meanings. However, rules for morpheme combination are not as regular as they are in agglutinating languages. When morphemes co-occur, they often undergo changes in their sounds. Also, a single morpheme may express multiple grammatical concepts so that the fit between form and function is more complex than in isolating or agglutinating languages.

Mohawk verbs can contain a large number of morphemes expressing various grammatical meanings. Prefixes denote person, number, negation, mood, location

or direction, simultaneity of action, and so on. Several suffixes indicate different verbal aspects. A few illustrative examples follow. (Note that Ṽ indicates a nasal vowel.)

3a. tehatkahtū́nyũs
   "he looks all around"
   te - h- at -kaht- ũ   -nyũ   -s
   two-he-self-look-in state of-all around-doing
3b. yakonãyohlũkwʌhákyeˀ
   "she's gathering up stones as she's coming along"
   yako-nãy-ohlũkw -   ˀ   ʌ-   hákye   - ˀ
   she-stone-gather up-in state of-all the time-in state of

INUKTITUT (A POLYSYNTHETIC LANGUAGE OF ARCTIC CANADA).   The following word in Inuktitut illustrates complexities of morpheme meaning and structure possible in polysynthetic languages:

4a. Qasuirrsarvigssarsingitluinarnarpuq
   "someone did not find a completely suitable resting place"
   qasu-irr-sar-vig-ssar-si-ngit-luinar-nar-puq

qasu	-irr	-sar	-vig	-ssar
tired	-not	-cause to be	-place	-for suitable
-si	-ngit	-luinar	-nar	-puq
-find	-not	-completely	-someone	-3rd sg. (he/she)

Grammatical Concepts

As mentioned, morphemes express lexical or grammatical meaning. Grammatical meaning includes concepts applying to nouns, verbs, modifiers, and so on. Some common concepts for nouns are case, number, and gender. *Case* refers to grammatical relationships between nouns (e.g., subject or object) or between nouns and verbs within larger constructional units such as clauses and sentences. Some languages, called *inflecting*, mark case with affixes. For instance, Russian nouns have inflectional suffixes to indicate cases. The paradigm below presents the inflection of a masculine noun {zavod-} "factory, plant." Feminine and neuter nouns select different sets of suffixes.

{zavod-} "factory"

Case	Singular	Plural
Nominative	zavod	zavod-i
Genitive	zavod-a	zavod-ov
Accusative	zavod	zavod-i
Dative	zavod-u	zavod-am
Locative	zavod-ɛ	zavod-ax
Instrumental	zavod-om	zavod-ami

Uses of these cases are illustrated in the following simple sentences:

Nominative:	zavód	bolšóy	
(subject)	factory	big	
	"the factory is big"		
Genitive:	to	kríša	zavód-a
(possessive)	this	roof	factory + genitive
	"this is the roof of the factory"		
Accusative:	aní	vídyeli	zavód
(direct object)	they	saw	factory (accusative)
	"they saw the factory"		
Dative:	aná	pisála	iván-u
(indirect object)	she	wrote	Ivan + dative
	"she wrote to Ivan"		
Locative:	na	zavód-ɛ	poryádok
		factory + locative	order
	"there is order in the factory"		
Instrumental:	ya	pisú	karandaš-óm
	I	write	pencil + instrumental
	"I write with a pencil"		

Different languages may express grammatical concepts in different ways. For instance, the notion of *number* has a variety of manifestations. Some languages do not indicate singular/nonsingular differences; number is signaled solely by separate enumerators and/or by context. Sentences out of context, therefore, can be ambiguous. The noun in the following sentence, in Nancowry, a language spoken on the Nicobar Islands of India, can refer to one or many "pig(s)":

sák	nɔ́t	ʔin	ciʔʌy
Spear	pig	the	we

"We speared the pig(s)."

In Indonesian, number is not overtly marked for subjects or objects. Whether nouns are definite (refer to a specific entity) or indefinite is likewise not marked. Therefore, nouns in sentences can have multiple possible senses:

harimau	makan	kambing
(the, a) tiger(s)	eat (ate, will eat)	(the, a) goat(s)

If context does not supply enough information to disambiguate meanings, separate specifying words can be added.

Other languages, such as English, make distinctions between singular and plural (two or more):

one cat; two or more cats

And still other languages have markers for singular, dual (two), and plural (three or more), for example, Inuktitut (Arctic Canada):

/iglu/   "a house"
/iglu*k*/   "two houses"
/iglu*t*/   "three or more houses"

Many languages organize their nouns into separate classes that are overtly marked and differentiated. A common type of classification system is called *gender*, usually dividing nouns into masculine and feminine, or masculine, feminine, and neuter. European languages of the Romance, Slavic, and Germanic families (except English) have systems of this type. In Romance languages, gender is signaled by the form of definite articles that precede nouns, for example, French "*le* mur" (masculine, "the wall") and "*la* table" (feminine, "the table"). Slavic languages indicate gender by forms of case endings that are suffixed to nouns, for example, Russian /dom/ "house" (masculine), /kriš*a*/ "roof" (feminine), /okn*o*/ "window" (neuter).

Some languages categorize nouns on the basis of complex kinds of meanings. For instance, Navajo noun classes are determined by shape and texture of objects. Navajo transitive verbs have different forms, depending on the class of noun that occurs as their direct objects according to the following characteristics, exemplified by the verb *to handle* (Young and Morgan 1987:251–263; note that nasal vowels are marked by a curve [V̨] beneath the vowel):

Class	*Examples*	*"Handle"*
solid, roundish	nut, car, newborn baby	/níˀą́/
slender, flexible	chain, feather, flower	/nílá/
slender, stiff	corn, fork, tree trunk	/nítą́/
flat, flexible	blanket, dollar bill, pillow	/níłtsooz/
mushy, viscous	mashed potatoes, mud, molasses	/nítłééˀ/
noncompact	corn silk, shredded cabbage, moss	/níłjool/
in open vessel	broth, dirt in a shovel, stew	/níką́/
load, quantity	bundle, firewood, wool fleece	/níyį́/

Swati, a Bantu language of Africa, has more than a dozen noun classes based on various meanings, each class noted by a distinctive prefix on a noun. Some of these are given below:

