C H A P T E R 4

Language and Communication

North Americans have certain stereotypes about how people in other regions talk. Some stereotypes, spread by the mass media, are more generalized than others are. Most Americans think they can imitate a "Southern accent." We also stereotype speech in New York City (the pronunciation of *coffee,* for example), Boston ("I pahked the kah in Hahvahd Yahd"), and Canada ("oot" for "out").

Regional patterns influence the way all Americans speak. In whichever state, college students from out of state easily recognize that their in-state classmates speak differently. In-state students, however, have difficulty hearing their own speech peculiarities because they are accustomed to them and view them as normal.

It is sometimes thought that midwesterners don't have accents. This belief stems from the fact that midwestern dialects don't have many stigmatized linguistic variants—speech patterns that people in other regions recognize and look down on, such as *r*lessness and *dem, dese,* and *dere* (instead of *them, these,* and *there*).

Far from having no accents, midwesterners, even in the same high school, exhibit linguistic diversity (see Eckert 1989, 2000). Dialect differences are immediately obvious to people, like me, who come from other parts of the country. One of the best examples of variable midwestern speech, involving vowels, is pronunciation of the *e* sound (called the /e/ phoneme), in such words as *ten, rent, French, section, lecture, effect, best,* and *test*. In southeastern Michigan, where I live and teach, there are four different ways of pronouncing this *e* sound. Speakers of Black English and

immigrants from Appalachia often pronounce *ten* as *tin,* just as Southerners habitually do. Some Michiganders say *ten,* the correct pronunciation in Standard English. However, two other pronunciations also are common. Instead of *ten,* many Michiganders say *tan,* or *tun* (as though they were using the word *ton,* a unit of weight).

My students often astound me with their pronunciation. One day I met one of my Michigan-raised teaching assistants in the hall. She was deliriously happy. When I asked why, she replied, "I've just had the best suction."

"What?" I said.

She finally spoke more precisely. "I've just had the best saction." She considered this a clearer pronunciation of the word *section*.

Another TA complimented me, "You luctured to great effuct today." After an exam a student lamented that she had not done her "bust on the tust" (i.e., best on the test).

The truth is, regional patterns affect the way we all speak.

Language

Linguistic anthropology illustrates anthropology's characteristic interests in diversity, comparison, and change—but here the focus is on language. Language, spoken (*speech*) and written (*writing*—which has existed for about 6,000 years), is our primary means of communication. Like culture in general, of which language is a part, language is transmitted through learning. Language is based on arbitrary, learned associations between words and the things they stand for. Unlike the communication systems of other animals, language allows us to discuss the past and future, share our experiences with others, and benefit from their experiences.

Anthropologists study language in its social and cultural context (see Bonvillain 2008; Salzmann 2007). Some linguistic anthropologists reconstruct ancient languages by comparing their contemporary descendants and in doing so make discoveries about history. Others study linguistic differences to discover the varied worldviews and patterns of thought in a multitude of cultures. Sociolinguists examine dialects and styles in a single language to show how speech reflects social differences, as in the above discussion of regional speech contrasts. Linguistic anthropologists also explore the role of language in colonization and globalization (Geis 1987; Thomas 1999).

Nonhuman Primate Communication

Call Systems

Only humans speak. No other animal has anything approaching the complexity of language. The natural communication systems of other primates (monkeys and apes) are **call systems.** These vocal systems consist of a limited number of sounds—*calls*—that are produced only when particular environmental stimuli are encountered. Such calls may be varied in intensity and duration, but they are much less flexible than language because they are automatic and can't be combined. When primates encounter

food and danger simultaneously, they can make only one call. They can't combine the calls for food and danger into a single utterance, indicating that both are present. At some point in human evolution, however, our ancestors began to combine calls and to understand the combinations. The number of calls also expanded, eventually becoming too great to be transmitted even partly through the genes. Communication came to rely almost totally on learning.

Although wild primates use call systems, the vocal tract of apes is not suitable for speech. Until the 1960s, attempts to teach spoken language to apes suggested that they lack linguistic abilities. In the 1950s, a couple raised a chimpanzee, Viki, as a member of their family and systematically tried to teach her to speak. However, Viki learned only four words ("mama," "papa," "up," and "cup").

Sign Language

More recent experiments have shown that apes can learn to use, if not speak, true language (Fouts 1997; Miles 1983). Several apes have learned to converse with people through means other than speech. One such communication system is American Sign Language, or ASL, which is widely used by hearing-impaired Americans. ASL employs a limited number of basic gesture units that are analogous to sounds in spoken language. These units combine to form words and larger units of meaning.

The first chimpanzee to learn ASL was Washoe, a female, who died in 2007 at the age of 42. Captured in West Africa, Washoe was acquired by R. Allen Gardner and Beatrice Gardner, scientists at the University of Nevada in Reno, in 1966, when she was a year old. Four years later, she moved to Norman, Oklahoma, to a converted farm that had become the Institute for Primate Studies. Washoe revolutionized the discussion of the language-learning abilities of apes (Carey 2007). At first she lived in a trailer and heard no spoken language. The researchers always used ASL to communicate with each other in her presence. The chimp gradually acquired a vocabulary of more than 100 signs representing English words (Gardner, Gardner, and Van Cantfort, eds. 1989). At the age of two, Washoe began to combine as many as five signs into rudimentary sentences such as "you, me, go out, hurry."

The second chimp to learn ASL was Lucy, Washoe's junior by one year. Lucy died, or was murdered by poachers, in 1986, after having been introduced to "the wild" in Africa in 1979 (Carter 1988). From her second day of life until her move to Africa, Lucy lived with a family in Norman, Oklahoma. Roger Fouts, a researcher from the nearby Institute for Primate Studies, came two days a week to test and improve Lucy's knowledge of ASL. During the rest of the week, Lucy used ASL to converse with her foster parents. After acquiring language, Washoe and Lucy exhibited several human traits: swearing, joking, telling lies, and trying to teach language to others (Fouts 1997).

When irritated, Washoe called her monkey neighbors at the institute "dirty monkeys." Lucy insulted her "dirty cat." On arrival at Lucy's place, Fouts once found a pile of excrement on the floor. When he asked the chimp what it was, she replied, "dirty, dirty," her expression for feces. Asked whose "dirty, dirty" it was, Lucy named Fouts's coworker, Sue. When Fouts refused to believe her about Sue, the chimp blamed the excrement on Fouts himself.

Cultural transmission of a communication system through learning is a fundamental attribute of language. Washoe, Lucy, and other chimps have tried to teach ASL to other animals, including their own offspring. Washoe taught gestures to other institute chimps, including her son Sequoia, who died in infancy (Fouts, Fouts, and Van Cantfort 1989).

Because of their size and strength as adults, gorillas are less likely subjects than chimps for such experiments. Lean adult male gorillas in the wild weigh 400 pounds (180 kilograms), and full-grown females can easily reach 250 pounds (110 kilograms). Because of this, psychologist Penny Patterson's work with gorillas at Stanford University seems more daring than the chimp experiments. Patterson raised her now full-grown female gorilla, Koko, in a trailer next to a Stanford museum. Koko's vocabulary surpasses that of any chimp. She regularly employs 400 ASL signs and has used about 700 at least once.

