The Story of Human Language
Part I

Professor John McWhorter

THE TEACHING COMPANY ®

John McWhorter, Ph.D.

Senior Fellow in Public Policy, Manhattan Institute

John McWhorter, Senior Fellow at the Manhattan Institute, earned his Ph.D. in linguistics from Stanford University in 1993 and became Associate Professor of Linguistics at UC Berkeley after teaching at Cornell University. His academic specialty is language change and language contact. He is the author of *The Power of Babel: A Natural History of Language*, on how the world's languages arise, change, and mix. He has also written a book on dialects and Black English, *The Word on the Street*. His books on creoles include *Language Change and Language Contact in Pidgins and Creoles*, *The Missing Spanish Creoles*, and an anthology of his creole articles called *Defining Creole*. Beyond his work in linguistics, Dr. McWhorter is the author of *Losing the Race* and an anthology of race writings, *Authentically Black.* He has written on race and cultural issues for *The New Republic*, *The Wall Street Journal*, *The Washington Post*, *The Chronicle of Higher Education*, *The National Review*, *The Los Angeles Times*, *The American Enterprise*, and *The New York Times*. Dr. McWhorter has appeared on *Dateline NBC*, *Politically Incorrect*, *Talk of the Nation*, *Today*, *Good Morning, America*, *The Jim Lehrer NewsHour*, and *Fresh Air* and does regular commentaries for *All Things Considered*. His latest book is *Doing Our Own Thing: The Degradation of Language and Music in America and Why We Should, Like, Care*.

Table of Contents

The Story of Human Language
Part I

The Story of Human Language

Scope:

There are 6,000 languages in the world, in so much variety that many languages would leave English speakers wondering just how a human being could possibly learn and use them. How did these languages come to be? Why isn't there just a single language?

This course answers these questions. Like animals and plants, the world's languages are the result of a long "natural history," which began with a single first language spoken in Africa. As human populations migrated to new places on the planet, each group's version of the language changed in different ways, until there were several languages where there was once one. Eventually, there were thousands.

Languages change in ways that make old sounds into new sounds and words into grammar, and they shift in different directions, so that eventually there are languages as different as German and Japanese. At all times, any language is gradually on its way to changing into a new one; the language that is not gradually turning upside-down is one on the verge of extinction.

This kind of change is so relentless that it even creates "languages within languages." In separate populations who speak the same language, changes differ. The result is variations upon the language—that is, dialects. Often one dialect is chosen as the standard one, and when it is used in writing, it changes more slowly than the ones that are mostly just spoken, because the permanency of writing has an official look that makes change seem suspicious. But the dialects that are mostly just spoken keep on changing at a more normal pace.

Then, the languages of the world tend to mix together on various levels. All languages borrow words from one another; there is no "pure" vocabulary. But some borrow so much vocabulary that there is little original material left, such as in English. And meanwhile, languages spoken alongside one another also trade grammar, coming to look alike the way married couples sometimes do. Some languages are even direct crosses between one language and another, two languages having "reproduced" along the lines of mitosis.

Ordinarily, language change is an exuberant process that makes languages develop far more machinery than they need—the gender markers in such languages as French and German are hardly necessary to communication, for example. But this overgrowth is checked when history gets in the way. For example, when people learn a language quickly without being explicitly taught, they develop a pidgin version of it; then, if they need to use this pidgin on an everyday basis, it becomes a real language, called a *creole*. Creoles are language starting again in a fashion—immediately they divide into dialects, mix with other languages, and start building up the decorations that older languages have.

Just as there is an extinction crisis among many of the world's animals and plants, it is estimated that 5,500 of the world's languages will no longer be spoken in 2100. Globalization and urbanization tend to bring people toward one of a few dozen politically dominant languages, and once a generation is not raised in a language, it no longer survives except in writing—if linguists have gotten to it yet. As a language dies, it passes through a "pidgin" stage on its way to expiration. This course, then, is both a celebration and a memorial of a fascinating variety of languages that is unlikely to exist for much longer.

Lecture One
What Is Language?

Scope: Language is more than words; it is also how the words are put together—grammar. The ability to use fluent, nuanced language is local to humans: bees, parrots, and chimps can approximate it but not with the complexity or spontaneity that comes naturally to us. Despite influential speculations, it is unclear whether Neanderthals could speak in the same manner as *Homo sapiens*, and theories that language emerged as the result of a single gene mutation about 30,000 years ago are increasingly controversial as well.

Outline

I. Language is more than words.

- **A.** By *language*, we do not mean solely words, but the grammar that we use to put them together to produce utterances that reflect our impressions of our lives, experiences, and environment, as well as enable us to affect people and events around us.
- **B.** One can learn hundreds of words in a foreign language and still be unable to manage even a simple conversation or even say, "You might as well finish it" or "It happened to be on a Tuesday."

II. Communication among lower animals is not "language" in the human sense.

- **A.** The philosopher Bertrand Russell once wrote, "A dog cannot relate his autobiography; however eloquently he may bark, he cannot tell you that his parents were honest though poor."
- **B.** Bees.
  - **1.** *How bees "talk."* A bee tells the hive about honey it has found by doing certain dances. In one, the bee moves in a straight line in the direction that the honey is in and waggles its behind with a frequency corresponding to how far away the honey is and with a "liveliness" corresponding to how rich the source is.
  - **2.** *Is this "language"?* But bees only communicate in this manner about the location of food. They cannot chew the fat.

III. Apes' language ability.

- **A.** Apes seem eerily "like us," and this includes their ability to communicate with us on certain levels. In his famously colloquial, quotidian diary, Samuel Pepys, man of affairs of Restoration England, wrote:

It is a great baboone, but so like a man in most things, that… yet I cannot believe but that it is a monster got of a man and she-baboone. I do believe it already understands much english; and I am of the mind it might be taught to speak or make signs. (Latham, R.C., and W. Matthews, eds. *The Diary of Samuel Pepys*, Vol. 2. Berkeley: University of California Press, 1970.)

B. *Early attempts to teach apes language*. In actuality, when people have tried to teach chimpanzees to talk, the results have been limited. In 1909, one chimp learned to say *mama*. In 1916, an orangutan learned to say *papa* and *cup*. In the 1940s, another chimp learned to say *papa*, *mama*, *cup*, and sometimes *up*.

C. *Apes and sign language*. More recently, researchers have tried to teach chimpanzees sign language. The results have been somewhat more successful.

1. Starting in 1966, Washoe, at about a year old, took three months to make her first signs, and by four, she had 132 signs.

2. She could extend *open* from referring to a door to opening containers and turning on faucets, and she once signed *water bird* when a swan passed. She could even put a few words together into "sentences," such as *you me out* for "Let's go out."

D. *Ape language versus human language*. But these chimpanzees are not using "language" in the human sense.

1. *Inconsistency*. They tend to respond properly to strings of two or more words only most of the time rather than all of the time.

2. *Grammar or context?* Some researchers have argued that understanding these strings of words shows that chimpanzees are using "grammar" in the sense of subject versus object and so on. But the correspondence between the words and the immediate context generally makes the meaning of the string clear without any sense of "grammar." One ape knew that *cooler sour cream put* meant, "Put the sour cream in the cooler," but obviously, this was the only rational meaning those words used together could have.

3. *Imitation versus communication.* One ape signed along with humans while they were communicating with him 40 percent of the time, while children overlap with adults speaking to them only about 5 percent of the time. This suggests that chimpanzees are imitating more than speaking on their own.

E. *What is missing from apes' language?* The linguist Charles Hockett listed 13 features of language in the human sense. Among them, what is missing from chimpanzees' (and other creatures') communication are:

1. *Displacement*: communicating about things and concepts beyond the immediate context and urgency (an animal cannot tell its

fellow animals about the giant squid carcass it saw washed up on the beach).

2. *Productivity*: being able to combine the basic elements of language in infinite combinations (as opposed to restricting communication to a small array of requests for food or announcements of where food is).

IV. Animals do not communicate spontaneously.

A. *Initiation*. Chimpanzees do not usually initiate a conversation, except to indicate what they want and within a narrow range of activities, such as eating. Washoe's comment on the swan was a once-off surprise.

B. *Parrots*. Irene Pepperberg (professor of psychology at Brandeis) has trained an African grey parrot named Alex since the late 1970s to answer such questions as "What object is green and three-cornered?," to count things up to six, to ask for food in such sentences as "Want a nut," and even to put names to sounds. Once, asking for a nut each time after being asked questions to name sounds, he slit his eyes and said, "Want a nut—nn, uh, tuh."

1. But language is largely a trick to Alex: asked what color something is, he will often give every color but the right one, showing intelligence but not a sense of language as communication rather than trick.
2. He also answers questions with only 80 percent accuracy, because he gets bored; language is a game, not a mode of expression.

C. *In nature, in the lab.* No apes sign in the wild; no parrots communicate in the wild.

V. When did human language arise?

A. *Cro-Magnons spoke; Neanderthals grunted?* One hypothesis is that the ability to use language is one of the distinguishing features of *Homo sapiens* as a species.

1. Philip Lieberman (professor of cognitive and linguistic science at Brown) has argued that the human larynx sits lower in the throat than in animals and that this positioning allows a long, large oral cavity that makes speaking physically possible. He has supported this argument by noting that children, apes, and crucially, Neanderthals do not have the lowered larynx.
2. This hypothesis is controversial; however, the larynx lowers only at puberty, long after people speak. There is evidence that Neanderthals' larynxes may not have been especially low, and researchers in France have constructed a model oral cavity with a raised larynx that was capable of producing a full range of human speech sounds.