Class	*Prefix*	*Example*	
persons	um(u)	um-fana	"boy"
body parts, fruit	li	li-dvolo	"knee"
instruments	s(i)	si-tja	"plate"
animals	in	in-ja	"dog"
abstract properties	bu	bu-bi	"evil"
locations	pha	pha-ndle	"outside"

Grammatical concepts relevant to verbs include *tense* (time of an event's occurrence), *aspect* (manner in which an event occurs), and *mode* (likelihood of an event's occurrence or speaker's attitude toward such an occurrence). Many languages also

mark such categories as person, number, gender, and/or case relations by affixes within verbs. Examples from Mohawk illustrate some possibilities of mode and aspect (note: {-k-} "I"; {-yʌ́tho-} "plant"):

1. **Modes (prefixes):**
   a. Definite (definite present or past occurrence):
      {wa̱ʔ-}
      waʔkyʌ́tho̱ʔ "I planted (it)"
   b. Indefinite (probable or desired occurrence): {a-}
      wakũ̱ʔ wéskwaniʔ neʔ a̱kyʌ́tho?
      I like   that   I plant
      "I like to plant"
   c. Future (definite occurrence in future): {ʌ́-}
      ʌ̱yʌ́tho̱ʔ "I will plant"
2. **Aspects (suffixes):**
   a. Punctual (single event): {-ʔ}
      waʔkyʌ́tho̱ʔ "I planted (it)"
   b. Serial (repeated events): {-s}
      kyʌ́tho̱s "I'm planting, I'm a planter"
   c. Perfective (states): {-ũ}
      kayʌ́thũ̱ "it is planted"

SYNTAX: THE STRUCTURE OF SENTENCES

Most talk consists of multiword units, not single words spoken in isolation. Every language has rules of *syntax* that describe possibilities of co-occurrences and orders of constituents. Syntactic patterns are often used to express case relations between words. Note the following contrastive sentences in English:

> The dog chased the cat.
> The cat chased the dog.

Subject and direct object are indicated by the relative sequence of words. Subjects precede verbs; direct objects follow verbs. The words themselves do not undergo internal changes.

In the next two sentences, direct and indirect objects are also strictly ordered. Direct objects precede indirect ones when the preposition *to* is used; otherwise, indirect objects come first:

> I sent a letter to Ruth.
> I sent Ruth a letter.

A language like English, which signals case by word order, is fundamentally different from an inflecting language like Russian. In Russian, word order does not affect underlying case relations because, as we have seen, cases are marked by affixes attached to nouns. The following Russian sentences express the same referential

meaning, translated as "the cat is chasing the dog" (*košk-a* = cat + nominative; *sobak-u* = dog + accusative; *presleduet* = is chasing):

Koška presleduet sobaku.
Sobaku presleduet koška.
Presleduet koška sobaku.
Presleduet sobaku koška.
Koška sobaku presleduet.
Sobaku koška presleduet.

Although changes in word order in inflecting languages do not alter the fundamental meaning of sentences, they signal other kinds of meanings or uses. They may mark focus or emphasis, relations between topics and comments, or stylistic preferences. In the set of Russian sentences, the first example best answers the question, "What is the cat chasing?" whereas the second is a response to "What is chasing the dog?" Each of the other sentences also has its contextual usage.

Isolating languages, such as Chinese, rely heavily on word order to convey grammatical meaning. In the following two sentences, word order alone expresses the difference between definite and indefinite nouns:

1a. huǒ che lái le
     train arrive new-situation
     "The train has arrived."
1b. lái huǒ che le
     arrive train new-situation
     "A train has arrived."

The next two sentences exemplify word orders that distinguish between active and passive meanings in Chinese:

2a. Zhū laǒshī pīyuè lé wǒdé kaǒshì
     Zhu professor mark PAST my test
     "Professor Zhu marked my test."
2b. wǒdé kaǒshì beì Zhū laǒshī pīyuè lé
     my test by Zhu professor mark PAST
     "My test was marked by Professor Zhu."

Most languages organize the three basic units of subject, object, and verb in one of three patterns. Unmarked sequences (simple, common constructions) are:

Verb + Subject + Object (VSO)
Subject + Verb + Object (SVO)
Subject + Object + Verb (SOV)

The contrasting feature is essentially that of the relative placement of verbs either initially, medially, or finally. Subjects occur prior to objects. Only a few of the world's

languages have unmarked word orders that place objects before subjects. Because subjects precede objects in the vast majority of languages, this pattern probably reflects human cognition. People perceive subjects as more salient than objects because they have the potential of agency, that is, an ability to initiate, control, direct, or affect actions and events. Objects are not doers but receivers of actions and are therefore less cognitively prominent. Significantly, cognitive prominence is reflected in linguistic structure.

Since Noam Chomsky revolutionized the field of linguistics with his publications in 1957 (*Syntactic Structures*) and 1965 (*Aspects of the Theory of Syntax*), linguists have attempted to describe and explain syntactic systems in terms of universal rather than language-specific patterns. A fundamental principle in linguistics is that words do not occur in sentences as random or isolated units but rather co-occur with others and form larger units called *phrases*. An important component of grammar is a set of "phrase structure" rules that describes the possible units internal to sentences. The most basic phrase structure rule states that a sentence (S) is composed of a Noun Phrase (NP) and a Verb Phrase (VP), shown by the notation:

$$S \longrightarrow NP \quad VP$$

Noun Phrases consist minimally of a Noun but may also contain Determiners (Det; e.g., *the, a, this, some*), Adjectival Phrases (ADJ), and/or Prepositional Phrases (PP). Verb Phrases must contain a Verb and may have Noun Phrases, Adverbial Phrases (ADV), and Prepositional Phrases as well. Sentences may also contain Auxiliaries (Aux; e.g., forms of *be, have, do, can, will*). As an example, the simple sentence "The dog chased the cat" can be described by the following rules:

```
S       ⟶ NP          VP
NP      ⟶ Det          Noun
VP      ⟶ Verb         NP
NP      ⟶ Det          Noun
[Det    ⟶ the
Noun    ⟶ dog, cat
Verb    ⟶ chase(d)]
```