Koko and the chimps also show that apes share still another linguistic ability with humans: **productivity.** Speakers routinely use the rules of their language to produce

Apes, such as these Congo chimpanzees, use call systems to communicate in the wild. Their vocal systems consist of a limited number of sounds—calls—that are produced only when particular environmental stimuli are encountered.

entirely new expressions that are comprehensible to other native speakers. I can, for example, create "baboonlet" to refer to a baboon infant. I do this by analogy with English words in which the suffix *-let* designates the young of a species. Anyone who speaks English immediately understands the meaning of my new word. Koko, Washoe, Lucy, and others have shown that apes also are able to use language productively. Lucy used gestures she already knew to create "drinkfruit" for watermelon. Washoe, seeing a swan for the first time, coined "waterbird." Koko, who knew the gestures for "finger" and "bracelet," formed "finger bracelet" when she was given a ring.

Chimps and gorillas have a rudimentary capacity for language. They may never have invented a meaningful gesture system in the wild. However, given such a system, they show many humanlike abilities in learning and using it. Of course, language use by apes is a product of human intervention and teaching. The experiments mentioned here do not suggest that apes can invent language (nor are human children ever faced with that task). However, young apes have managed to learn the basics of gestural language. They can employ it productively and creatively, although not with the sophistication of human ASL users.

Apes also have demonstrated linguistic **displacement.** Absent in call systems, this is a key ingredient in language. Normally, each call is tied to an environmental stimulus such as food. Calls are uttered only when that stimulus is present. Displacement means that humans can talk about things that are not present. We don't have to see the objects before we say the words. Human conversations are not limited by place. We can discuss the past and future, share our experiences with others, and benefit from theirs.

Patterson has described several examples of Koko's capacity for displacement (Patterson 1978). The gorilla once expressed sorrow about having bitten Penny three days earlier. Koko has used the sign "later" to postpone doing things she doesn't want to do. Table 4.1 summarizes the contrasts between language, whether sign or spoken, and call systems.

TABLE 4.1

Language Contrasted with Call Systems

Human Language	Primate Call Systems
Has the capacity to speak of things and events that are not present (displacement).	Are stimuli-dependent; the food call will be made only in the presence of food; it cannot be faked.
Has the capacity to generate new expressions by combining other expressions (productivity).	Consist of a limited number of calls that cannot be combined to produce new calls.
Is group specific in that all humans have the capacity for language, but each linguistic community has its own language, which is culturally transmitted.	Tend to be species specific, with little variation among communities of the same species for each call.

Certain scholars doubt the linguistic abilities of chimps and gorillas (Sebeok and Umiker-Sebeok, eds. 1980; Terrace 1979). These people contend that Koko and the chimps are comparable to trained circus animals and don't really have linguistic ability. However, in defense of Patterson and the other researchers (Hill 1978; Van Cantfort and Rimpau 1982), only one of their critics has worked with an ape. This was Herbert Terrace, whose experience teaching a chimp sign language lacked the continuity and personal involvement that have contributed so much to Patterson's success with Koko.

No one denies the huge difference between human language and gorilla signs. There is a major gap between the ability to write a book or say a prayer and the few hundred gestures employed by a well-trained chimp. Apes aren't people, but they aren't just animals either. Let Koko express it: When asked by a reporter whether she was a person or an animal, Koko chose neither. Instead, she signed "fine animal gorilla" (Patterson 1978). For the latest on Koko, see http://koko.org.

The Origin of Language

Although the capacity to remember and combine linguistic symbols may be latent in the apes (Miles 1983), human evolution was needed for this seed to flower into language. A mutated gene known as FOXP2 helps explain why humans speak and chimps don't (Paulson 2005). The key role of FOXP2 in speech came to light in a study of a British family, identified only as KE, half of whose members had an inherited, severe deficit in speech (Trivedi 2001). The same variant form of FOXP2 that is found in chimpanzees causes this disorder. Those who have the nonspeech version of the gene cannot make the fine tongue and lip movements that are necessary for clear speech, and their speech is unintelligible—even to other members of the KE family (Trivedi 2001). Chimps have the same (genetic) sequence as the KE family members with the speech deficit. Comparing chimp and human genomes, it appears that the speech-friendly form of FOXP2 took hold in humans around 150,000 years ago. This mutation conferred selective advantages (linguistic and cultural abilities) that allowed those who had it to spread at the expense of those who did not (Paulson 2005).

Language offered a tremendous adaptive advantage to *Homo sapiens*. Language permits the information stored by a human society to exceed by far that of any nonhuman group. Language is a uniquely effective vehicle for learning. Because we can speak of things we have never experienced, we can anticipate responses before we encounter the stimuli. Adaptation can occur more rapidly in *Homo* than in the other primates because our adaptive means are more flexible.

Nonverbal Communication

Language is our principal means of communicating, but it isn't the only one we use. We *communicate* when we transmit information about ourselves to others and receive such information from them. Our expressions, stances, gestures, and movements, even if unconscious, convey information and are part of our communication styles. Deborah Tannen (1990) discusses differences in the communication styles of American men

and women, and her comments go beyond language. She notes that American girls and women tend to look directly at each other when they talk, whereas American boys and men do not. Males are more likely to look straight ahead rather than turn and make eye contact with someone, especially another man, seated beside them. Also, in conversational groups, American men tend to relax and sprawl out. American women may adopt a similar relaxed posture in all-female groups, but when they are with men, they tend to draw in their limbs and adopt a tighter stance.

Kinesics is the study of communication through body movements, stances, gestures, and expressions. Linguists pay attention not only to what is said but to how it is said, and to features besides language itself that convey meaning. A speaker's enthusiasm is conveyed not only through words, but also through facial expressions, gestures, and other signs of animation. We use gestures, such as a jab of the hand, for emphasis. We vary our intonation and the pitch or loudness of our voices. We communicate through strategic pauses, and even by being silent. An effective communication strategy may be to alter pitch, voice level, and grammatical forms, such as declaratives ("I am . . ."), imperatives ("Go forth . . ."), and questions ("Are you . . . ?"). Culture teaches us that certain manners and styles should accompany certain kinds of speech. Our demeanor, verbal and nonverbal, when our favorite team is winning would be out of place at a funeral, or when a somber subject is being discussed.

Culture always plays a role in shaping the "natural." Cross-culturally, nodding does not always mean affirmative, nor does head shaking from side to side always mean negative. Brazilians wag a finger to mean no. Americans say "uh huh" to affirm, whereas in Madagascar a similar sound is made to deny. Americans point with their fingers; the people of Madagascar point with their lips.

Body movements communicate social differences. In Japan, bowing is a regular part of social interaction, but different bows are used depending on the social status of the people who are interacting. In Madagascar and Polynesia, people of lower status should not hold their heads above those of people of higher status. When one approaches someone older or of higher status, one bends one's knees and lowers one's head as a sign of respect. In Madagascar, one always does this, for politeness, when passing between two people. Although our gestures, facial expressions, and body stances have roots in our primate heritage, and can be seen in the monkeys and the apes, they have not escaped cultural shaping. Language, which is so highly dependent on the use of symbols, is the domain of communication in which culture plays the strongest role.