B. The "Big Bang" observation.

1. "*Really human."* Actually, although our species emerged about 150,000 years ago, according to paleontological and genetic evidence, many have argued that it was only about 50,000 years ago that there was an explosion in sophistication among *Homo sapiens*, resulting in finer tools, cave art, the bow, tents, and huts.
2. *Rationale for the "Big Bang" thesis.* Advocates of this argument note that the first species of the genus *Homo* emerged about 2 million years ago; that by 500,000 years ago, human brains were as big as those in modern humans; and that by 100,000 years ago, Neanderthals' brains were even bigger than ours. Yet these scholars observe that during this time, there was only minor cultural development. Remains of humans in Zhoukoudian, China, from 500,000 years ago over the next 300,000 years show no cultural development. According to University of Hawaii linguist and language evolution specialist Derek Bickerton, these humans: "sat for 0.3 million years in the drafty, smoky caves of Zhoukoudian, cooking bats over smoldering embers and waiting for the caves to fill up with their own garbage" (Bickerton, Derek. *Language and Human Behavior*. Seattle: University of Washington Press, 1995). This has suggested to many that a genetic mutation created the ability for language a good 100,000 years after *Homo sapiens* emerged.
3. *The bigger picture*. However, recent evidence reveals a great deal of sophisticated mental activity, similar to that discovered in Europe, among humans in Africa much further in the past. This suggests that our mental evolution was a gradual process tracing back as far as earlier species, such as *Homo erectus*. It also lends a solution to the problem that the "Big Bang" thesis leaves: if sophistication was achieved in Europe only 50,000 years ago while other humans had already reached Australia by 70,000 years ago, then how did this mental leap—including language—diffuse throughout the world?

C. *Conclusion*. It is highly likely that human language emerged in Africa, with the emergence of either *Homo sapiens* or possibly earlier species of *Homo*. Supporting this is the fact that there is a gene called FOXP2 that is connected with the ability to use language, and it traces back 100,000 years, long before the 50,000-year mark that "Big Bang" theorists designate as the birth of language.

Essential Reading:

Bickerton, Derek. *Language and Species*. Chicago: University of Chicago Press, 1990.

———. *Language and Human Behavior*. Seattle: University of Washington Press, 1995.

Crystal, David. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987 (chapter 64: "Language and Other Communication Systems," pp. 396–403).

Oppenheimer, Stephen. *The Real Eve: Modern Man's Journey out of Africa*. New York: Carroll & Graf, 2003.

Supplementary Reading:

Cavalli-Sforza, Luigi Luca, and Francesco Cavalli-Sforza. *The Great Human Diasporas*. Cambridge, MA: Perseus Books, 1995.

Hockett, Charles F. "The Origin of Speech." *Scientific American* 203 (September 1960).

Pepperberg, Irene Maxine. *The Alex Studies: Cognitive and Communicative Abilities of Grey Parrots*. Cambridge, MA: Harvard University Press, 2002.

Wallman, Joel. *Aping Language*. Cambridge: Cambridge University Press, 1992.

Questions to Consider:

1. We often feel that we can "talk" to our pets; dogs can commonly even learn as many as 20 words. But there is a difference between a conversation with a human and one with a cat. What aspects of language are missing in communication with a dog, cat, or parrot?
2. To get a sense of what a marvelously subtle instrument a human language is, think of a foreigner you know who speaks English decently but still makes mistakes here and there. What kinds of mistakes does this non-native speaker make, and how does he or she distort the precise meanings that we as native speakers can convey?

Lecture Two
When Language Began

Scope: Noam Chomsky has argued that the ability to use language is innately specified in the human brain. The evidence for this includes how quickly we acquire language; how its acquisition seems to be keyed to youth, as are many critical human activities; that actual speech is full of errors and hesitations, yet all humans learn how to speak effectively; and that there are genetic defects that correlate with speech deficits. This view is controversial, however, with many linguists and psychologists seeing language as one facet of cognition rather than as a separate ability.

Outline

I. The Chomskyan hypothesis: Noam Chomsky at the Massachusetts Institute of Technology has argued since the late 1950s that there is evidence that language is a genetic specification located in the human brain. Chomsky argues that humans are programmed very specifically for language, down to a level of detail that includes a distinction between parts of speech, the ways that parts of speech relate to one another, and even parts of grammar as specific as the reason we can say both "You did what?" and "What did you do?" In the last example, the *what* is placed at the front of the sentence, but note that while we can say, "Who do you think will say what?" we cannot then put the *what* at the front and say, "What who do you think will say?" The work of Chomsky and his many followers proposes that things like this are due to certain rules that we are born predisposed to learn.

You did what?
What did you do?

Who do you think will say what?
What who do you think will say? (this sentence is impossible)

II. Arguments for the Chomskyan thesis.

A. *Speed of acquisition*. All mentally healthy children learn to speak the language that they are exposed to within the first few years of life. We are all familiar with how difficult it is to learn foreign languages as an adult or even as a teenager, yet children acquire those same languages flawlessly with no conscious effort. We do not work to learn our first languages—it "just happens"—despite how very complex languages are. This suggests that we are programmed for the task.

B. *All humans learn to speak*. In contrast to singing or athletic ability, all humans acquire the ability to speak fluently. This includes a great many who are mentally deficient in other ways. This suggests that there

is a specific hardwiring for language that overrides culture or individual abilities, as for example, walking.

C. *The critical-age hypothesis*. Language learning ability erodes as we get older.

1. *Age gradation*. Small children of immigrants learn the new country's language perfectly; people who come to a new country in their early teens often master the language almost perfectly but have slight accents; people who immigrate as full adults often never fully master the new language even with considerable effort.

2. *Maturational stages in nature*. This parallels a common tendency in organisms for certain genetically specified features to be programmed to appear at certain stages in the life cycle, then erode as they are no longer necessary. Just as ducklings are programmed to fixate on a large moving object as their "mother" and caterpillars are programmed to become butterflies at a certain point, we may be programmed to learn languages early. Our lesser ability later in life would trace to the fact that there is no reason connected to survival for us to be programmed to learn languages later.

3. *The case of Genie*. A girl named Genie was kept in isolation from human contact from the time she was a toddler until the age of 13 and beaten if she tried to talk. After her release, she never learned to speak fluently, producing such sentences as *I like elephant eat peanut*.

D. *Poverty of the stimulus*. Humans learn language without being taught, and despite the fact that the language they hear is fragmentary and full of false starts. Language as it is actually spoken is rarely as carefully planned out as it is in the artificial medium of writing. Here is a transcription of college students speaking:

A: Yeah. It doesn't help the tree but it protects, keeps the moisture in. Uh huh. Because then it just soaks up moisture. It works by the water molecules adhere to the carbon moleh, molecules that are in the ashes. It holds it on. And the plant takes it away from there.

B: You know, you said how silly it was about my, uh, well, it's not a theory at all. That the more pregnant you are and you see spots before your eyes it's proven that it's the retention of the water.

(Carterette, Edward C., and Margaret Hubbard Jones. *Informal Speech*. Berkeley: University of California Press, 1974, p. 390.)

E. *Specificity of language deficits*. Damage to the brain produces language deficits in specific ways that seem to correspond to two very specific areas of the brain where the ability to speak seems to be located.

1. *Broca's area* appears to control grammar; one person with damage to this area spoke like this:

Yes…ah…Monday…ah…Dad and Peter Hogan, and Dad…ah…hospital…and ah…Wednesday…Wednesday nine o'clock and ah Thursday…ten o'clock ah doctors…two…two…an doctors and…ah…teeth…yah…

2. *Wernicke's area* appears to control meaning and comprehension; one person with damage to this area spoke like this:

Oh sure. Go ahead, any old think you want. If I could I would. Oh. I'm taking the word the wrong way to say, all of the barbers here whenever they stop you it's going around and around, if you know what I mean, that is tying and tying for repucer, repuceration, well, we were trying the best that we could…

3. Myrna Gopnik, a linguist at McGill University, and several geneticists have studied a multigenerational family in England in which many people speak rather slowly and often make the kinds of mistakes one would expect of a foreigner, such as *The man fall off the tree* and *The boys eat four cookie*. Their condition is termed *specific language impairment*. Presented with a drawing of a bird-like creature, told that it is called a *wug*, shown a picture of two of the creatures, and asked, "Now there are two of them; there are two…?," the impaired members of the family will either wave away the question or answer along the lines of *wugness*.

4. The affected members of the family have been shown to have a defect in the gene FOXP2.

F. *Apes versus humans*. It has recently been discovered that chimpanzees and other apes also have the FOXP2 gene but in a slightly different form. This suggests that our version of the gene may give us the ability to use language that apes fall short of.

III. Counterarguments to the Chomskyan thesis.

A. *Language or cognition?* Many argue that the speed with which humans learn language is but one aspect of the general learning abilities of young people. One might argue that it is remarkable how quickly children learn to pour liquid into a container, throw a ball with aim, or jump rope, and one might observe that the ability to learn such things erodes with age. Few would argue, however, that we are genetically specified for such activities.

B. *Specific language impairment or mental deficit?* In a subsequent study, the family with language impairment was shown to have a general deficit in intelligence rather than a linguistic deficit specifically, against the hypothesis that there is a discrete genetic endowment for speaking. (Sampson, Geoffrey. *Educating Eve: The "Language Instinct" Debate*. London: Cassell, 1997.)

C. *How poor is the stimulus?* No one has ever actually documented just how much language children hear is fragmentary, and some researchers suggest that it is much less than Chomsky and his followers assume.