Linguists also represent sentences by tree diagrams (or phrase markers) to depict constituents of phrases and their syntactic relations. The tree diagram for "the dog chased the cat" is
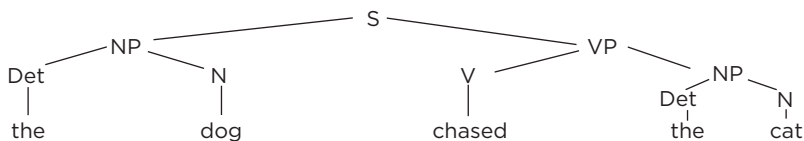
More complex sentences are represented by more elaborate tree diagrams, but they are all based on similar principles of grouping and relating constituents. Following is a tree diagram for the sentence "The good student will read a book in the library":
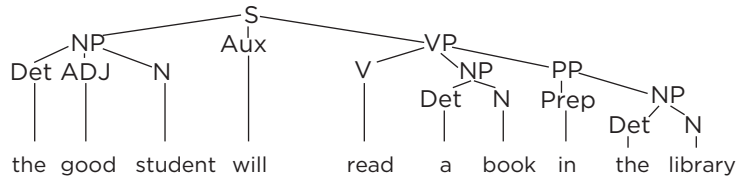
The purpose of grammar is to describe linguistic facts so that speakers can produce, or *generate*, rules accounting for all possible sentences in a particular language. A *generative grammar* should also block or constrain generation of impermissible constructions.

Chomsky introduced the distinction between *surface structure*—the surface appearance of sentences as they appear in actual speech—and *deep structure*—the underlying order of words as they are generated by basic phrase structure rules. Deep structure is transformed into surface structure by *transformations* that act on underlying components and, by stages, result in actual speech. The deep and surface structures of a sentence may be similar, as in the simple sentence illustrated earlier, "The dog chased the cat." However, many sentences require changes or transformations of the underlying order of components. For example, "Did the dog chase the cat?" is a question requiring several transformations. It begins with the string "INTERROGATIVE + the dog chase the cat." The interrogative transformation introduces an auxiliary "do," which is then shifted to the initial position. The auxiliary also attracts tense markers applicable to verbs, for example, "do" + Past "did."

Transformational rules can also account for nonoccurrence of segments in surface structure by *deletion*, eliminating redundancies that might otherwise be generated. When sentences are combined through a conjunction (*and*), redundant sequences are deleted:

The cats played in the yard and the dogs played in the yard.
The cats and dogs played in the yard.

Transformational grammar provides insights that enable linguists to decipher the origin of ambiguity in sentences. Consider one of Chomsky's well-known examples:

Flying planes can be dangerous.

This sentence is an ambiguous surface realization of two different deep structures, expressible as

1. To fly planes can be dangerous.
2. Planes—planes fly—can be dangerous.

The latter sentence exemplifies a process of *embedding*, which is common in English and many, but not all, languages. One sentence, "planes fly," is first embedded within the matrix "planes can be dangerous." It is then transformed into an adjective, "flying," eliminating the redundant "planes." Finally, "flying" is moved to its proper adjectival position preceding the head noun "planes." By these transformations, the deep structure "Planes—planes fly—can be dangerous" becomes the surface sentence "Flying planes can be dangerous." In the first underlying sentence, "To fly planes can be

dangerous," the infinitive "to fly" is turned into a gerund, "flying," that remains in initial position preceding its direct object.

This example demonstrates the steps by which two different deep structures can eventually have the same surface appearance. Different transformational rules were applied, coincidentally achieving identical end results.

SEMANTICS: THE ANALYSIS OF MEANING

The function of language is to express the speaker's meaning. Although meaning is global in the sense that it is thought and experienced as a simultaneous whole, it must be encoded through language in segmented linear form. Morphemes have semantic content (meaning) and combine with one another to produce further meaning. And words are combined, in turn, in larger, multiword constructions, yielding additional meaning.

Semantic analysis, or the study of meaning, is complex because meaning includes many kinds of input. Words have referential senses, labeling persons, objects, or events in the world, or in thought and imagination. Words also have cultural meanings, reflecting attitudes, values, or shared symbols (e.g., apple pie). Words and sentence constructions can have situational relevance, some used in formal contexts and others in informal situations (e.g., Please pass the salt/Gimme the salt). Words or constructions can be associated with different kinds of encounters; their selection, therefore, conveys interactional meaning (e.g., Dr. Jones/sweetheart). Finally, utterances can have affective meaning, indicating attitudes of speakers (e.g., John told me about his accomplishments/John boasted about his accomplishments). Here we will touch only briefly on some notions in semantic analysis; subsequent chapters will deal at length with issues of cultural, situational, and interactional meaning.

Influenced by advances in generative grammar, linguists attempt to discover universal principles in semantics. One approach is to specify meanings of words in terms of underlying semantic components. Once components are identified, linguists can determine the types of features that co-occur or are blocked from co-occurring. For instance, Chomsky's famous example of an unacceptable sentence, "Colorless green ideas sleep furiously," is rejected because of semantic inconsistencies even though it is grammatically well formed; that is, adjectives, noun, verb, and adverb are all placed in correct sequence. The problem with the sentence is that its semantic components cannot co-occur: "ideas" do not "sleep"; "ideas" are not "green"; something that is "green" cannot be "colorless." Syntactic rules alone do not provide adequate constraints; rather, restrictions are based on semantic rules, identifiable as co-occurrences of certain kinds of features with one another. Semantic features need not be overtly marked, but they are, nonetheless, significant attributes of words.

Nouns may contain the following *semantic features* (among others):

count/mass
specific/generic
potent/nonpotent
animate/inanimate
masculine/feminine
human/nonhuman

The presence of particular components can be discovered for any given noun. For example,

COW: count, potent, animate, feminine, nonhuman

Semantic features may be expressed through various linguistic forms. Some languages overtly mark features of animate/inanimate, mass/count, definite/indefinite, and so on, whereas others do not. In English, animate or inanimate nouns are not differentiated in their structure but are distinguished by their ability to occur as subjects of certain verbs. For example, only animate nouns can be subjects of *breathe, eat*, and *sleep*. The feature of count or mass is indicated by whether a noun can be enumerated or counted: "two cats" but not "two waters." And definite/indefinite distinctions are signaled by articles—for example, definite: "*the* cat came home"; indefinite: "*a* cat ran by the house."