The Structure of Language

The scientific study of a spoken language **(descriptive linguistics)** involves several interrelated areas of analysis: phonology, morphology, lexicon, and syntax. **Phonology,** the study of speech sounds, considers which sounds are present and significant in a given language. **Morphology** studies the forms in which sounds combine to form *morphemes*—words and their meaningful parts. Thus, the word *cats* would be analyzed as containing two morphemes—*cat,* the name for a kind of animal, and *-s,* a morpheme indicating plurality. A language's **lexicon** is a dictionary containing all its morphemes and their meanings. **Syntax** refers to the arrangement and order of words

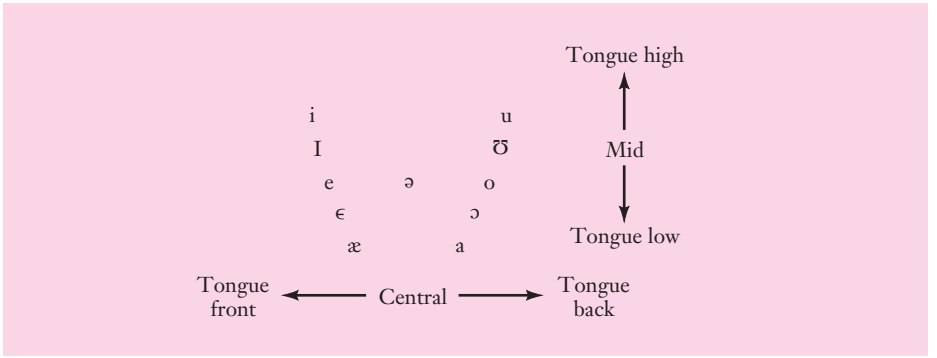
Syntax refers to the arrangement and order of words in phrases and sentences. A photo of Yoda from *Star Wars* (*The Empire Strikes Back*) this is. What's odd about Yoda's syntax?

in phrases and sentences. For example, do nouns usually come before or after verbs? Do adjectives normally precede or follow the nouns they modify?

Speech Sounds

From the movies and TV, and from meeting foreigners, we know something about foreign accents and mispronunciations. We know that someone with a marked French accent doesn't pronounce *r* like an American does. But at least someone from France can distinguish between "craw" and "claw," which someone from Japan may not be able to do. The difference between *r* and *l* makes a difference in English and in French, but it doesn't in Japanese. In linguistics we say that the difference between *r* and *l* is *phonemic* in English and French but not in Japanese. In English and French *r* and *l* are phonemes but not in Japanese. A **phoneme** is a sound contrast that makes a difference, that differentiates meaning.

We find the phonemes in a given language by comparing *minimal pairs,* words that resemble each other in all but one sound. The words have different meanings, but they differ in just one sound. The contrasting sounds are therefore phonemes in that language. An example in English is the minimal pair *pit/bit*. These two words are distinguished by a single sound contrast between /p/ and /b/ (we enclose phonemes in slashes). Thus /p/ and /b/ are phonemes in English. Another example is the different vowel sound of *bit* and *beat* (Figure 4.1). This contrast serves to distinguish these two words and the two vowel phonemes written /I/ and /i/ in English.



high front (spread)	[i]	as in *beat*
lower high front (spread)	[I]	as in *bit*
mid front (spread)	[e]	as in *bait*
lower mid front (spread)	[ɛ]	as in *bet*
low front	[æ]	as in *bat*
central	[ə]	as in *butt*
low back	[a]	as in *pot*
lower mid back (rounded)	[ɔ]	as in *bought*
mid back (rounded)	[o]	as in *boat*
lower high back (rounded)	[ʊ]	as in *put*
high back (rounded)	[u]	as in *boot*

FIGURE 4.1 ***Vowel phonemes in Standard American English*** They are shown according to height of tongue and tongue position at front, center, or back of mouth. Phonetic symbols are identified by English words that include them; note that most are minimal pairs.

SOURCE: From *Aspects of Language,* 3rd ed. by Dwight Bolinger, Figure 2.1. Copyright © 1981 Heinle/Arts & Sciences, a part of Cengage Learning, Inc. Reproduced by permission. www.cengage.com/permissions.

Standard (American) English (SE), the "region-free" dialect of TV network newscasters, has about 35 phonemes—at least 11 vowels and 24 consonants. The number of phonemes varies from language to language—from 15 to 60, averaging between 30 and 40. The number of phonemes also varies between dialects of a given language. In North American English, for example, vowel phonemes vary noticeably from dialect to dialect. Readers should pronounce the words in Figure 4.1, paying attention to (or asking someone else) whether they distinguish each of the vowel sounds. Most North Americans don't pronounce them all.

Phonetics is the study of speech sounds in general, what people actually say in various languages, like the differences in vowel pronunciation described in the discussion of midwestern speech at the beginning of the chapter. **Phonemics** studies only the *significant* sound contrasts (phonemes) of a given language. In English, like /r/ and /l/ (remember *craw* and *claw*), /b/ and /v/ also are phonemes, occurring in minimal pairs like *bat* and *vat*. In Spanish, however, the contrast between [b] and [v]

doesn't distinguish meaning, and they therefore are not phonemes (we enclose sounds that are not phonemic in brackets). Spanish speakers normally use the [b] sound to pronounce words spelled with either *b* or *v*.

In any language a given phoneme extends over a phonetic range. In English the phoneme /p/ ignores the phonetic contrast between the [p^h] in *pin* and the [p] in *spin*. Most English speakers don't even notice that there is a phonetic difference. The [p^h] is aspirated, so that a puff of air follows the [p]. The [p] in *spin* is not. (To see the difference, light a match, hold it in front of your mouth, and watch the flame as you pronounce the two words.) The contrast between [p^h] and [p] *is* phonemic in some languages, such as Hindi (spoken in India). That is, there are words whose meaning is distinguished only by the contrast between an aspirated and an unaspirated [p].

Native speakers vary in their pronunciation of certain phonemes, such as the /e/ phoneme in the midwestern United States. This variation is important in the evolution of language. Without shifts in pronunciation, there could be no linguistic change. The section on sociolinguistics below considers phonetic variation and its relationship to social divisions and the evolution of language.

Language, Thought, and Culture

The well-known linguist Noam Chomsky (1957) has argued that the human brain contains a limited set of rules for organizing language, so that all languages have a common structural basis. (Chomsky calls this set of rules *universal grammar*.) That people can learn foreign languages and that words and ideas translate from one language to another supports Chomsky's position that all humans have similar linguistic abilities and thought processes. Another line of support comes from creole languages. Such languages develop from pidgins, languages that form in situations of acculturation, when different societies come into contact and must devise a system of communication. Pidgins based on English and native languages developed through trade and colonialism in many world areas, including China, Papua New Guinea, and West Africa. Eventually, after generations of being spoken, pidgins may develop into *creole languages*. These are more mature languages, with developed grammatical rules and native speakers (people who learn the language as their primary one during enculturation).

Creoles are spoken in several Caribbean societies. Gullah, which is spoken by African Americans on coastal islands in South Carolina and Georgia, is a creole language. Supporting the idea that creoles are based on universal grammar is the fact that such languages all share certain features. Syntactically, all use particles (e.g., will, was) to form future and past tenses and multiple negation to deny or negate (e.g., he don't got none). Also, all form questions by changing inflection rather than by changing word order. For example, "You're going home for the holidays?" (with a rising tone at the end) rather than "Are you going home for the holidays?"