IV. Conclusion.

A. It seems obvious that humans are programmed to speak on some level. If otherwise, then at least a few groups of humans would be documented who did not speak or did not speak as well as other groups. Furthermore, all babies worldwide would not babble instinctively and eventually learn to speak. After all, no matter how much dogs and cats hear us talk, they do not do so themselves—nor do even the most talented chimpanzees.

B. Just when this ability emerged is currently unknown, but we can be reasonably certain that the humans who migrated out of Africa and populated the world possessed the gift of speech that we are familiar with today.

Essential Reading:

Pinker, Steven. *The Language Instinct*. New York: HarperPerennial, 1994, p. 310.

Sampson, Geoffrey. *Educating Eve: The "Language Instinct" Debate*. London: Cassell, 1997.

Supplementary Reading:

Calvin, William H., and Derek Bickerton. *Lingua ex Machina: Reconciling Darwin with the Human Brain*. Cambridge, MA: MIT Press, 2000.

Deacon, Terrence W. *The Symbolic Species: The Co-Evolution of Language and the Brain*. New York: W.W. Norton, 1997.

Questions to Consider:

1. Linguists who study how children acquire language often note that there is a particular point at which children's ability to speak makes a "quantum leap," such that they are producing full sentences when just a couple of months ago they were limited to two-word utterances, such as "Me eat." Have you noticed such a "quantum leap" in children belonging to you or others?

2. Linguists also note that children learn language to an extent that far surpasses what we "teach" them explicitly. To what extent do you sense that you directly taught your child how to speak—or how not to speak?

Lecture Three

How Language Changes—Sound Change

Scope: A human language is always changing slowly into another one. This is partly because it is natural for sounds to morph into different ones over time. Sounds often change to become more akin to ones before or after them. Sounds at the ends of words tend to wear away. Vowels shift around in the mouth. In English, the last two processes are why *made* is pronounced as it is: the *e* dropped off and an "ah" sound changed to an "ay" sound. Sound change also creates languages where a syllable's tone determines its meaning, as in Chinese.

Outline

I. *Variety among languages*. The first language has now morphed into 6,000 worldwide. The variety among them is awesome: they are not just variations on the French, German, and Russian we learn most often in school, nor are such languages as Chinese the limit in terms of the variation.

A. There are languages with clicks. The clicks change the meaning of words just as vowels and consonants do in English. The clicks are written with symbols that look rather like profanity in comic strips. In Nama, spoken in Namibia, *hara* means "swallow," !*hara* means "to check out," |*hara* means "to dangle," and †*hara* means "to repulse." One click language has 48 different click sounds.

hara	"swallow"
!hara	"to check out"
|hara	"to dangle"
†hara	"to repulse"

B. There are languages in Australia with just three verbs. In Jingulu, the only verbs are *come*, *go*, and *do*. Beyond this, Jingulu speakers use such expressions as "go a dive" and "do a sleep."

C. There are languages that pack a whole sentence's worth of meaning into one word. In Yupik Eskimo, to say, "He had not yet said again that he was going to hunt reindeer," one says, *Tuntussuqatarniksaitengqiggtuq*.

Tuntu-	ssur-	qatar-	ni-	ksaite-	ngqiggte-	uq
reindeer	hunt	will	say	not	again	he

II. Language always changes. The pathway from the first language to all of these variations was based on the fact that language always changes over time.

A. Old English is a foreign tongue to us, as we see in the opening of *Beowulf*:

Hwæt we gardena in gear-dagum þeod-cyninga þrym
what we spear-Danes' in yore-days tribe-kings' glory
ge-frunon hu ðа æþelingas ellen fremedon.
heard how the leaders courage accomplished

Yet there was no time when this language suddenly changed to ours—the process was gradual. This has been happening to all languages around the world since language began.

B. The change from Old English to Modern English—or from the first language to Nama or Jingulu or Greenlandic Eskimo—happened as the result of certain kinds of changes universal in how language changes. In this lecture, we will explore one of these processes, how sounds in a language change over time.

III. Typical sound change processes.

A. *Assimilation*. Many of these changes seem to us to be "sloppy" speaking. For example, in early Latin, the word for *impossible* is *inpossibilis*, but in later Latin, the word was *impossibilis*. The *n* changed to an *m* because the *m* sound is closer to a *p* than *n*. This process is called *assimilation*. Over time, laziness created a new word—the one we borrowed from Latin that is so proper to us today!

in-possibilis > im-possibilis

B. *Consonant weakening*. Similarly, over time, consonants tend to weaken and even disappear.

1. In Latin, the word for *ripe* was *maturus*. In Old Spanish, the word was pronounced the way it is written today: *maduro*; the *t* weakened into a *d*, and the *s* at the end vanished. But in Castillian Spanish today, the word is actually pronounced "mathuro," with the soft kind of *th* in *mother*. In Old French, the word was similar, pronounced "mathur," but since then, the *th* sound has dropped out completely, and the word is just *mûr*.

LATIN	OLD SPANISH	MODERN CASTILLIAN SPANISH
maturus	maduro	"mathuro"

OLD FRENCH	MODERN FRENCH
"mathur"	mûr

maturus > *mûr* (And this change happened without a break!)

2. This is not "exotic"; it is typical of English, as well. Notice that in the word *bottle*, we do not say "BAH-tull"—we say something like "bahddle." This is because the *t* has weakened to a *d*-like sound over time.

C. *Vowel weakening*. Vowels are fragile as well. The reason *name* is spelled with an *e* at the end is because the spelling corresponds to an earlier stage in our language. Once, the word was "NAH-meh." Over time, the *e* weakened to an "uh" sound: "NAH-muh." Finally, the *e* withered away completely.

D. *Sound shift*. A question here might be why languages do not simply wear away into dust if this is all that sound change is about. In fact, sounds often just transform into new ones.

The Great Vowel Shift. For example, I oversimplified in describing the evolution of the word *name*. The first vowel changed as well: we do not say "nahm" but "naym."

1. *Vowels in the mouth*. This is because starting in the late 1300s, many English vowels began to shift to new ones. Much of our spelling reflects the stage before this shift. To understand it, we need to see how sounds fit into the human mouth. These are the basic vowels the way we learn them in, for example, Spanish:

i u

e o

a

2. *How the Great Vowel Shift happened*. Vowels began shifting upwards on this grid.

Notice that a word such as FOOD is spelled with two o's. It used to be pronounced "fode," but its pronunciation moved up into the "u" region and became what it is now. The spelling has stayed the same, but the language has moved on. Over on the other side of the chart, a word like FEED was originally pronounced "fade," but the sound moved upward so that now it is pronounced with the "i" sound.

While words such as FEED left their "slots," words with the *ah* sound of "NAH-muh" moved up and took their place. This is why the word is now pronounced "naym"—and why *made* is pronounced the way it is instead of the way it is spelled, "MAH-duh," and so on.

3. *The process continues*. Many Americans today pronounce what is written as *aw* as *ah*, as in "rah fish" instead of "raw fish."

4. *Similar shifts elsewhere*. When the erosion of consonants and the shifting of vowels combine, words can transform so far that we would never perceive any relationship between stage one and stage two without documents showing us the shift through the ages. In Latin, water was *aqua*. In Spanish, the consonant softens to a *g*: *agua*. But in French, the consonant has vanished, and the vowels have changed and combined into one, so that the word is *eau*, pronounced just "oh."

IV. *How languages develop tones*. There are also languages where the pitch at which one utters a syllable determines the very meaning of the word. This is by no means rare; it is typical in East and Southeast Asia and much of Africa. This is another phenomenon created by sound change.

A. *How tones work*. In Mandarin Chinese, the word *ma* means different things depending on its tone.

má	"hemp"
mà	"scold"
mǎ	"horse"
mā	"mother"

Mandarin has four tones; Cantonese Chinese has six, so that *fan* can mean "share," "powder," "advise," "divide," "excited," or "grave."

B. *How tones emerge*. This happens as sounds wear away.

1. Suppose there are three words in a language, *pa*, *pak*, and *pas*. Now, when you say *pak*, your voice tends to go up a bit, whereas when you say *pas*, it tends to go down a bit.

Year 1		Last Week
pā	→	pā
pák	→	pá
pàs	→	pà

2. Normally, one wouldn't notice this. But suppose in this language, consonants at the end of words started wearing away, just as the *s* at the end of Latin's maturus did to create Spanish's *maduro*. If this happened, then the only way to tell the words apart would be the pitch differences. This is how tone develops in languages.

Such pronunciations as "rah fish," then, are symptoms of a general process that helped to transform the first language into the 6,000 new ones that exist today.

Essential Reading:

Bryson, Bill. *The Mother Tongue: English and How It Got That Way*. New York: William Morrow and Co., 1990.

Burgess, Anthony. *A Mouthful of Air: Language, Languages…Especially English*. New York: William Morrow and Co., 1992.

Crystal, David, 1995. *The Cambridge Encyclopedia of the English Language*. Cambridge: Cambridge University Press, 1995 (chapters 3–4: "Old English," "Middle English").

Questions to Consider:

1. To understand how sound change has turned one language into 6,000, think about how you probably say "suh-PRIZE" for *surprise* rather than "ser-PRIZE," or "VEJ-ta-bull" for *vegetable* instead of "VEJ-ah-tah-bull." Are you "wrong" in saying the words this way or just a normal human being?
2. Think of the word *cotton*. Time was that most English speakers pronounced it "KAH-tunn," the way it is spelled. But often, *t's* in the middle of a word can change to a *glottal stop*—that sound in the throat before the vowels in *uh-oh*. The glottal stop is a real "sound" just like *t*—we just don't write it, although it is written in hundreds of other languages. Do you say "KAH-n," with a glottal stop in the middle, or "KAH-tunn"?