Nouns in sentences fulfill several types of *semantic roles*. Common roles in transitive sentences can be illustrated for the sentence "Amy sent a letter from Paris to her friend in Iowa":

AGENT: performer of an action: Amy

PATIENT: entity affected by an action: a letter

SOURCE: starting point of an action: Paris

GOAL: end point of an action: her friend in Iowa

Other semantic roles occur as well:

experiencer (entity experiencing some action or state): *Ruth* likes classical music.

instrument (entity used to carry out an action): Ruth cut the cake with *a knife.*

Verbs can be semantically characterized as actions, processes, or states. Each type selects a particular semantic relation with accompanying nouns. Consider the following sentences (adapted from Chafe 1970:98):

ACTION: Jane ran.

PROCESS: The wood dried.

ACTION/PROCESS: Jane dried the wood.

STATE: The wood is dry.

Action verbs take *agent* nouns as grammatical subjects. In the first sentence, "Jane" acted as agent; she did something (she ran). By contrast, *process* verbs take *patient* subjects. In the second sentence, "the wood" did not do anything; rather, something happened to it. *Action/process* verbs (transitives), exemplified by the third sentence, require an agent subject who does something and a patient as object that has something done to it. Finally, *states*, as in the last example, select patient subjects. They depict inherent conditions or states of being. These distinctions among verbs reflect

the importance of differentiating between surface grammatical subjects/objects and underlying semantic roles of agent/patient.

MANUAL LANGUAGE

The term *manual language* refers to a system of communication that employs hand movements to convey meanings. This complex system forms the basis of American Sign Language (ASL), used by Deaf people in the United States. ASL and sign languages developed and used by people in other countries are complete languages consisting of rules of phonology, morphology, and syntax. Several features of ASL are briefly described in this section.

Formation of Signs

ASL signs are composed of formally distinct features that co-occur in various combinations. Composition of signs, then, is analogous to phonological structure of oral languages. ASL employs four basic kinds of articulatory parameters in the production or articulation of signs: (1) hand configuration: how the hands are shaped; (2) place of articulation: where a sign is formed in relation to a signer's body; (3) movement of hands in space; and (4) orientation of hands in relation to the body.

HAND CONFIGURATION. ASL signs are made from numerous configurations of the hand and fingers. These are illustrated in Figure 2.5 demonstrating signs that are used in finger spelling the letters of the alphabet. Five of these are called "neutral" shapes: A, B, C, G, and O. Of all hand configurations, these five shapes occur most frequently in ASL words. These neutral shapes are employed in sign languages used in other countries as well. Friedman suggests that their frequency of occurrence in words and their universality are due to the fact that they are the "least complex shapes the hand can assume (in terms of muscular arrangement)" (1977:18).

PLACE OF ARTICULATION. Signs are formed, or articulated, in "signing space" consisting of the area in front of a signer's body extending from the top of the head to the waist and from side to side to the extent of arm's reach with elbow bent. The most frequently used space in ASL is located on or near a signer's face and head. Because ASL depends on visual channels for transmitting messages, it makes sense to produce signs in proximity to the face or head. In addition, Friedman suggests that this area is chosen for articulation because there are more distinct "landmarks" on the face than elsewhere on the body (ibid.:40). Such landmarks include forehead, eyes, nose, mouth, and cheeks.

Signs are formed with one or both hands. According to Klima and Bellugi, approximately 40 percent of ASL signs are made with only one hand, 35 percent with both hands moving actively, and 25 percent with one hand acting on the other as a base (1979:42). To produce signs, hands may assume different spatial relations to one another. For example, "establish" is formed with one hand above the other; "with" is made with one hand beside the other; "follow" is made with one hand behind the other; and "assistant" is formed with one hand below the other (ibid.:44).
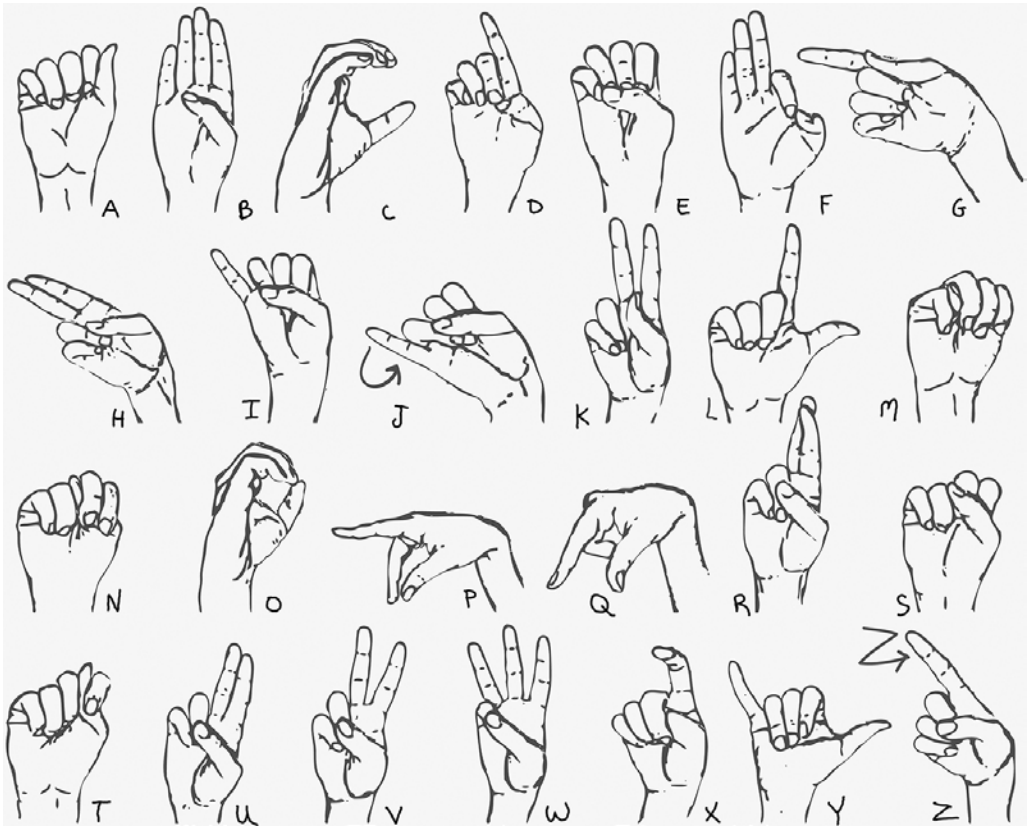
Figure 2.5 Hand Shapes in American Sign Language.