The Sapir-Whorf Hypothesis

Other linguists and anthropologists take a different approach to the relation between language and thought. Rather than seeking universal linguistic structures and processes,

they believe that different languages produce different ways of thinking. This position sometimes is known as the **Sapir-Whorf hypothesis** after Edward Sapir (1931) and his student Benjamin Lee Whorf (1956), its prominent early advocates. Sapir and Whorf argued that the grammatical categories of particular languages lead their speakers to think about things in different ways. For example, English divides time into past, present, and future. Hopi, a language of the Pueblo region of the Native American Southwest, does not. Rather, Hopi distinguishes between events that exist or have existed (what we use present and past to discuss) and those that don't or don't yet (our future events, along with imaginary and hypothetical events). Whorf argued that this difference leads Hopi speakers to think about time and reality in different ways than English speakers do.

A similar example comes from Portuguese, which employs a future subjunctive verb form, introducing a degree of uncertainty into discussions of the future. In English we routinely use the future tense to talk about something we think will happen. We don't feel the need to qualify "The sun'll come out tomorrow," by adding "if it doesn't go supernova." We don't hesitate to proclaim "I'll see you next year," even when we can't be absolutely sure we will. The Portuguese future subjunctive qualifies the future event, recognizing that the future can't be certain. Our way of expressing the future as certain is so ingrained that we don't even think about it, just as the Hopi don't see the need to distinguish between present and past, both of which are real, while the future remains hypothetical. It seems, however, that language does not tightly restrict thought, because cultural changes can produce changes in thought and in language, as we'll see in the next section (see also Gumperz and Levinson, eds. 1996).

Shown here (in 1995) is Leigh Jenkins, who was or is director of Cultural Preservation for the Hopi tribal council. The Hopi language would not distinguish between *was* and *is* in the previous sentence. For the Hopi, present and past are real and are expressed grammatically in the same way while the future remains hypothetical and has a different grammatical expression.

Focal Vocabulary

A lexicon (or vocabulary) is a language's dictionary, its set of names for things, events, and ideas. Lexicon influences perception. Thus, Eskimos (or Inuit) have several distinct words for different types of snow that in English are all called *snow*. Most English speakers never notice the differences between these types of snow and might have trouble seeing them even if someone pointed them out. Eskimos recognize and think about differences in snow that English speakers don't see because our language gives us just one word.

Similarly, the Nuer of Sudan have an elaborate vocabulary to describe cattle. Eskimos have several words for snow and Nuer have dozens for cattle because of their particular histories, economies, and environments (Brown 1958; Eastman 1975). When the need arises, English speakers can also elaborate their snow and cattle vocabularies. For example, skiers name varieties of snow with words that are missing from the lexicons of Florida retirees. Similarly, the cattle vocabulary of a Texas rancher is much more ample than that of a salesperson in a New York City department store. Such specialized sets of terms and distinctions that are particularly important to certain groups (those with particular *foci* of experience or activity) are known as **focal vocabulary.**

Vocabulary is the area of language that changes most readily. New words and distinctions, when needed, appear and spread. For example, who would have "faxed" anything a generation ago? Names for items get simpler as they become common and important. A television has become a *TV,* an automobile a *car,* and a digital video disc a *DVD*.

Language, culture, and thought are interrelated. Opposing the Sapir-Whorf hypothesis, however, it might be more accurate to say that changes in culture produce changes in language and thought than to say the reverse. Consider differences between female and male Americans regarding the color terms they use (Lakoff 2004). Distinctions implied by such terms as *salmon, rust, peach, beige, teal, mauve, cranberry,* and *dusky orange* aren't in the vocabularies of most American men. However, many of them weren't even in American women's lexicons 50 years ago. These changes reflect changes in American economy, society, and culture. Color terms and distinctions have increased with the growth of the fashion and cosmetic industries. A similar contrast (and growth) in Americans' lexicons shows up in football, basketball, and hockey vocabularies. Sports fans, more often males than females, use more terms concerning, and make more elaborate distinctions between, the games they watch, such as hockey (see Table 4.2). Thus, cultural contrasts and changes affect lexical distinctions (for instance, *peach* versus *salmon*) within semantic domains (for instance, color terminology). **Semantics** refers to a language's meaning system.

The ways in which people divide up the world—the lexical contrasts they perceive as meaningful or significant—reflect their experiences (see Bicker, Sillitoe, and Pottier, eds. 2004). Anthropologists have discovered that certain sets of vocabulary items evolve in a determined order. For example, after studying more than 100 languages, Berlin and Kay (1969/1992) discovered 10 basic color terms: *white, black, red, yellow, blue, green,*

On May 26, 2008, in Detroit, Red Wings defenseman Brad Stuart (C) tries to keep Pittsburgh Penguins' Kris Letang (R) from getting a shot on Detroit Red Wings goalie Chris Osgood (L) in Detroit's 3-0 victory in game 2 of the Stanley Cup Finals. The Penguins would avenge that loss and claim the Stanley cup the following year. How might an avid hockey fan describe this photo?

TABLE 4.2

Focal Vocabulary for Hockey

Insiders have special terms for the major elements of the game

Elements of Hockey	Insiders' Term
puck	biscuit
goal/net	pipes
penalty box	sin bin
hockey stick	twig
helmet	bucket
space between a goalie's leg pads	five hole

brown, pink, orange, and *purple* (they evolved in more or less that order). The number of terms varied with cultural complexity. Representing one extreme were Papua New Guinea cultivators and Australian hunters and gatherers, who used only two basic terms, which translate as *black* and *white* or *dark* and *light*. At the other end of the continuum were European and Asian languages with all the color terms. Color terminology was most developed in areas with a history of using dyes and artificial coloring.

Sociolinguistics

No language is a uniform system in which everyone talks just like everyone else. The field of **sociolinguistics** investigates relationships between social and linguistic variation (Romaine 2000; Trudgill 2000). How do different speakers use a given language? How do linguistic features correlate with social diversity and stratification, including class, ethnic, and gender differences (Tannen 1990; Tannen, ed. 1993)? How is language used to express, reinforce, or resist power (Geis 1987; Lakoff 2000)?

Sociolinguists focus on features that vary systematically with social position and situation. To study variation, sociolinguists must observe, define, and measure variable use of language in real-world situations. To show that linguistic features correlate with social, economic, and political differences, the social attributes of speakers also must be measured and related to speech (Fasold 1990; Labov 1972*a*).