Lecture Four

How Language Changes—Building New Material

Scope: Language change is not only sound erosion and morphing but also the building of new words and constructions. This often happens through grammaticalization, where a word that begins as a concrete one (*dog*, *eat*, *red*) becomes one that serves the grammar, placing sentences in time (*soon*), specifying objects (*the*), and so on. The French negative marker *pas* began as the concrete word for *step*. The conjugational endings in Romance languages (Spanish *hablo*, *hablas*, *habla*) began as separate words. Languages also build new words from combining or refashioning old ones.

Outline

I. Even if sounds not only wear away but change, if even the ones that are changing can get worn away too, then why doesn't a language just collapse into dust after a while? The answer is that at all times, a language is developing new material at the same time that it is losing it.

II. Grammaticalization.

A. Words can be divided into two classes.

1. *Concrete* words refer to objects, actions, concepts, or traits that any of these have. In other words, nouns, verbs, adjectives, adverbs: *man*, *happiness*, *run*, *overrate*, *red*, *distraught*, *quickly*, *soon*.

2. *Grammatical* words are those that relate concrete terms to one another or situate a statement in time, space, and attitude. In other words, prepositions, articles, conjunctions, interjections, auxiliaries: *in*, *under*, *the*, *but*, *except*, *hey!*, *so*…, *would*, *not*.

B. A fundamental process in what happens to a language over time is that grammatical words develop gradually from words that begin as concrete.

C. The negative marker *pas* in French.

1. In early French, the regular way to negate a sentence was to put *ne* before it. One did not need to add *pas* afterwards as in Modern French. At this stage in French, *pas* still had a *concrete* meaning, *step*, and to add *pas* meant just a stronger version of the negative.

pas "step" *il ne marche* "he doesn't walk"

vs.

il ne marche pas "he doesn't walk a step"

2. At the time, this was part of a general pattern. To make a stronger negation, one added various words to a sentence with *ne*, depending on what kind of action was involved.

pas "step"	*il ne marche*	"he doesn't walk"
	vs.	
il ne marche pas	"he doesn't walk a step"	
mie "crumb"	*il ne mange*	"he doesn't eat"
	vs.	
il ne mange mie	"he doesn't eat a crumb"	
goutte "drop"	*il ne boit*	"he doesn't drink"
	vs.	
il ne boit goutte	"he doesn't drink a drop"	

3. In general in language, an expression that begins as a colorful one either disappears (*peachy keen!*) or dilutes into normality and needs replacing by a new "colorful" expression. In the 1960s and 1970s, for example, to call something or someone *lame* was pretty trenchant; today, it has diluted into meaning roughly "not especially good" and has been replaced by other expressions among the young, such as *from hell*.

4. In French, the "crumb" and "drop" expressions fell away after a while, but the "pas" one held on—although it began fading in power. After a while, there was no real difference between an expression with *pas* and one without one:

il ne marche	"he doesn't walk"
il ne marche pas	

5. In this situation, *pas* no longer seemed to mean *step* at all. By the 1500s, *pas* started to seem as if it were a new way of saying *not*, along with *ne*. And, eventually, it was. This meant that you could use it with any verb, even ones that had nothing to do with walking.

il ne marche pas he not walk **step**	→	il ne marche pas he not walk **not**
il ne mange **pas**		"he doesn't eat"
il ne boit **pas**		"he doesn't drink"

6. Therefore, a word that began as a concrete word for *step* became a piece of grammar, a word to make a sentence negative. This process is called *grammaticalization*.

7. The process has gone even further in colloquial French, where speakers tend to drop the *ne*, leaving *pas* as the only negator word. The change in *pas* from "thing" to "grammar" is now complete!

Standard French:	*il ne marche pas*	"he doesn't walk"
Colloquial French:	*il marche pas*	"he doesn't walk"

8. Recall that this is a worldwide process, not just something that happens in Europe, or to written languages, or to languages spoken by certain people. In the Mandinka language of West Africa, their grammatical word for showing the future, like English's *will*, is *sina*. This word began as two concrete words, *si* and *na*, which mean *sun* and *come*. Together, these words form the word for *tomorrow*: *sina* or "sun come." This word for *tomorrow* was used in expressions with the future so much that it came to be felt as the word for the future itself.

D. Grammaticalization and endings.

1. To return to the issue of how language rebuilds itself: grammaticalization creates not only new words, such as *pas*, but new endings to replace the ones that sound erosion wears away.

2. For example, in Latin, there were endings expressing the future.

LATIN	
amabo	"I will love"
amabis	"You will love"
amabit	"He will love"

3. But there was a newer way of expressing the future, using the verb *habēre* "to have."

LATIN			
amabo	or	*amare habeo*	"I will love"
amabis	or	*amare habes*	"You will love"
amabit	or	*amare habet*	"He will love"

4. Over time, the future endings wore away. But at the same time, the *habēre* forms began wearing down and becoming endings on the verb that came before them. What began as concrete words—forms of "to have"—became bits of grammar, endings. The result was a new set of future endings, such as in Italian.

LATIN		ITALIAN	
amare habeo	→	*amer**ò***	"I will love"
amare habes	→	*amer**ai***	"You will love"
amare habet	→	*amer**à***	"He/she will love"

5. Overall, any prefixes or suffixes that you find in a language most likely began as separate words. Languages very often continually

create their prefixes and suffixes in this way. For example, this kind of process had created the original future endings in Latin. Latin's ancestor Proto-Indo-European had had an expression with a verb and a following verb "to be." This was what created such Latin words as *amabo*.

PROTO-INDO-EUROPEAN		LATIN
am b^h*wo*	→	*ama**bo***

E. Grammaticalization and new sounds.

1. Grammaticalization can go so far that it leaves behind bits of material that we barely even think of as suffixes or affixes at all. Consider, for example, this list of related words:

nip	nibble
drip	dribble
dab	dabble
jig	jiggle
	cackle
	babble

2. We do not usually even realize these words are related, but the *-le* syllable was once an ending in an earlier stage of Germanic, the family that English belongs to. The ending meant "to do something repeatedly within a short time."

3. Today, we can't make new words with that ending, and often, the original word without *-le* no longer even exists. The ending is just a fossil, but it began as a separate word, now lost to time.

F. Grammaticalization and new tones.

1. Sometimes, grammaticalization can also just leave behind a tone! In many languages in Southeast Asia, there was once a prefix that meant that one caused some action to happen. Here is an example from Lahu, a language spoken in China and various Southeast Asia countries:

Stage One		Stage Two	
câ	"to eat"	*câ*	"to eat"
s-câ	"to make someone eat"	*cā*	"to feed"

2. The *s-* made speakers pronounce the vowel on a lower pitch. But then, erosion wore away the *s-* and left just the lower pitch behind. Now, the low pitch alone shows that one means that an action was caused—as if just a tone meant "to make."

III. Rebracketing.

A. New words also emerge when speakers redraw the boundaries between two words or combine two words into a single one.

B. Redrawing the boundaries.

1. The reason some nicknames begin with a seemingly random *n* traces to when the word for *my* was *mīn*, which would be pronounced *mine* today. One would often affectionately say "Mine Ellen" or "Mine Ed." As *mine* became *my*, people started hearing the *n* in these cases as part of the name; thus, we have such nicknames as *Nelly* and *Ned*.

2. *Hamburger* began as *Hamburger steak*, referring to the origin of the delicacy in Hamburg, Germany. Over time, people began hearing the *-burger* part as a "word," supposing that the "burger" was made of "ham." Now, *burger* is a word of its own and is used with other words—*fishburger* and so on.

C. *Combining two words into one*. *Alone* began as the two words *all* and *one*. Pronounced together so often, they combined into today's word. To us, it sounds as if the word combines *lone* with a stray *a-*, along the lines, perhaps, of *abubble*. But the word *lone* only arose after *all* and *one* had combined to become *alone*.

IV. Languages are always developing new material, through processes usually too slow to recognize in a lifetime. Only written documents or careful deduction show us the reality of this. From *step* to *not*, from *sun-come* to *will*, from *all one* to *alone*—these changes are part of the natural pathway of any language over time.

Essential Reading:

Bryson, Bill. *The Mother Tongue: English and How It Got That Way*. New York: William Morrow and Co., 1990.

Supplementary Reading:

Grammaticalization has only been widely recognized as a discrete phenomenon, studied, and discussed by linguists over the past 25 years or so, and no popular source on language discusses it other than my own *The Power of Babel*. However, there is a textbook that, although pitched at linguists, can be processed by laymen, especially those seriously interested in the topic: Hopper, Paul J., and Elizabeth Closs Traugott, eds. *Grammaticalization*. Cambridge: Cambridge University Press, 1993.

Questions to Consider:

1. Think about current expressions among younger people, such as *awesome*—remember when that word really meant what the dictionary says it means, that is, "majestic"? Try to list some other words or expressions that once had a more "pungent" meaning than they do now.

2. Chances are you have no problem using *burger* to refer to a disc-shaped piece of food, now often not even made of meat. If this usage is okay, then

does this not give you a more tolerant perspective on how language changes in other ways during our lifetimes?