MOVEMENT OF HANDS IN SPACE. Hand movements in ASL are complex and involve the use of various dimensions of physical space and of changes in hand position. Direction of movement is a significant articulatory factor. Possibilities include movement along a vertical axis: upward, downward, and up and down; and movement along a horizontal-depth axis: rightward, leftward, and side to side.

Another distinctive feature is manner of movement of hands—that is, whether the hand moves in a straight, circular, or twisting path. Manner of hand movement also includes bending at the wrist or knuckles, wiggling the fingers, and opening or closing the hand.

ORIENTATION.   The last articulation parameter in ASL is the orientation of the palms of the hands in relation to a signer's body. Hands may be oriented with palms up or down, facing left or right, or directed toward or away from a signer. Orientation of the hands may involve contact between parts of the hand and other parts of a signer's body. Points of contact on the hand include fingertips, thumb tip, palm, side of the hand, and back of the hand.

Figure 2.6 illustrates the signs for first, second, and third persons. Note that plural persons are expressed by using the same hand configurations as singulars, but they are accompanied by movement of the hands.

ASL Vocabulary and Grammar

The vocabulary of ASL consists of thousands of distinct signs. Most signs are completely arbitrary in the sense that their form has no inherent physical relationship to their meaning. Arbitrariness of form and meaning is therefore a linguistic trait shared by both oral and manual language. However, some ASL signs do have an "iconic" relationship to concepts that they express. That is, they convey meaning through direct physical depiction. For instance, reference to signer or addressee (i.e.,

I, me

YOU
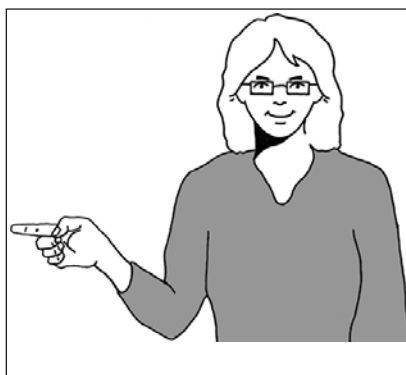
HE/SHE/IT, him/her

WE, us

THEY, them

YOU–plural

Figure 2.6   ASL Signs for First, Second, and Third Persons.

"I," "you") is conveyed with the hand in a neutral shape pointed toward the signer's body ("I") or toward the addressee ("you"). Spatial relations of hands can also have iconic functions. Examples cited earlier demonstrate such a process; for example, "with" is signed with one hand beside the other, and "follow" is made with one hand behind the other.

Although a number of ASL signs do have some physical correspondence to their meanings, it is important to note that even these signs are conventionalized, stylized representations. Similar to words in oral language, they are "socially constituted" symbols (McNeill 1987:244).

Words in ASL may contain a single sign or a combination of signs. Principles of word structure and word formation are thus similar in both ASL and oral language. Morphological rules apply in both systems. Just as morphemes can be combined in oral languages, manual morphemes can be combined within ASL words. Nouns, verbs, adjectives, and adverbs are often formed through compounding (Klima and Bellugi 1979:205):

Compound Sign	*Meaning of Compound*
sick + spread	epidemic
face + new	stranger
think + alike	to agree
wrong + happen	accidentally or by chance
sure + work	seriously

Grammatical meanings are conveyed in ASL through modifications of signs. For instance, to represent meanings of "intensification" of an activity (translated as "very," e.g., "very fast," "very slow"), a sign is produced with a short, rapid movement as contrasted with its neutral articulation.

The grammatical concept of tense is depicted in ASL as a vertical spatial plane running along the side of a signer's body. If a sign is made in this space immediately in front of a signer's body, present tense is conveyed; if a sign is made further in

EVERY-MORNING I GET-UP READ NEWSPAPER.
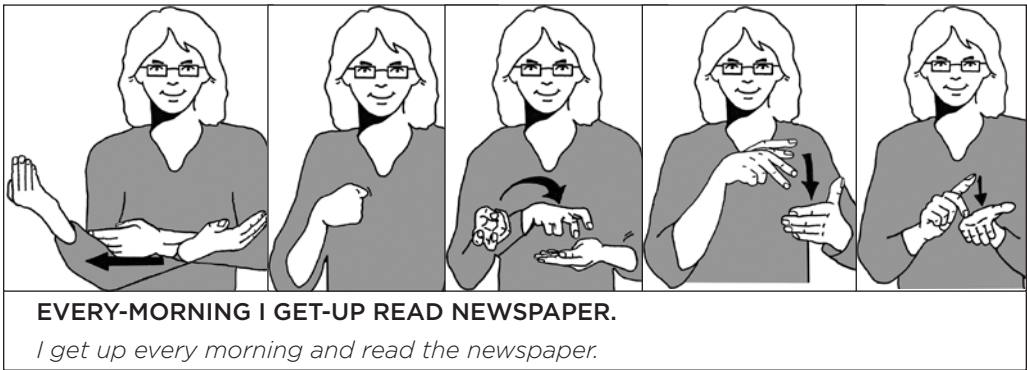*I get up every morning and read the newspaper.*

Figure 2.7   I Get Up Every Morning and Read the Newspaper.

front, a verb has a future tense meaning; and if a sign is made in the side vertical area behind a signer's body, a verb is interpreted with reference to past tense (Friedman 1977:51–52).

Signs can be modified in their production in order to transmit aspectual meanings of verbs. Among the many aspects depicted in ASL are the following (ibid.:249, 257, 293–294):

1. *Continuative* (continuation of action or state)—"My brother's leg has pained him for a long time."
2. *Incessant* (frequent occurrence and duration of a trait or quality)—"My sister gets sick incessantly; it never stops."
3. *Predispositional* (tendency to have a trait or quality)—"That's his way; he is characteristically quiet."
4. *Allocative* (allocation or distribution of objects)—"He gave something to each of them."