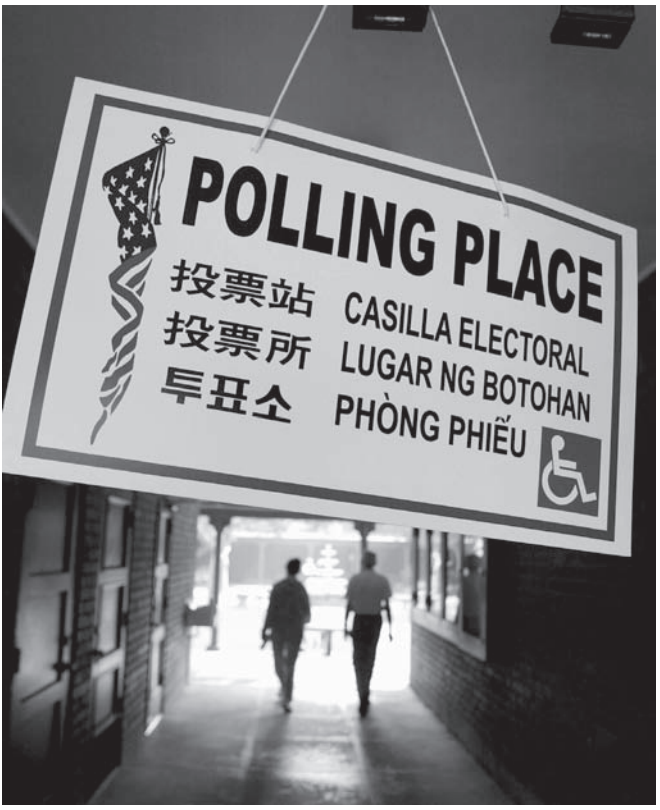
Variation within a language at a given time is historical change in progress. The same forces that, working gradually, have produced large-scale linguistic change over the centuries are still at work today. Linguistic change doesn't occur in a vacuum but in society. When new ways of speaking are associated with social factors, they are imitated, and they spread. In this way, a language changes.

Linguistic Diversity within Nations

As an illustration of the linguistic variation encountered in all nations, consider the contemporary United States. Ethnic diversity is revealed by the fact that millions of Americans learn first languages other than English. Spanish is the most common. Most of those people eventually become bilinguals, adding English as a second language. In many multilingual (including colonized) nations, people use two languages on different occasions—one in the home, for example, and the other on the job or in public (see this chapter's "Anthropology Today" section).

Whether bilingual or not, we all vary our speech in different contexts; we engage in **style shifts.** In certain parts of Europe, people regularly switch dialects. This phenomenon, known as **diglossia,** applies to "high" and "low" variants of the same language, for example, in German and Flemish (spoken in Belgium). People employ the high variant at universities and in writing, professions, and the mass media. They use the low variant for ordinary conversation with family members and friends.

Just as social situations influence our speech, so do geographical, cultural, and socioeconomic differences. Many dialects coexist in the United States with Standard (American) English (SE). SE itself is a dialect that differs, say, from "BBC English,"



Ethnic and linguistic diversity characterize many nations, especially in big cities, as is illustrated by this California sign written in seven languages: Chinese, Korean, Spanish, Vietnamese, Japanese, Tagalog, and English.

which is the preferred dialect in Great Britain. Different dialects are equally effective as systems of communication, which is language's main job. Our tendency to think of particular dialects as cruder or more sophisticated than others is a social rather than a linguistic judgment. We rank certain speech patterns as better or worse because we recognize that they are used by groups that we also rank. People who say *dese, dem,* and *dere* instead of *these, them,* and *there* communicate perfectly well with anyone who recognizes that the *d* sound systematically replaces the *th* sound in their speech. However, this form of speech has become an indicator of low social rank. We call it, like the use of *ain't,* "uneducated speech." The use of *dem, dese,* and *dere* is one of many phonological differences that Americans recognize and look down on.

Gender Speech Contrasts

Comparing men and women, there are differences in phonology, grammar, and vocabulary, and in the body stances and movements that accompany speech (Eckert

and McConnell-Ginet 2003; Lakoff 2004; Tannen 1990). In phonology, American women tend to pronounce their vowels more peripherally ("rant," "rint" when saying the word "rent"), whereas men tend to pronounce theirs more centrally ("runt"). In public contexts, Japanese women tend to adopt an artificially high voice, for the sake of politeness, according to their traditional culture. Women tend to be more careful about uneducated speech. This trend shows up in both the United States and England. Men may adopt working-class speech because they associate it with masculinity. Perhaps women pay more attention to the media, in which standard dialects are employed.

According to Robin Lakoff (2004), the use of certain types of words and expressions has been associated with women's traditional lesser power in American society (see also Coates 1986; Romaine 1999; Tannen 1990; Tannen, ed. 1993). For example, *Oh dear, Oh fudge,* and *Goodness!* are less forceful than *Hell* and *Damn*. Watch the lips of a disgruntled athlete in a televised competition, such as a football game. What's the likelihood he's saying "Phooey on you"? Women, by contrast, are more likely to use such adjectives as *adorable, charming, sweet, cute, lovely,* and *divine* than men are.

Let's return to sports and color terminology for additional illustration of differences in lexical (vocabulary) distinctions that men and women make. Men typically know more terms related to sports, make more distinctions among them (e.g., runs versus points), and try to use the terms more precisely than women do. Correspondingly, influenced more by the fashion and cosmetics industries than men are, women use more color terms and attempt to use them more specifically than men do. Thus, when I lecture on sociolinguistics, and to make this point, I bring an off-purple shirt to class. Holding it up, I first ask women to say aloud what color the shirt is. The women rarely answer with a uniform voice, as they try to distinguish the actual shade (mauve, lavender, lilac, violet, or some other purplish hue). Then I ask the men, who consistently answer as one, "PURPLE." Rare is the man who on the spur of the moment can imagine the difference between *fuchsia* and *magenta*.

Differences in the linguistic strategies and behavior of men and women are examined in several books by the well-known sociolinguist Deborah Tannen (1990; ed. 1993). Tannen uses the terms "rapport" and "report" to contrast women's and men's overall linguistic styles. Women, says Tannen, typically use language and the body movements that accompany it to build rapport, social connections with others. Men, on the other hand, tend to make reports, reciting information that serves to establish a place for themselves in a hierarchy, as they also attempt to determine the relative ranks of their conversation mates.

Stratification and Symbolic Domination

We use and evaluate speech in the context of *extralinguistic* forces—social, political, and economic. Mainstream Americans evaluate the speech of low-status groups negatively, calling it "uneducated." This is not because these ways of speaking are bad in themselves but because they have come to symbolize low status. Consider

variation in the pronunciation of *r*. In some parts of the United States *r* is regularly pronounced, and in other (*r*less) areas it is not. Originally, American *r*less speech was modeled on the fashionable speech of England. Because of its prestige, *r*lessness was adopted in many areas and continues as the norm around Boston and in the South.

New Yorkers sought prestige by dropping their *r*'s in the 19th century, after having pronounced them in the 18th. However, contemporary New Yorkers are going back to the 18th-century pattern of pronouncing *r*'s. What matters, and what governs linguistic change, is not the reverberation of a strong midwestern *r* but *social* evaluation, whether *r*'s happen to be "in" or "out."

Studies of *r* pronunciation in New York City have clarified the mechanisms of phonological change. William Labov (1972*b*) focused on whether *r* was pronounced after vowels in such words as *car, floor, card,* and *fourth*. To get data on how this linguistic variation correlated with social class, he used a series of rapid encounters with employees in three New York City department stores, each of whose prices and locations attracted a different socioeconomic group. Saks Fifth Avenue (68 encounters) catered to the upper middle class, Macy's (125) attracted middle-class shoppers, and S. Klein's (71) had predominantly lower-middle-class and working-class customers. The class origins of store personnel reflected those of their customers.