Lecture Five

How Language Changes—Meaning and Order

Scope: Words' meanings naturally shift in various ways through time, usually not having the same connotation at any given time as they did a thousand years before. The word *silly* began meaning "blessed" and acquired its current meaning in a series of gradual steps of reinterpretation. Words' meanings narrow: *meat* once referred to all food; words' meanings broaden: *bird* once referred only to small birds. Languages' word order also changes over time. All possible orders of subject, verb, and object are attested in the world, and one order can change to another one. In English, the verb used to usually come last.

Outline

I. Semantic change.

A. On the Jack Benny show in the 1940s, Phil Harris said, "Nobody makes love better than me." Obviously he was not using the expression in the meaning it has today—at the time, *make love* meant to court and kiss. Since then, its meaning has drifted. This is an example of semantic change, and despite how uncomfortable many are to see words' meanings shifting over their lifetimes, this kind of change is a central part of how one language became our 6,000.

B. *Semantic drift*. Often a word's meaning drifts in various directions over time. The word *silly* began in Old English meaning "blessed." But to be blessed implies innocence, and by the Middle Ages, the word meant "innocent":

1400: Cely art thou, hooli virgyne marie

But innocence tends to elicit compassion and, thus, the meaning of the word became "deserving of compassion":

1470: Sely Scotland, that of helpe has gret neide.

There is a fine line, however, between eliciting compassion and seeming weak; as a result, *silly* meant "weak" by the 1600s:

1633: Thou onely art The mightie God, but I a sillie worm.

From here, it was short step to "simple" or "ignorant," and next came the word as we know it, *silly*!

In the following quote from Shakespeare's *The Two Gentlemen of Verona*, we tend to assume that Valentine is making a crack about women, but when the play was written in 1591, he meant that women

deserved compassion and help, just like the "poor passengers" he refers to immediately afterward.

I take your offer and will live with you,
Provided that you do no outrages
On silly women or poor passengers.
(*The Two Gentlemen of Verona*, 1591 [iv, i, 70–2])

C. *Semantic narrowing*. Words often come to have more specific meanings than they start with. *Meat* in Old English referred to all food and only later came to refer to animal flesh. We keep a remnant of the old meaning in *sweetmeat*, which refers to candy and fruit, not flesh.

D. *Semantic broadening*. Words also often come to have more general meaning. In Old English, the word *bird* (*brid* at that point) referred only to young birds. The word for birds in general was *fugol*, just as the same root in German, *Vogel*, is today. But *brid* broadened to refer to all birds over time, while *fugol* narrowed and became today's *fowl*, referring only to game birds.

E. *The bigger picture*. Proto-Indo-European had a word b^her, which meant to carry or to bear children. This one word now permeates English in a wide range of meanings that have changed from its original one.

1. *Basic changes*. We *bear* a nuisance—because toleration is a kind of "carrying." The b^her root is also in what one bears, a *burden*. Further, the root has come down to us in a narrowed form, referring to one kind of burden, *birth*.

2. *Changes in combination with other words.* Proto-Indo-European speakers often combined b^her with the word *enk*, which meant "to get to"—to carry something over to something was to bring it, and *bring* is exactly the word that came from this: b^her *-enk* became *bring* over time.

3. *Changes in other languages, and back to us.* Meanwhile, sound change turned b^her into *ferre* in Latin, and English borrowed Latin words with *ferre* in them, all with semantically changed descendants of b^her, such as *transfer*, *prefer*, and back to the birthing realm, *fertile*. Greek inherited b^her as *pherein* and shunted it into such words as *pheremone*—chemicals that the air "carries"—*paraphernalia*, and *amphorae*, because things are carried in bottles.

II. Word order.

A. In English, word order is subject-verb-object: *The boy kicked the ball*. Linguists call this word order *SVO*.

B. *Different word orders*. But across the world's languages, we find all of the possible orders. There are actually more languages with SOV order than SVO, such as Turkish.

Turkish
Hasan öküzü aldi.
Hasan ox bought
S O V

"Hasan bought the ox."

There are languages where the verb comes first, such as Welsh.

Welsh
Gwelodd Alun gi.
saw Alun dog
V S O

"Alun saw a dog."

Linguists used to consider it impossible that a language would have the direct reverse of our familiar SVO, but languages like this have been discovered, such as the Hixkaryana language spoken by a small group in South America.

Hixkaryana
Kanawa yano toto.
canoe took person
O V S

"The man took the canoe."

C. Word order and language change.

1. These different orders are the product of change over time. We cannot be sure what order the first language had, but most linguists think that the first one was either SVO or SOV. Languages tend to change their word order over time; therefore, the various ones in existence today arose when new languages drifted from the first language's word order.

2. For example, Old English was basically an SOV language.

Old English
Hwi wolde God swa lytles þinges him forwyrnan?
why would God so small thing him deny

"Why would God deny him such a small thing?"

Biblical Hebrew put the verb first, but Modern Hebrew has SVO like Modern English.

3. In a language such as Warlpiri, for example, there actually is no set word order.

Warlpiri
maliki KA *wajilipi-nyi* **kurdu** wita-ngku
dog is chase child small

wajilipi-nyi KA maliki **kurdu** wita-ngku
wajilipi-nyi KA **kurdu** wita-ngku maliki
kurdu wita-ngku KA maliki *wajilipi-nyi*
kurdu *wajilipi-nyi* KA wita-ngku maliki
maliki KA **kurdu** wita-ngku *wajilipi-nyi*

"The small child is chasing the dog."

The first language may have been like Warlpiri in this regard, which would mean that any set word order in a language is a change from how language began.

Essential Reading:

Bryson, Bill. *The Mother Tongue: English and How It Got That Way*. New York: William Morrow and Co., 1990 (semantic change).

Crystal, David, *The Cambridge Encyclopedia of the English Language*. Cambridge: Cambridge University Press, 1995 (chapters 3–4: "Old English," "Middle English").

Watkins, Calvert, ed. *The American Heritage Dictionary of Indo-European Roots*. Boston: Houghton Mifflin, 1985 (semantic change).

Supplementary Reading:

Baker, Mark. *The Atoms of Language*. New York: Basic Books, 2001 (word order and how it changes).

Questions to Consider:

1. Has a Shakespeare performance ever worn you out a tad? If the answer is yes, much of the reason is that the words Shakespeare used have changed semantically to such a degree. In your favorite passage of Shakespeare, attend to the footnoted indications of what seemingly normal words he used meant in his time. What do you think about it?
2. Do you think it would be better if words' meanings stayed the same over time? Why or why not?

Lecture Six

How Language Changes—Many Directions

Scope: The first language has become 6,000 because processes of language change can take place in many directions, explainable rather than predictable. In each offshoot group, the original language will change in different ways, until new languages have emerged. Latin split in this way into the Romance languages, as sound changes, grammaticalizations, and meaning changes proceeded differently in each area the Romans brought Latin. This kind of family tree development is a worldwide phenomenon.

Outline

I. One language becomes several.

A. We have seen some of the tendencies in how languages change: assimilation, consonant weakening, vowel weakening, and sound shift.

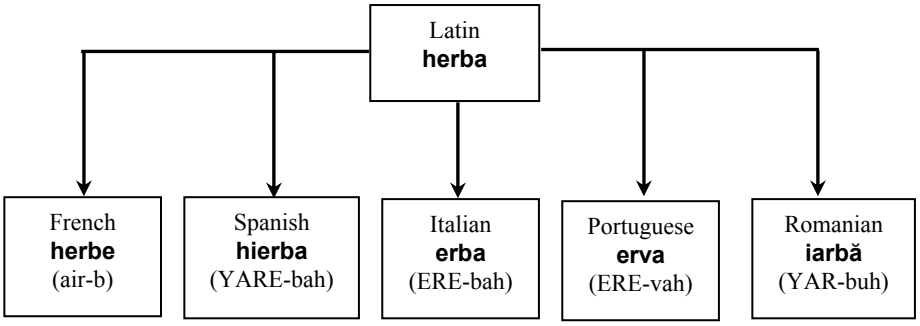
B. But all of these processes can happen in many different ways, and there is no way of predicting which will occur in a language. For example, the *th* sound in *thing* has changed to a *t* in dialects where the pronunciation is *ting* (*dem tings*), but to *f* in Cockney English (*dem fings*).

C. Often, many groups of people speaking the same language have migrated to several different locations. Chance has it that different changes occur in each new place, and the result over time is several new languages.

II. From Latin to Romance.

A. This is what happened to Latin as the Romans spread their language from Italy across Europe. In each region, Latin developed into a new language, and these languages today are the ones we know as the Romance languages. These include French, Spanish, Italian, Portuguese, and Romanian, as well as smaller ones, such as Catalan.

B. *One word becomes five*. The fate of the Latin word *herba* for "grass" in the five main Romance languages shows how language changes in many ways and creates new languages.



1. All the languages dropped the *h*—the spellings in French and Spanish maintain it, just as English spelling maintains the "silent" *e*.
2. *Moderate changes*. Italian is one of the closest Romance languages to Latin, and other than the lost *h*, it preserves the word intact. French goes somewhat further and drops the final *-a* as well. Spanish keeps this but changes the *e* to an *ie* (pronounced "yeh"), while Portuguese instead softens the *b* to a *v*.
3. *Radical changes*. Romanian doesn't just insert a *y* sound before the *e* as Spanish does but has a whole new sound *ia* (pronounced "yah"), and the symbol over the final *-a* indicates that this is a new sound, roughly "uh." Consider that similar changes happen to every word in the language, and it is easy to see how one language becomes several new ones.

C. *One sentence becomes five*. Consider a Latin sentence like this one:

Fēminae id dedi.
Woman-to it I gave

"I gave it to the woman."

Here is this sentence in the five main Romance languages:

Latin: *Fēminae* **id** dedi.