In addition to articulatory and morphological rules, ASL contains syntactic rules as well. Most sentences follow Subject-Verb-Object (SVO) order, similar to the basic word order of oral English.

In sum, structural and functional characteristics of ASL demonstrate both its complexity and its adherence to standardized rules of lexical and grammatical formation. It is therefore a distinct, elaborate, and meaningful linguistic system that is used by a population in the United States estimated to number from 250,000 to 500,000 (Woodward 1991). Some communicative practices employed in signing by Deaf people will be further discussed in Chapter 6.

NONVERBAL COMMUNICATION

Nonverbal Actions

People convey meaning not only through spoken language but also through gestures, facial expressions, body posture, and use of space. These aspects of communication are not merely embellishments to talk but are critical components of participants' messages. Nonverbal communication uses both kinesic and proxemic acts. The term *kinesics* refers to gesture, facial expression, eye contact, and body posture. *Proxemics* includes uses of touch and definitions of personal space.

Research in nonverbal behavior reveals both universal and culture-specific patterns. Because human bodies are constructed on a species-wide model, it follows that possible behavioral repertories are determined by the same fundamental constraints throughout the world. However, just as each language employs only some of the possible sounds that the human vocal apparatus can produce, each system of nonverbal communication selects only some possible human gestures, facial expressions, and so on. And nonverbal actions that "look the same" in different systems may have very different meanings because the meanings are culturally constructed and assigned. The meanings of gestures, expressions, and body postures do not flow from the actions themselves any more than the meanings of words flow from the particular sounds with which they are made.

Researchers in nonverbal communication generally emphasize one of two modes of interpretation. Although these interpretations are sometimes framed as opposites, they need not be incompatible. One school stresses biological/behaviorist features of nonverbal communication. Jolly (1972) states that certain gestures, body postures, and facial movements may have universal (or at least widespread) significance. In fact, some may be of primate origin. According to Jolly, humans and other primates appear to employ similar signals of enjoyment, distress, threat, and submissiveness. For example, observe the human and nonhuman primate expressions in the photographs in Figure 2.8 (Jolly 1972:156–165).

Some kinesic acts may have widespread functions. The two photographs in Figure 2.9 illustrate the eyebrow flash, which Eibl-Eibesfeldt describes as a "universal expressive pattern used during greeting at a distance" (1972:304ff). The set contains two pictures, one of a person with lowered eyebrows at the start of greeting and the second of the same person with maximally raised eyebrows.

Although biological/behaviorist interpretations of nonverbal actions are still common, more recently anthropologists studying nonverbal communication have argued that little, if any, actions are universal in their meaning. Instead, they stress the fact that all human behavior is culturally constructed and therefore all meaning is culturally assigned (Farnell 1995).

Some researchers have attempted to develop a system for notating gestures, expressions, and movements that could be used for comparative analyses of kinesic behavior in diverse cultures. Ray Birdwhistell's "kinesograms" (1970) are symbols specifying each possible expression, gesture, and change of position. Although planned as comparable to the International Phonetic Alphabet in its worldwide relevance, problems in its application arise because nonverbal communication is essentially fluid. Whereas sounds are segmentable into discrete units that can be represented by a single symbol (e.g., /p/, /o/), kinesic behavior is continual and multilayered. Therefore, it is difficult to decide where one segment ends and another begins. As an alternative, some researchers use notational systems based on *Labanotation*, a system originally introduced in the 1930s by Laban for recording dance movements (Farnell 1995).

Whatever the origin of nonverbal actions, all behaviors are learned as part of socialization within one's group. As Sheila Ramsey stated, "According to culturally prescribed codes, we use eye movement and contact to manage conversations and to regulate interactions; we follow rigid rules governing intra and inter personal touch, our bodies synchronously join in the rhythm of others in a group, and gestures modulate our speech. We must internalize all of this in order to become and remain fully functioning and socially appropriate members of any culture" (1979:111).

Gestures and other kinds of nonverbal actions are fundamentally communicative; that is, they carry meaning, and they are part of human cognition. They are understood to have meaning, interpretation, and evaluation by members of particular communities of practice. They are acts of the human body. Principally among the creators of communicating meaning are the hands. Indeed, human hands have created the world as we know it through our practice of toolmaking, tool using, interacting with and altering our environment, and fashioning the world around us. These are both creative and communicative acts (Streeck, Goodwin, and LeBaron 2011).

Figure 2.8a Human Tense-Mouth Face. Heads of state are dominant males, often photographed making gestures of confident threat.

Figure 2.8b The Chimpanzee Open-Mouth Threat.

Figure 2.8c The Human Smile Is a Greeting Gesture. It often grades into our laughter and play face. These girls enjoy playing together on a team, and it shows on their faces.

Figure 2.9a French Eyebrow Flash.

Figure 2.9b French Eyebrow Flash.

Some nonverbal actions have the status of so-called emblems: gestures that are understood by participants to express a specific meaning, often substituting for spoken words. Emblems in Euro-American societies include head nods to signal assent or shrugging the shoulders to convey uncertainty. Because emblems function within a particular interpretive system, similar actions may have different meanings in different cultures.

An important research question in nonverbal behavior concerns the relationship between gesture and spoken language. Young children's earliest gestures function

for "pointing," that is, physically pointing to an object or person before they have acquired the words to label objects or events. This use of gesture compensates for the inability to express oneself verbally. However, after the age of 2 years, children's use of gesture changes dramatically, becoming more adultlike.

In an intriguing study of five bilingual children who were videotaped in conversations every six months from the age of 2 until 3½ years, Rachel Mayberry and Elena Nicoladis (2000) found that gestural development was correlated with the complexity of language structure acquired by the child. The children, all firstborn boys who were bilingual in English and French from birth, were observed in conversations separately with their mothers and fathers. Length of utterance was measured and plotted along with gestural use. One finding was that the frequency of gesture increased with age and linguistic development. That is, at 2 years of age, 81 percent of the children's gestures were made while speaking, and by the age of 3½ years, 90 percent of gestures were made while speaking (Mayberry and Nicoladis 2000:194). This finding is consistent with adult patterns, in which adults use gestures in coordination with as much as 80 percent to 90 percent of their words in spoken language (McNeill 1992).