Having already determined that a certain department was on the fourth floor, Labov approached ground-floor salespeople and asked where that department was. After the salesperson had answered, "Fourth floor," Labov repeated his "Where?" in order to get a second response. The second reply was more formal and emphatic, the salesperson presumably thinking that Labov hadn't heard or understood the first answer. For each salesperson, therefore, Labov had two samples of /r/ pronunciation in two words.

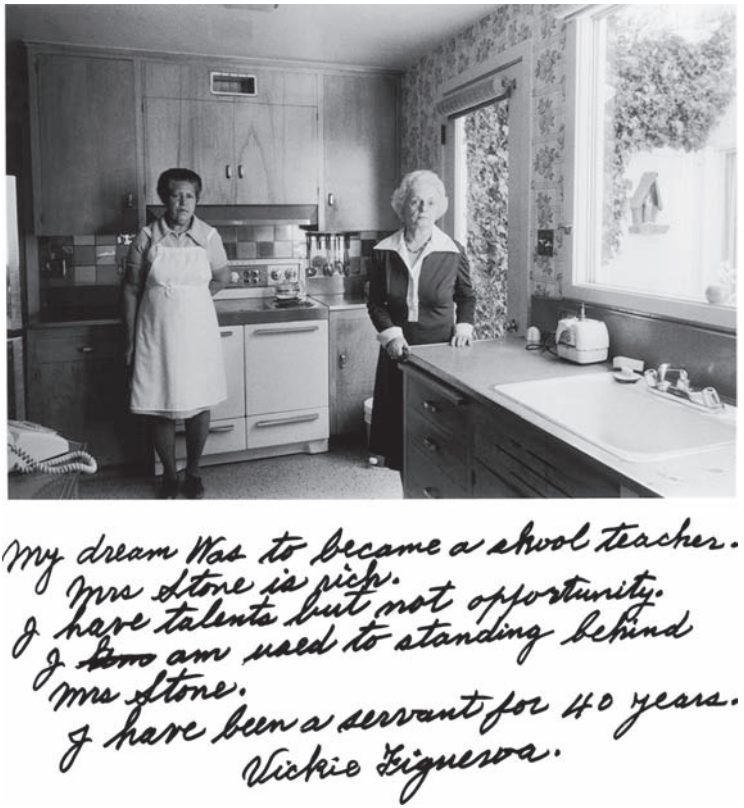
Labov calculated the percentages of workers who pronounced /r/ at least once during the interview. These were 62 percent at Saks, 51 percent at Macy's, but only 20 percent at S. Klein's. He also found that personnel on upper floors, where he asked "What floor is this?" (and where more expensive items were sold), pronounced *r* more often than ground-floor salespeople did.

In Labov's study, *r* pronunciation was clearly associated with prestige. Certainly the job interviewers who had hired the salespeople never counted *r*'s before offering employment. However, they did use speech evaluations to make judgments about how effective certain people would be in selling particular kinds of merchandise. In other words, they practiced sociolinguistic discrimination, using linguistic features in deciding who got certain jobs.

Our speech habits help determine our access to employment and other material resources. Because of this, "proper language" itself becomes a strategic resource—and a path to wealth, prestige, and power (Gal 1989; Thomas and Wareing, eds. 2004). Illustrating this, many ethnographers have described the importance of verbal skill and oratory in politics (Beeman 1986; Bloch, ed. 1975; Brenneis 1988; Geis 1987; Lakoff 2000). Ronald Reagan, known as a "great communicator," dominated American society in the

1980s as a two-term president. Another twice-elected president, Bill Clinton, despite his southern accent, was known for his verbal skills in certain contexts (e.g., televised debates and town-hall meetings). Communications flaws may have helped doom the presidencies of Gerald Ford, Jimmy Carter, and George Bush the elder. Does his use of language affect your perception of the current president of the United States?

The French anthropologist Pierre Bourdieu views linguistic practices as *symbolic capital* that properly trained people may convert into economic and social capital. The value of a dialect—its standing in a "linguistic market"—depends on the extent to which it provides access to desired positions in the labor market. In turn, this reflects its legitimation by formal institutions—educational institutions, state, church, and prestige media. Even people who don't use the prestige dialect accept its authority and correctness, its "symbolic domination" (Bourdieu 1982, 1984). Thus, linguistic forms, which lack power in themselves, take on the power of the groups they symbolize. The education system, however (defending its own worth), denies



Proper language is a strategic resource, correlated with wealth, prestige, and power. How is linguistic (and social) stratification illustrated in this photo, including the handwritten comments below it?

linguistic relativity. It misrepresents prestige speech as being inherently better. The linguistic insecurity often felt by lower-class and minority speakers is a result of this symbolic domination.

Black English Vernacular (BEV)

The sociolinguist William Labov and several associates, both white and black, have conducted detailed studies of what they call **Black English Vernacular (BEV).** (*Vernacular* means ordinary, casual speech.) BEV is the "relatively uniform dialect spoken by the majority of black youth in most parts of the United States today, especially in the inner city areas of New York, Boston, Detroit, Philadelphia, Washington, Cleveland, . . . and other urban centers. It is also spoken in most rural areas and used in the casual, intimate speech of many adults" (Labov 1972*a*, p. xiii). This does not imply that all, or even most, African Americans speak BEV.

BEV is a complex linguistic system with its own rules, which linguists have described. Consider some of the phonological and grammatical differences between BEV and SE. One phonological difference is that BEV speakers are less likely to pronounce *r* than SE speakers are. Actually, many SE speakers don't pronounce *r*'s that come right before a consonant (ca*r*d) or at the end of a word (car). But SE speakers usually do pronounce an *r* that comes right before a vowel, either at the end of a word (fou*r* o'clock) or within a word (Ca*r*ol). BEV speakers, by contrast, are much more likely to omit such intervocalic (between vowels) *r*'s. The result is that speakers of the two dialects have different *homonyms* (words that sound the same but have different meanings). BEV speakers who don't pronounce intervocalic *r*'s have the following homonyms: Carol/Cal; Paris/pass.

Although never a native speaker of BEV, President Barack Obama speaking here in 2009 to the National Academy of Sciences, exemplifies an upwardly mobile person with an unusually effective mastery of SE.

Observing different phonological rules, BEV speakers pronounce certain words differently than SE speakers do. Particularly in the elementary school context, the homonyms of BEV-speaking students typically differ from those of their SE-speaking teachers. To evaluate reading accuracy, teachers should determine whether students are recognizing the different meanings of such BEV homonyms as *passed, past,* and *pass*. Teachers need to make sure students understand what they are reading, which is probably more important than whether they are pronouncing words correctly according to the SE norm.

Phonological rules may lead BEV speakers to omit *-ed* as a past-tense marker and *-s* as a marker of plurality. However, other speech contexts demonstrate that BEV speakers do understand the difference between past and present verbs, and between singular and plural nouns. Confirming this are irregular verbs (e.g., *tell, told*) and irregular plurals (e.g., *child, children*), in which BEV works the same as SE.