French: Je **l**'ai donné à la *femme*.
Spanish: Se **lo** dí a la *mujer*.
Italian: **L**'ho datto alla *donna*.
Portuguese: **O** dei à *mulher*.
Romanian: Am dat-**o** *femeii*.

The words in italics are for *woman*, the words in bold are for *it*, and the words underlined are for *give*.

1. Word order.
   a. Over time, word order changes, as we can see from the different places that *it* goes in each language.

b. Latin had flexible word order because of such endings as *-ae* on *fēminae*, which meant "to." The Romance languages have lost most of these kinds of endings on nouns, replacing them with prepositions. This means that word order is not as flexible in Latin's descendants.

2. *Grammar change*. Only the Spanish and Portuguese forms of *give* are descended directly from Latin's *dedi*. The other languages now use a different form of the verb, the participle, used along with a form of the verb *have* (in the construction famous in French as the *passé composé*). This is another way that grammar changes over time—languages develop new ways to express the past, the future, the plural, and so on.

a. *Word substitution*. In many languages, a Latin word has been replaced by another one—only French and Romanian still use a word derived from *fēmina* to mean "woman" in a neutral sense.

b. *New words from old ones*. Latin did not have any articles, but all of the Romance languages have them. They developed them by grammaticalization, as Latin words for *that* shortened and changed their meanings from the concrete to the grammatical. But the shape of the articles came out differently in each language: where French has *le*, Spanish has *el*; Italian, *il*; Portuguese, *o*; and Romanian has *-ul*, which it places after the noun instead of before it!

III. From Middle Chinese to seven Chinese languages.

A. This kind of change has happened to create new languages all over the world. For example, it is often said that there are many Chinese "dialects," as if Mandarin and Cantonese were as similar as American and British English. But actually, these varieties are separate languages, as different from one another as the Romance languages. Only the fact that they are written with the same writing system gives them the appearance of being "the same language."

B. Below is the word for *daughter-in-law* in seven of the Chinese languages. The strange-looking *c* is pronounced approximately like *ch*. Notice how the consonants and vowels have changed in various directions. Also, the dash and apostrophe symbols over the vowels stand for the tones, and even these have changed in many of the words over time.

Middle Chinese
sjək

Mandarin	Wu (Shanghainese)	Xiang	Gan	Hakka	Cantonese	Min (Taiwanese)
ɕí	**sə̄ŋ**	**ɕí**	**ɕīn**	**sīm**	**sām**	**sīn**

(Norman, Jerry. *Chinese*. Cambridge: Cambridge University Press, 1988, p. 198.)

IV. The bigger picture.

A. It is likely that there was one first language. Even this language immediately started changing. If there had only ever been one human group, then its language would now be completely different from the original one because of the kinds of changes we have seen.

B. But as soon as human groups started splitting off and migrating to other places—that is, as soon as there was more than group—this meant that the new group or groups' language changed in different ways than the first group's. This meant a new language. Today's 6,000 languages are the product of this process.

Essential Reading:

Note: The following are all readable sources that give "tours" of various languages in the world, highlighting comparisons of family members, including the Romance ones. They do not focus on the change processes themselves but usefully highlight the products of those changes.

Bodmer, Frederick. *The Loom of Language*. New York: W.W. Norton, 1944 (paperback edition, 1985).

Burgess, Anthony. *A Mouthful of Air*. New York: William Morrow & Co., 1992.

Pei, Mario. *The Story of Language*. Philadelphia: J.B. Lippincott, 1949.

Questions to Consider:

1. Do you know anyone who grew up with a language other than English who says that his or her language is "like" another one but hard to understand? Ask this person for a list of 10 words in his or her native language and the other one and examine how the words in the two languages are alike but different—often because of the sound changes we saw in Lecture Three.

This will be especially useful with Chinese speakers; for example, ask a Cantonese speaker for Mandarin equivalents of Cantonese words.

2. Have you had experience with both French and Spanish or French and another Romance language? Look at words in both languages and try to figure out what sound change tendencies were local to each.

Lecture Seven

How Language Changes—Modern English

Scope: It is useful to see how language change has happened in our own language even in times relatively close to our own. As recently as Shakespeare, words had meanings more different than is always obvious to us, which interferes with our comprehension of his language. Even in the 1800s, Jane Austen's work is full of sentences that would be considered errors today, and we would be shocked by what was considered acceptable pronunciation of many words in that time. This also shows that language change is less decay than mere transformation, given that we tend to gain alongside the losses.

Outline

I. Language change: Right in our own backyard.

A. It is plain that language change turned Old English into Modern English. But because Old English and Middle English are so far from us in time, there is a temptation to tacitly sense language change as an "exotic" phenomenon, more typical of the past than our present-day lives.

B. One way to see that language change is a living reality—in fact, the very nature of speaking—is to look at changes in English more recent than this. English has changed a great deal even in the period when we recognize it as the language we speak.

II. Semantic change.

A. Along the lines of *silly*'s drift from meaning "blessed" to meaning "foolish," a great many words that Shakespeare used had different meanings for him than they do for us. Most of us do not comprehend Shakespeare as precisely as we often reasonably suppose.

1. Juliet in *Romeo and Juliet* is often depicted saying, "Wherefore art thou, Romeo?" (ii, ii, 33) with a gesture of looking for her lover. But Romeo is standing right below her during this scene. *Wherefore* actually meant "why." She follows with "Deny thy father and refuse thy name;/Or, if thou wilt not, be but sworn my love,/And I'll no longer be a Capulet."

2. Viola tells us in *Twelfth Night* (iii, i, 67–70):

> This fellow is wise enough to play the fool;
> And to do that well craves a kind of wit.
> He must observe their mood on whom he jests,
> The quality of persons, and the time…

Certainly, she doesn't mean that playing the fool requires being funny. *Wit* did not yet mean "clever humor" in Shakespeare's time: it meant *knowledge*. This usage is now relegated to the margins in English, as in such expressions as *mother wit* or *keep your wits about you*.

B. When Polonius in *Hamlet* (i, iii, 69) advises Laertes to "Take each man's censure, but reserve thy judgment," we can only assume that he means that Laertes should receive people's criticisms without objecting. But in Shakespeare's time, there was an expression "to take a person's censure," which meant "to size someone up."

III. Change in grammar and pronunciation.

A. Even as late as Jane Austen's novels in the early 1800s, there are usages that we would consider "mistakes" that were quite proper in Austen's time, such as:

So, you are come at last
...and much was ate
It would quite shock you…would not it?
She was small of her age

B. William Cobbett wrote a *Grammar of the English Language in a Series of Letters* to his 14-year-old son. Cobbett's conception of proper English to pass on to his son included such usages as *I bended*, *I sunk*, *loaden*, *shotten*, and *spitten*!

C. As late as the late 1800s, it was typical in English to say *A house is currently building on Mott Street*, rather than *A house is currently being built*, which was processed as somewhat vulgar.

D. Long after the Great Vowel Shift that we saw in Lecture Three, pronunciation of English words continued to drift, creating pronunciations different from ours in more ways than just the English accent we tend to imagine English spoken in before, roughly, the Andrew Jackson presidency. In John Walker's *Pronouncing Dictionary of English* in 1774, Walker recommends that *dismay* be pronounced "diz-may" and *dismiss* "diz-miss" and that *cement* be pronounced "SEE-ment" and *balcony* "bal-COH-nee."

IV. Language change: Decay or growth?

A. *Language "going to the dogs."* In Modern English, ever fewer speakers are distinguishing *lie* (as in *The pencil is lying on the table*) from *lay* (as in *I laid the pencil on the table*). Similarly, few speakers spontaneously distinguish between *disinterested* (unbiased) and *uninterested* (finding nothing of interest in). Many bemoan this as evidence of decay. But just this kind of decay explains much of how Old English became even the most standardized, formal Modern English.

B. *Losses of yore*. For example, English once distinguished *here* from *hither*, *there* from *thither*, and *where* from *whither*. Now, these words are strictly archaic. German and related languages still use equivalent words—in German, *ich bin hier* (*I am here*) but I ask you *Komm her*. We can imagine that while these words were being lost in English, some may have complained that a "useful" distinction was being lost, but few of us consider the absence of those words a problem today.

C. *Ring in the new?* In fact, sometimes, when some English speakers attempt to "compensate" for such losses later on, we process the compensation as "wrong." For example, *you* once was used only in the plural, and *thou* was used for one person. *You* was, specifically, the object form, and *ye* was the subject form. *Thou lookest*, *ye look*; *I see thee*, *I see you*. But today, we see such expressions as *you all* and *you'uns* as "wrong"! This shows that it is less loss that disturbs us than change itself.

D. *The grass is always greener*. The truth is that English has gained features all its own while losing other things, but this is clear only if we compare our language to its relatives, whereas losses are obvious even if we have no familiarity with other languages.

1. For instance, in Shakespeare's time, while *hither* and *thou* were on their way out of the language, the use of *-ing* in the progressive was emerging. Before this, one said *Right now, I sit in the chair*—just the way most foreign languages we learn would—where we would now say *Right now, I am sitting in the chair* or *Right now, I am building a house*.

2. In this, English now has a feature that German and its sisters lack. Now, *I sit in the chair* usually means that one sits on a regular basis, while *I am sitting in the chair* means that one is doing it right now. Other Germanic languages—as well as Romance ones—do not make this distinction as clearly or as regularly as English does.

Essential Reading:

Bailey, Richard. *Nineteenth Century English*. Ann Arbor: University of Michigan Press, 1996.