Mayberry and Nicoladis further divided children's gestures into types, that is, iconic gestures, beats, and pointing, in order to understand their development and relationship to spoken language. In their definition, iconic gestures are actions that "depict some aspect of spatial images, actions, people, or objects," while beat gestures are "hand and arm movements that emphasize spoken words or mark the structure of discourse" (ibid.). The category term of *pointing* includes pointing, reaching, clapping, and waving. Analysis of the data revealed that, in the initial stages of language development, children's gestures were of the pointing type. However, once their utterances consisted of more than two words, they began to use iconic and beat gestures while speaking. An additional clue into the relationship between gesture type and spoken language was the fact that the children's use of gestures accompanying each of their two languages (English and French) was correlated with the complexity of their language abilities in each language (ibid.:195). For three of the children, their linguistic abilities developed unevenly in each of their two languages, and their use of gestures was consistent with the pattern expected by the preliminary analysis. For example, the two children whose English advanced more quickly than their French used iconic and beat gestures when speaking complex sentences in English but did not use these gestures when producing one-word or two-word utterances in French. The reverse pattern was shown by the child whose French advanced more quickly than his English; that is, he used iconic and beat gestures when speaking complex sentences in French but did not use these gestures when speaking simpler utterances in English. These findings make it clear that the use of gestures does not correlate with any specific language but rather with language development and complexity.

Cultural diversity in interpreting nonverbal behaviors can lead to misunderstandings between people of different ethnic backgrounds. Two sources of problems are possible. One is that an emblem or signal used by one participant is absent from the repertory of the other and therefore no meaning is conveyed. The other problem is more serious: Similar behaviors exist for both participants, but their meanings differ. When someone is confronted with an unfamiliar act, the person knows that she or he cannot properly decode the message intended by the sender, but when a nonverbal act

is familiar in its form, an addressee decodes the message according to her or his own norms without realizing that the intended meaning is different. "Misled by the familiarity of the gesture, the decoder will most likely be unaware of this discrepancy, and consequently act according to [his/her] erroneous interpretation. … While a strange gesture will cause discommunication, the false decoding of familiar gestures will produce miscommunication, that is, misunderstanding" (Schneller 1988:155–156).

Misunderstanding between people of diverse ethnicities has been documented in Israel, a multicultural country (Schneller 1988). Even though most Israelis speak a common language (Hebrew), their diverse origins can lead to misinterpretation of nonverbal messages. In experimental situations, Israeli college students from 14 cultural backgrounds viewed videotaped gestures made by recent immigrants from Ethiopia. Of the 26 Ethiopian emblems demonstrated, 85 percent were recognized by the students. However, only 23 percent of the recognized gestures were correctly decoded; 7 percent were given "approximate" decodings; and 70 percent were misinterpreted (ibid.:158). Misunderstanding, then, is much more common than nonunderstanding.

Additional research by Raphael Schneller demonstrated that decoding of gestures commonly used by native-born Israelis was also problematic. In this experiment, Israelis from five different cultural backgrounds were shown videotapes of other Israelis and were asked to attribute meanings to the gestures. Of the nine emblems shown, 85 percent were recognized, although many were incorrectly decoded. Some emblems had high rates of correct decoding, but others had extremely low rates. Frequencies of misunderstanding varied, but some gestures were incorrectly interpreted by as much as 70 percent of respondents (ibid.:160–161).

These studies demonstrate the lack of congruence between participants' intended and received messages. When speech accompanies gestures, understanding is, of course, much more likely. Problems can still arise, though, because discrepancies between the perceived meanings of verbal and nonverbal behaviors result in confusion. And because nonverbal decoding usually occurs nonconsciously, people are unaware of the source of their confusion, potentially deepening their sense of discomfort with co-participants.

Although different meanings attributed to nonverbal behaviors by members of different groups can contribute to tense encounters, the discrepancies can also be a source of cultural humor. For example, the Western Apache of Arizona have developed joking routines that play, in part, on the intrusive, domineering communicative styles of Anglos (Basso 1979:48–55). In the routines, Apaches imitate numerous behaviors that Anglos typically perform but which Apaches consider offensive. These include making direct eye contact with or staring at interlocutors and touching another person while talking to them, stereotyped by the friendly backslap or hug.

Within a given society, patterns of nonverbal behavior often function to signal differences in status. Gestures, eye movements, smiles and other facial expressions, touching, and defining personal space are used in displays of status. In many cultures, a constellation of nonverbal behaviors appears to be consistent with high status or power. Dominant people tend to use broad gestures; look or even stare at others; maintain "serious," unsmiling faces; and inhabit wide areas of personal space. Conversely, in encounters between unequals, subordinates tend to use restricted, small

gestures; avert their eyes when looked at; smile frequently; and allow their space to be encroached on even to the point of being touched. Whereas high-status people use expansive gestures and attempt to enlarge the appearance of their bodies, low-status individuals act to limit their body images by lowering their heads and keeping their legs together and their arms close to their bodies.

In some cultures, specific gestures can be used as general markers of politeness. Patterns of bowing in Japan and other Asian societies are intricate signs of respect and deference. Reciprocal bowing (both participants bow to the same degree) signals equality and mutual respect. Nonreciprocal bowing occurs when a subordinate person bows deeply to a high-status person who acknowledges the bow with a head-nod (Morsbach 1988:190–191).

Nonverbal behaviors reflecting gender inequalities have been well documented in Western societies, including the United States. The constellation of acts mentioned above associated with dominant people tends to be employed by men, whereas women tend to use nonverbal markers of subordination or deference. Women typically smile, avert their eyes when looked at, condense their bodies and gestures, avoid encroaching on others' space, and allow intrusions into their own space (Hall 1984; Henley 1977). Nancy Henley reported numerous studies demonstrating that in mixed-sex interactions, men touched women twice as often as women touched men; men initiated eye contact twice as often with women as women did with men; and women returned smiles of men nearly all the time, whereas men returned only two-thirds of the smiles given by women (1977:115, 164, 176).