SE is not superior to BEV as a linguistic system, but it does happen to be the prestige dialect—the one used in the mass media, in writing, and in most public and professional contexts. SE is the dialect that has the most "symbolic capital." In areas of Germany where there is diglossia, speakers of Plattdeusch (Low German) learn the High German dialect to communicate appropriately in the national context. Similarly, upwardly mobile BEV-speaking students learn SE.

Historical Linguistics

Sociolinguists study contemporary variation in speech, which is language change in progress. **Historical linguistics** deals with longer-term change. Historical linguists can reconstruct many features of past languages by studying contemporary **daughter languages.** These are languages that descend from the same parent language and that have been changing separately for hundreds or even thousands of years. We call the original language from which they diverge the **protolanguage.** Romance languages such as French and Spanish, for example, are daughter languages of Latin, their common protolanguage. German, English, Dutch, and the Scandinavian languages are daughter languages of proto-Germanic. The Romance languages and the Germanic languages all belong to the Indo-European language family. Their common protolanguage is called Proto-Indo-European, PIE. Historical linguists classify languages according to their degree of relationship (see Figure 4.2—PIE family tree).

Language changes over time. It evolves—varies, spreads, divides into **subgroups** (languages within a taxonomy of related languages that are most closely related). Dialects of a single parent language become distinct daughter languages, especially if they are isolated from one another. Some of them split, and new "granddaughter" languages develop. If people remain in the ancestral homeland, their speech patterns also change. The evolving speech in the ancestral homeland should be considered a daughter language like the others.

A close relationship between languages doesn't necessarily mean that their speakers are closely related biologically or culturally, because people can adopt new languages. In the equatorial forests of Africa, "pygmy" hunters have discarded their ancestral languages and now speak those of the cultivators who have migrated to the area. Immigrants to the United States spoke many different languages on arrival, but their descendants now speak fluent English.

Knowledge of linguistic relationships often is valuable to anthropologists interested in history, particularly events during the past 5,000 years. Cultural features may (or may not) correlate with the distribution of language families. Groups that speak related languages may (or may not) be more culturally similar to each other than they are to groups whose speech derives from different linguistic ancestors. Of course, cultural similarities aren't limited to speakers of related languages. Even

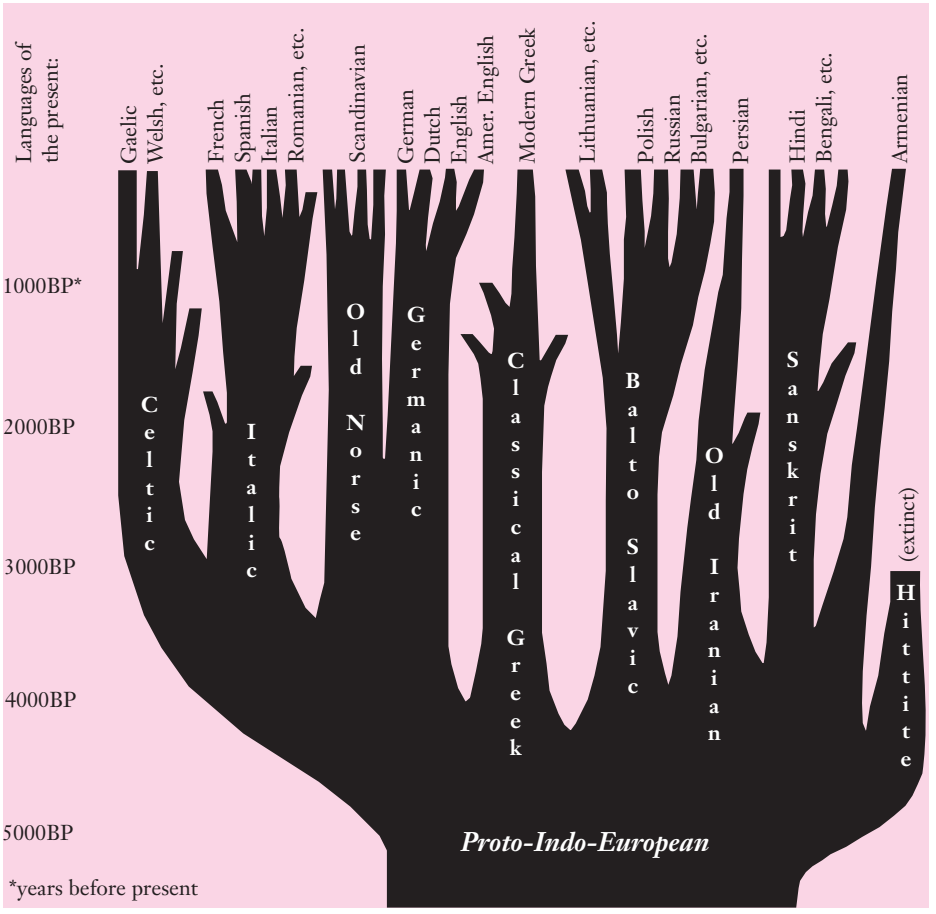


FIGURE 4.2 ***PIE Family Tree*** Main languages and subgroups of the Indo-European language stock, showing approximate time to their divergence.

groups whose members speak unrelated languages have contact through trade, intermarriage, and warfare. Ideas and inventions diffuse widely among human groups. Many items of vocabulary in contemporary English, particularly food items such as "beef" and "pork," come from French. Even without written documentation of France's influence after the Norman Conquest of England in 1066, linguistic evidence in contemporary English would reveal a long period of important firsthand contact with France. Similarly, linguistic evidence may confirm cultural contact and borrowing when written history is lacking. By considering which words have been borrowed, we also can make inferences about the nature of the contact.

Language Loss

One aspect of linguistic history is language loss. When languages disappear, cultural diversity is reduced as well. According to linguist K. David Harrison, "When we lose

a language, we lose centuries of thinking about time, seasons, sea creatures, reindeer, edible flowers, mathematics, landscapes, myths, music, the unknown and the everyday" (quoted in Maugh 2007). Harrison's recent book, *When Languages Die* (2007), notes that an indigenous language goes extinct every two weeks, as its last speakers die. The world's linguistic diversity has been cut in half (measured by number of distinct languages) in the past 500 years, and half of the remaining languages are predicted to disappear during this century. Colonial languages (e.g., English, Spanish, Portuguese, French, Dutch, Russian) have expanded at the expense of indigenous ones. Of approximately 7,000 remaining languages, about 20 percent are endangered, compared with 18 percent of mammals, 8 percent of plants, and 5 percent of birds (Maugh 2007).

Harrison, who teaches at Swarthmore College, is director of research for the Living Tongues Institute for Endangered Languages (http://www.livingtongues.org), which works to maintain, preserve, and revitalize endangered languages through multimedia documentation projects. Researchers from the institute use digital audio and video equipment to record the last speakers of the most endangered languages. *National Geographic*'s Enduring Voices Project (http://www.nationalgeographic.com/mission/enduringvoices/) strives to preserve endangered languages by identifying the geographic areas with unique, poorly understood, or threatened languages and by documenting those languages and cultures.

The website shows various language hot spots where the endangerment rate ranges from low to severe. The rate is high in an area encompassing Oklahoma, Texas, and New Mexico, where 40 Native American languages are at risk. The top hot spot is northern Australia, where 153 Aboriginal languages are endangered (Maugh 2007). Other hot spots are in central South America, the Pacific Northwest of North America, and eastern Siberia. In all these areas indigenous tongues have yielded, either voluntarily or through coercion, to a colonial language.