Crystal, David. *The Cambridge Encyclopedia of the English Language*. Cambridge: Cambridge University Press, 1995 (especially chapter 5: "Early Modern English").

McWhorter, John. *Word on the Street: Debunking the Myth of a "Pure" Standard English*. New York: Perseus, 1998 (chapter 4: "The Shakespearean Tragedy").

Questions to Consider:

1. Do you wish that we still said *Come hither* to our children? Why or why not?
2. Collate some examples from your favorite 19th-century novel of usages of English that would be a bit odd today. Do they seem simply "quaint" or like earlier stages of our language, and can you pin down the difference between the two?

Lecture Eight
Language Families—Indo-European

Scope: The Indo-European family is spoken in most of Europe, as well as eastward in Iran and India. The family began in the southern steppes of modern Russia in about 4000 B.C., most likely, and now consists of various subfamilies. Each subfamily teaches lessons about how language changes. For example, in Germanic, bizarre changes in consonants created the difference between such words as *pater*, *père*, and *padre* and our own *father*. Some of the branches have stayed closer to what the Indo-European ancestral language was like, such as the Slavic one containing Russian, while others have morphed so far that they were classified only rather recently as part of the family (Albanian).

Outline

I. The discovery of Indo-European.

A. In 1786, William Jones, a British jurist and Orientalist, presented an address to the Bengal Asiatic Society in which he observed:

> The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs, and in the forms of grammar, than could possibly have been produced by accident; so strong, indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists.

Jones was making the first official observation of the fact that groups of languages develop from single ones; that is, he inaugurated the study of the natural history of language.

B. The kind of "affinity" he referred to involved not only word roots in common among Sanskrit, Latin, and Greek but also aspects of grammar. For example, even the case endings on nouns in these languages are clearly related:

tooth in four cases in the languages William Jones referred to:

	SANSKRIT	GREEK	LATIN
nominative	*dán*	*odón*	*dēns*
genitive	*datás*	*odóntos*	*dentis*
dative	*daté*	*odónti*	*dentī*
accusative	*dántam*	*odónta*	*dentem*

C. Jones was referring to ancient languages no longer spoken. But Sanskrit is the ancestor of languages now spoken in India, such as Hindi and Bengali; Latin was the ancestor of the Romance languages; and Ancient Greek has developed into Modern Greek. Linguists later found that the "affinity" Jones referred to applies not only to these languages but to most of the languages of Europe, as well as Iran and India. The "common source" Jones referred to indeed no longer exists, but its descendants are now known as the Indo-European language family.

D. Here is the word for *tooth* in an assortment of these languages:

English	*tooth*
French	*dent*
Italian	*dente*
German	*zahn*
Swedish	*tand*
Russian	*zup*
Polish	*zab*
Welsh	*dant*
Greek	*dhondi*
Albanian	*dami*
Persian	*dandân*
Hindi	*dãt*

II. The emergence of Indo-European.

A. *Location*. Indo-European was by no means the first language or even close. Most evidence suggests that the original Indo-European language was spoken about 6,000 years ago in 4000 B.C., on the steppes of what is now southern Russia. The people are called the Kurgans, referring to burial mounds that they left behind. These people spread westward into Europe and eastward into Iran and India.

B. *Evidence*. We can infer some things about their homeland and culture from what words all or most of the Indo-European languages have in common. Because there are no common words for "palm tree" or "vine," these people were unlikely to be Mediterraneans. Because there is no common word for "oak," they most likely did not emerge in Europe. Because there are common words for "horse," "wheel," and related concepts, we assume that they were using horses as draft animals, and there is archaeological evidence that the Kurgan people had domesticated horses.

C. It has been theorized that Indo-European actually emerged in what is now Turkey, but recent genetic evidence concurs with the traditional southern Russian scenario.

III. Although the Indo-European languages have a great deal in common, they also demonstrate how vastly languages diverge from one another over time.

A. Germanic.

1. This group includes German, Dutch, Swedish and its close relatives Norwegian and Danish, Icelandic, Yiddish, and a few lesser-known languages, such as Frisian and Faroese, as well as Afrikaans spoken in South Africa.

2. A strange sound change took place in the ancestor of this group, explained by Grimm's law, which was named after its discoverer, the same Jacob Grimm who collected folk tales.

Grimm's Law: Latin and Greek to English

pater	**f**ather
podiatrist	**f**oot
tenuous	**th**in
tricolor	**th**ree
decimal	**t**en
dental	**t**ooth

For some reason, in many places where Proto-Indo-European had a *p*, Proto-Germanic switched this to an *f*. This is why Latin has *pater* and Sanskrit has *pitár*, but English has *father* and German has *Vater* (pronounced "FAH-ter"). There were many switches like this; *t* changed to a *th* sound in Germanic, so that while a word we borrowed from Latin, such as *tenuous*, has a *t*, the native Germanic rendition of the word has a *th*. In the same way, Proto-Indo-European's *d* changed into a *t* in Germanic. This is why we have *ten* where Latin had *decem*, the root in some words we borrowed, including *decimal*, and why we have *tooth* where Latin had *dēns*, Sanskrit had *dán*, and Ancient Greek had *odón*.

B. Celtic.

1. These languages are now few, all under severe threat: Irish Gaelic, Scotch Gaelic, Welsh, and Breton spoken in France. Celtic was once spoken across Europe and even in what is now Turkey, but the languages have been edged to the western fringe of Europe by waves of invaders.

2. Celtic languages are well known for their *mutations*, where proper expression requires switching consonants at the beginning of words for no apparent reason, and sometimes the switch alone conveys important meanings.

cath	"cat"
fy ***ngh****ath*	"my cat"

*ei **g**ath* “his cat”
*ei **ch**ath* “her cat”

In Welsh, the word for *cat* is *cath*, but to say *my cat* requires also changing the initial *c* to *ngh*. And then, this kind of change is the only way to distinguish between *his cat* and *her cat*.

C. Baltic versus Italic: Old-fashioned versus up-to-the-minute.

1. Some languages are more conservative than others–that is, they change more slowly. Some Indo-European families have retained a striking amount of Proto-Indo-European structure over the millennia. Others have shed a surprising amount. Lithuanian is of the Baltic family (which today has only one other member, Latvian), and it preserves seven cases, a record among living Indo-European members.

2. As it happens, one of the Indo-European groups most familiar to us is one of the least “faithful” to its ancestor in terms of case endings. Italic once included Latin and other dead languages, but today lives only through the children of Latin alone; Spanish is one. Spanish has not a single one of the Proto-Indo-European case endings. (There is a likely reason for this kind of difference, which we will explore later.)

	LITHUANIAN	SPANISH
tooth	*dantìs*	*diente*
tooth’s	*dantiẽs*	*del diente*
to the tooth	*dañčiui*	*al diente*
tooth (accusative)	*dañtį*	*diente*
on the tooth	*dantyjè*	*sobre el diente*
with the tooth	*dantimì*	*con el diente*
Oh, tooth!	*dantiẽ!*	*¡Ay, diente!*

D. Albanian and Armenian: Black sheep.

1. Other groups have been so innovative that they are difficult to even recognize as family members. Albanian is the language that would have been spoken by the *Twelfth Night* characters because the play takes place east of the Adriatic in the Illyrian region. Armenian is spoken between the Black Sea and the Caspian Sea. Both of these languages are the only members of their family.

2. Both have borrowed many words from other language groups: only about 1 in 12 Albanian words is native to the language and only about 1 in 4 Armenian ones. Both languages have also wended quite far along their own paths of development. Albanian wasn’t even discovered to be Indo-European until 1854, and Armenian was long thought to be a kind of Persian. Here are the numbers 2 through 9 in Albanian and Armenian, compared to “normal” Indo-European languages. The Albanian and Armenian

words come from the same ancestor as the other languages' words do, but look how differently they often come out:

ENGLISH	SPANISH	FRENCH	GERMAN	GREEK	ALBANIAN	ARMENIAN
two	dos	deux	zwei	dúo	dü	erku
three	tres	trois	drei	treîs	tre	erek'
four	cuatro	quatre	vier	téttares	katër	č'ork'
five	cinco	cinq	fünf	pénte	pesë	hing
six	seis	six	sechs	héks	gjashtë	vec'
seven	siete	sept	sieben	heptá	shtatë	evt'n
eight	ocho	huit	acht	oktő	tetë	ut'
nine	nueve	neuf	neun	ennéa	nëntë	inn

E. *Indo-European: The "Indo" part*. In India, Indo-European languages have taken on many features from the grammars of languages spoken by peoples who first occupied the area, such as the Dravidian languages that are still spoken in southern India today, including Tamil. An example is word order. In Hindi, the verb comes at the end of the sentence, and prepositions come after nouns. Thus, in Hindi, *I met Apu* is "I Apu-with met-did."

Mẽ Apu se mila tha.
I Apu with meet did

"I met Apu."

Essential Reading:

Burgess, Anthony. *A Mouthful of Air*. New York: William Morrow & Co., 1992 (chapters 12–16).

Crystal, David. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987 ("The Indo-European Family").

Supplementary Reading:

Ramat, Anna Giacalone, and Paolo Ramat, eds. *The Indo-European Languages*. London: Routledge, 1998.

Wells, Spencer. *The Journey of Man: A Genetic Odyssey*. Princeton: Princeton University Press, 2002 (chapter 8: "The Importance of Culture").

Questions to Consider:

1. Ask someone you know who speaks Russian, Polish, Persian, Greek, or another Indo-European language how to say *My father spoke to a woman one day*, write the sentence down, and try to figure out how the words relate to English words with similar meanings. If you do this, you will see the essence of how language changes: this person's language started as the same one that became English!