The Meaning of Silence

Silence is an act of nonverbal communication that transmits many kinds of meaning dependent on cultural norms of interpretation. Our tendency to describe silence as an absence of speech reveals a particular cultural bias, implying that something is missing, but silence is a "something" with purpose and significance. Silent behavior occurs in all societies, although its message varies both between and within different groups. It conveys meaning, as does all communication, partly from the situational and interactional contexts of its use. Emphasizing the use of silence also focuses on the fact that silence does not simply exist but is actively created by participants.

In US society, silence is required of individuals or groups engaged in several types of encounters. Most tend to have a ceremonial or formalized character where participants have established roles and behave in predictable ways. Audiences at ceremonies, governmental or legal proceedings, and theatrical events are generally constrained from speech or are limited to making brief, formulaic responses.

Silence or paucity of speech also underscores status differences between individuals in various kinds of role relationships, including employer/employee, teacher/student, and adult/child. In encounters between unequals, disproportionate use of talk or silence reveals underlying social hierarchies. Individuals of higher status tend to talk more, whereas those of lower rank are expected to be silent or less talkative.

In US society, interpersonal silence is not well tolerated, especially between people who are not intimates. Greater familiarity leads to greater ability to refrain from speech. In the opinion of Ishii and Bruneau, "One function of speech is to avoid

silence" (1988:313). This assessment offers a possible explanation of Western behaviors such as formulaic greetings, so-called small talk, and frequent question-and-answer sequences occurring in much daily conversation.

Because talk is preferred in interpersonal encounters, silence is often given negative interpretations. Feelings of hostility, disdain, disinterest, or anger are often attributed to silent participants. Despite these attitudes, silence is sometimes perceived as a mark of an individual's contemplative thought, respect for others, or desire to avoid conflict. Contrasting interpretations may be motivated by context or by social or personality attributes of participants.

In other cultures, as expected, the situational and interactional functions of silence are varied, although some cross-cultural similarities do pertain. Among the latter are status-related patterns in which people of lower status in unequal encounters tend to be more silent than those of higher rank.

Cultural variations, though, abound in terms of contexts where silence is expected. Among the Western Apache, silence is the norm in situations of ambiguity or uncertainty, such as encounters between strangers, initial courtship, times of mourning, greeting people who have been away for an extended period, and reactions to displays of anger (Basso 1972:71–79). These circumstances have a common theme: An individual is interacting with someone who is unpredictable because he or she is unknown, not known well, has been absent for some time, or is in a distressed psychic state. When interacting with such people, one must take care to silently observe them in order to pick up clues and anticipate their likely behavior.

Among the Igbo of Nigeria, talk and social gregariousness are highly valued, so silence stands out as unusual behavior. It is mandated in ritual or ritualized situations. For example, four days after a death in a household, villagers show sympathy by entering the house, standing in silence in front of bereaved family members, sitting silently for a period, and again presenting themselves to mourners before departing (Nwoye 1985:186). Silence is the norm in other ritual endeavors, including sacrifices and consulting with ancestor spirits (ibid.:186–187). In these contexts, silence marks the occasion's solemnity and signals the detachment of participants from normal routines.

Silence is also employed by Igbos as a means of social control. Wrongdoers are punished by group silence. All villagers refuse to speak to the guilty party and his or her family (ibid.:188). In the traditional life of communal interdependence, wrongdoers quickly correct their behavior. Finally, Igbo silence can be used to demonstrate hostilities between people, especially by withholding greetings. Because greetings are signals of sociability, silence eloquently speaks of disharmony. Therefore, Igbos' refusal to greet or speak to each other is a clear manifestation of animosity or evil intentions. In Gregory Nwoye's words, "The Igbo expression of the English equivalent of 'not to be on speaking terms' is much more sinister than its English equivalent" (ibid.:190).

It is important, of course, to be wary of overgeneralizing or stereotyping any society. Not all members are equally silent or loquacious or adhere to interpretive norms to the same degree. Discrepancies always exist between ideals and actual practice.

Summary

In this chapter, we have explored various means by which co-participants produce messages. Transmission of meaning from one individual to another is the essence of communication. To accomplish this purpose, people employ verbal and nonverbal techniques.

Linguists have developed numerous descriptive and explanatory tools to analyze the structure of language. Talk is achieved through the interdependent components of sounds, words, sentences, and meanings. Although every language is unique, some universals can be specified, including the human range of phonetic inventories, recurring types of morphological and syntactic constructions, and underlying semantic relationships.

Nonverbal communication also consists of unique and common behaviors. Although some actions may occur in many societies, they are always given culturally specific interpretations. Silence is also a universal activity, but its display and contextual meaning are affected by cultural rules.

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3

Language and Cultural Meaning

■ ■ ■

Compare the different ways that speakers of English and Navajo express their intentions and actions (note that Navajo utterances have been translated into English):

ENGLISH SPEAKER: I must go there.

NAVAJO SPEAKER: It is only good that I shall go there.

ENGLISH SPEAKER: I make the horse run.

NAVAJO SPEAKER: The horse is running for me.

In their use of language, speakers of English and Navajo express different views of events and experiences. By framing their intentions or activities with contrasting words and grammatical forms, they show in these examples that they have different attitudes about people's rights and obligations. English speakers encode the rights of people to control other beings (people or animals) or to be controlled or compelled themselves. In contrast, Navajo speakers give all beings the ability to decide for themselves, without compulsion or control from others.

The words used by speakers of English and Navajo express and reflect attitudes about the world that come from their own cultures. Although the attitudes indicated by these examples are specific, the process of encoding values, ideas, and emotions in language is universal. Such culturally shared attitudes, or *cultural models*, are based on people's ideas about the world they live in. Cultural models are expressed in several ways, but language is key to their transmission. Cultural models may be stated overtly, as in proverbs such as "don't cry over spilt milk" or "the early bird catches the worm," and either direct one's actions and attitudes or provide explanations for one's circumstances. Beliefs about the world may also be conveyed through accepted myths and legends, whether religious or secular, for example, the depiction of events in the Garden of Eden or the story of George Washington and the cherry tree. Such accounts guide human thought and action by providing moral lessons for individual behavior.