ANTHROPOLOGY TODAY

Linguistic Diversity and the Internet

Despite language loss, linguistic diversity is alive and well in many countries, including India, as described below. Despite that nation's colonial history, only about a tenth of the Indian population speaks English. However, even many of those English speakers prefer to read, and to seek out Internet content, in their own regional languages. In this story we see how local entrepreneurs and international companies such as Google, Yahoo, and Microsoft are rushing to meet the demand for Web content in local languages. This example illustrates one of the main lessons of applied anthropology, that external inputs fit in best when they are tailored properly to local settings. We see also how Indians shift their linguistic styles—even languages—as they interact with friends, family, coworkers, and Internet sources in their daily lives.

Continued

ANTHROPOLOGY TODAY *Continued*

Asia already has twice as many Internet users as North America, and by 2012 it will have three times as many. Already, more than half of the search queries on Google come from outside the United States.

The globalization of the Web has inspired entrepreneurs like Ram Prakash Hanumanthappa, an engineer from outside Bangalore, India. Mr. Ram Prakash learned English as a teenager, but he still prefers to express himself to friends and family members in his native Kannada. But using Kannada on the Web involves computer keyboard maps that even Mr. Ram Prakash finds challenging to learn.

So in 2006 he developed Quillpad, an online service for typing in 10 South Asian languages. Users spell out words of local languages phonetically in Roman letters, and Quillpad's predictive engine converts them into local-language script. Bloggers and authors rave about the service, which has attracted interest from the cellphone maker Nokia and the attention of Google Inc., which has since introduced its own transliteration tool.

Mr. Ram Prakash said Western technology companies have misunderstood the linguistic landscape of India, where English is spoken proficiently by only about a tenth of the population and even many college-educated Indians prefer the contours of their native tongues for everyday speech. "You've got to give them an opportunity to express themselves correctly, rather than make a fool out of themselves and forcing them to use English," he said.

Only there is a shortage of non-English content and applications. So, American technology giants are spending hundreds of millions of dollars each year to build and develop foreign-language Web sites and services—before local companies like Quillpad beat them to the punch and the profits. . . .

Nowhere are the obstacles, or the potential rewards, more apparent than in India, whose online population . . . is poised to become the third-largest in the world after China and the United States by 2012. Indians may speak one language to their boss, another to their spouse and a third to a parent. In casual speech, words can be drawn from a grab bag of tongues.

In the last two years, Yahoo and Google have introduced more than a dozen services to encourage India's Web users to search, blog, chat and learn in their mother tongues. Microsoft has built its Windows Live bundle of online consumer services in seven Indian languages. Facebook has enlisted hundreds of volunteers to translate its social networking site into Hindi and other regional languages, and Wikipedia now has more entries in Indian local languages than in Korean. Google's search service has lagged behind the local competition in China, and that has

Summary

1. Wild primates use call systems to communicate. Environmental stimuli trigger calls, which cannot be combined when multiple stimuli are present. Contrasts between language and call systems include displacement, productivity, and cultural transmission. Over time, our ancestral call systems grew too complex for genetic transmission, and hominid communication began to rely on learning. Humans still use nonverbal communication, such as facial expressions, gestures, and body stances and movements. But language is the main system humans use

made providing locally flavored services a priority for the company in India. Google's initiatives in India are aimed at opening the country's historically slow-growing personal computer market, and at developing expertise that Google will be able to apply to building services for emerging markets worldwide.

"India is a microcosm of the world," said Dr. Prasad Bhaarat Ram, Google India's head of research and development. "Having 22 languages creates a new level of complexity in which you can't take the same approach that you would if you had one predominant language and applied it 22 times."

Global businesses are spending hundreds of millions of dollars a year working their way down a list of languages into which to translate their Web sites, said Donald A. DePalma, the chief research officer of Common Sense Advisory, a consulting business in Lowell, Mass., that specializes in localizing Web sites. India—with relatively undeveloped e-commerce and online advertising markets—is actually lower on the list than Russia, Brazil and South Korea, Mr. DePalma said. . . .

English simply will not suffice for connecting with India's growing online market, a lesson already learned by Western television producers and consumer products makers. . . .

Even among the largely English-speaking base of around 50 million Web users in India today, nearly three-quarters prefer to read in a local language, according to a survey by JuxtConsult, an Indian market research company. Many cannot find the content they are seeking. "There is a huge shortage of local language content," said Sanjay Tiwari, the chief executive of JuxtConsult. A Microsoft initiative, Project Bhasha, coordinates the efforts of Indian academics, local businesses and solo software developers to expand computing in regional languages. The project's Web site, which counts thousands of registered members, refers to language as "one of the main contributors to the digital divide" in India.

The company is also seeing growing demand from Indian government agencies and companies creating online public services in local languages.

"As many of these companies want to push their services into rural India or tier-two towns or smaller towns, then it becomes essential they communicate with their customers in the local language," said Pradeep Parappil, a Microsoft program manager.

"Localization is the key to success in countries like India," said Gopal Krishna, who oversees consumer services at Yahoo India.

Source: Daniel Sorid, "Writing the Web's Future in Numerous Languages," *New York Times,* December 31, 2008. Copyright © 2008 The New York Times. Reprinted by permission.

to communicate. Chimps and gorillas can understand and manipulate nonverbal symbols based on language.

2. No language uses all the sounds the human vocal tract can make. Phonology—the study of speech sounds—focuses on sound contrasts (phonemes) that distinguish meaning. The grammars and lexicons of particular languages can lead their speakers to perceive and think in certain ways.
3. Linguistic anthropologists share anthropology's general interest in diversity in time and space. Sociolinguistics investigates relationships between social and linguistic variation by focusing on the actual use of language. Only when features

of speech acquire social meaning are they imitated. If they are valued, they will spread. People vary their speech, shifting styles, dialects, and languages.

4. As linguistic systems, all languages and dialects are equally complex, rule-governed, and effective for communication. However, speech is used, is evaluated, and changes in the context of political, economic, and social forces. Often the linguistic traits of a low-status group are negatively evaluated. This devaluation is not because of linguistic features per se. Rather, it reflects the association of such features with low social status. One dialect, supported by the dominant institutions of the state, exercises symbolic domination over the others.
5. Historical linguistics is useful for anthropologists interested in historical relationships among populations. Cultural similarities and differences often correlate with linguistic ones. Linguistic clues can suggest past contacts between cultures. Related languages—members of the same language family—descend from an original protolanguage. Relationships between languages don't necessarily mean there are biological ties between their speakers because people can learn new languages.
6. One aspect of linguistic history is language loss. The world's linguistic diversity has been cut in half in the past 500 years, and half of the remaining 7,000 languages are predicted to disappear during this century.

Key Terms

Black English Vernacular (BEV) (p. 82)
call systems (p. 65)
cultural transmission (p. 67)
daughter languages (p. 83)
descriptive linguistics (p. 70)
diglossia (p. 77)
displacement (p. 68)
focal vocabulary (p. 75)
historical linguistics (p. 83)
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