2. English was once the Proto-Indo-European language. Now it is not, nor is any other language that grew from it. Can we put a value judgment on this? Do we wish that the "Proto-Indo-European heritage" could be preserved?

Lecture Nine

Language Families—Tracing Indo-European

Scope: Linguists have deduced what Proto-Indo-European was like by comparing the modern languages: if more have a *b* in a word than a *v*, it is likely that the original word had a *b*. Along these lines, we can assume that the word for *sister-in-law* was *snusos*, even though in Armenian today, it is simply *nu*! Sometimes, careful guesses have been confirmed by newly discovered ancient documents, some Indo-European subfamilies being known only in this fashion.

Outline

I. Reconstructing the ancestor.

A. In the previous lecture, I occasionally referred to features that the first Indo-European language had. One might ask, however, just how we can know what that language was like. It was not written: our first written evidence of Indo-European comes after the first language had already split into several new ones, including Sanskrit, Latin, Ancient Greek, and Gothic.

B. Over the past two centuries, linguists have reconstructed what the first Indo-European language was probably like by deducing from the living languages and the older ones that were written. The hypothetical language is called *Proto-Indo-European*. There is a vast "dictionary" of Proto-Indo-European words, and much is known about its endings and other aspects of its grammar.

II. Reconstructing Proto-Indo-European words.

A. Here is *sister-in-law* in seven Indo-European languages:

Armenian	*nu*
Sanskrit	*snuṣā́*
Russian	*snokhá*
Old English	*snoru*
Latin	*nurus*
Greek	*nuós*
Albanian	*nuse*

Actually, in Albanian and Armenian, the meaning of the root is now *bride*—semantic change is eternal.

To discover what the Proto-Indo-European word for *sister-in-law* was, we trace backwards. This method is called *comparative reconstruction*.

B. Some of the words begin with *sn-*, while others begin with *n-*. To decide whether the Proto-Indo-European word began with *sn-* or *n-*, we

seek an account that squares with typical sound-change processes. Along those lines, it is more likely that several separate languages lost an *s*—by ordinary sound erosion—than that several separate languages somehow developed *s* for some reason (and always *s*). Thus, we know that the word began with *sn-*.

C. To decide whether the first vowel was an *o* or a *u*, we choose *u*, because more of the words have *u* than *o*. Again, it is more likely that a few words changed a *u* to an *o* than that many changed an *o* to a *u*. Thus, the first word would have begun with *snu-*.

D. The second consonant is a little harder to decide on. Three words—half of our set—have an *s*, but this is not a majority. Here, some additional information nudges us in the right direction. In many Latin words, *r* between vowels had begun as *s*. In Russian, many *kh* sounds trace back to *s* in earlier Slavic languages. This gives us a majority for *s*, and we can assume that the first word began with *snus-*.

E. The ending gives us a surprise.

1. Because *sister-in-law* is a feminine concept, if we are familiar with such languages as Spanish and Italian, in which *-o* is the masculine ending and *-a* the feminine one, we expect the original ending to have been *-a*. But Greek and Latin have *-ós* and *-us*, masculine endings, and in Armenian, when the word is given case endings, an *o* appears on the stem: *nuo*.

2. This is just three, not a majority. But then logic beckons: given that sisters-in-law are women, why would Sanskrit and Russian speakers have changed a feminine ending to a masculine one? In bizarre cases like this, we suppose that the ending must have originally been masculine and that some languages naturally "fixed" this over time and changed it to the more logical feminine ending. Thus, we have our original Proto-Indo-European word, the mysteriously cross-gender word *snusos*.

F. Through comparative reconstruction, then, we can know that a word that is merely *nu* in Albanian today began as the longer, chunkier *snusos*. Indo-Europeanists mark these hypothetical forms with an asterisk: **snusos*.

III. *Reconstructing Proto-Indo-European sounds*. One way we know this method is valid is that sometimes, unexpected discoveries confirm what began as surmises.

A. Languages have preferences in terms of how syllables are built. In Japanese, the only consonant that can occur at the end of a word is *n*. Otherwise, all words end in a vowel—*arigatō*, *sushi*, *kamikaze*, and so on. In Chinese, most words have just one syllable. In Proto-Indo-European, most words reconstructed have one vowel sandwiched

between two consonants, such as the *b^h*er-*, "to bear" root we saw in Lecture Five, or **med-*, "to measure."

*b^h*er-* "to bear"
**med-* "to measure"

B. But then there are Proto-Indo-European roots where instead of a final consonant, there is a first consonant, then a long vowel. A long vowel is marked with a macron: **dō-* "to give," **pā-* "to protect."

**dō-* "to give"
**pā-* "to protect"

C. In the late 1800s, pioneering linguist Ferdinand de Saussure proposed that these words used to follow the normal consonant-vowel-consonant pattern, but that the vowels were now, as it were, stretching into a spot where there had once been a consonant.

1	2	3
b^h	e	r
m	e	d
d	o	o
p	a	a

Saussure assumed that the consonants must have been breathy ones pronounced back in the throat (such as *h*), given that sounds like this often make a vowel before them longer in languages around the world.

STAGE ONE

1	2	3
b^h	e	r
m	e	d
d	o	H
p	a	H

STAGE TWO

1	2	3
b^h	e	r
m	e	d
d	o	o
p	a	a

D. De Saussure's theory was rejected because there was no concrete evidence that these sounds had existed. But early in the 20th century, ancient tablets written in cuneiform script were found in Turkey, dating as far back as the 1700s B.C. Many of them were written in what turned out to be an extinct Indo-European language, now called Hittite. Hittite has a consonant sound, written as an *h*, in some of the places where de Saussure guessed it would be.

E. Thus, today, Proto-Indo-European is assumed to have had these sounds, called *laryngeals*, although no living language preserves them.

IV. *Filling out the genealogy*. Hittite was one of several languages now known only from documents found in Turkey, constituting a whole extinct Indo-European family called Anatolian. Another extinct family was discovered in the 20th century.

A. At the end of the 1800s, Buddhist manuscripts were discovered in western China, dating as far back as 600 A.D., in an unknown language. Luckily, the script was related to the one now used for Hindi, and the manuscripts were well-known Buddhist texts. The language turned out to be an Indo-European one—it had words like *noktim* for night—but its name and speakers were a mystery.

B. But one of the documents was written instead in the Uighur language, related to Turkish, and said that it was translated from a language called "twghry." As it happens, Greek historians mention a people who migrated from the Fergana Valley (at the intersection of what is today Uzbekistan, Tajikistan, and Kyrgyzstan) to northern India and converted to Buddhism. The Greeks call them the Tokharoi—note the match to "twghry" in the consonants.

C. Various clues allowed a match between the people the Greeks mentioned and the manuscripts. Frescoes painted by Buddhists in western China around 900 A.D. depict Caucasian people. Mummies have been found in the area with ample facial hair, light eyes, and high, bridged noses; these mummies are also very tall. Further, contemporary Chinese accounts mention white people in the area.

D. Thus, Tocharian was a lost branch of Indo-European, spoken by white peoples who migrated into China.

Essential Reading:

Dalby, Andrew. *Dictionary of Languages*. New York: Columbia University Press, 1998 (entries on Indo-European and its various branches).

Watkins, Calvert, ed. *The American Heritage Dictionary of Indo-European Roots*. Boston: Houghton Mifflin, 1985, pp. xiii–xiv.

Supplementary Reading:

Arlotto, Anthony. *Introduction to Historical Linguistics*. Boston: University Press of America, 1972.

Barber, Elizabeth Wayland. *The Mummies of Ürümchi*. New York: W.W. Norton & Co., 1999.

Questions to Consider:

1. If we could reconstruct the very first language through the above methods, what purpose or benefit might this serve? This is not a trick question: just explore.

2. You may have noticed that there are many similarities between how languages evolve and how animals and plants do. However, there are also differences between natural selection and language evolution—which ones come to mind?

Lecture Ten

Language Families—Diversity of Structures

Scope: This lecture shows how language change in different directions can produce two language families extremely different from Indo-European and from one another. Semitic includes Arabic and Hebrew and assigns basic meanings to three-consonant sequences and creates words by altering the vowels around them: in Hebrew, *katav* is "he wrote," *kotev* is "he writes," and *ktiv* is "spelling." In Sino-Tibetan languages, such as Chinese, a sentence tends to leave more to context than we often imagine possible, and a series of particles at the end of a sentence conveys shades of attitude that we barely think of as "grammar" at all.

This lecture introduces two language families that demonstrate how different the product of language change over time can be.

Outline

I. Semitic.

A. The best-known Semitic languages are Arabic and Hebrew, spoken in the Middle East, along with a few others, such as Aramaic (the language of Jesus). There are records of many extinct Semitic languages, such as Akkadian (written in cuneiform) and Phoenician.

B. Semitic languages are almost unique in the world in basing words on roots of three consonants, creating a range of related meanings by altering the vowels around and between them and adding prefixes and suffixes.

C. For example, in Arabic, the root K-T-B has to do with the concept of writing. Here is the way the language creates a wide range of meanings from this one root:

ka**t**a**b**a	"he wrote"	**k**i**t**ā**b**	"book"
ya**kt**u**b**u	"he writes"	**k**u**t**u**b**ī	"bookseller"
ka**tt**a**b**a	"to make write"	ma**kt**a**b**	"office"
‘a**kt**a**b**a	"to dictate"	ma**kt**u**b**	"letter"
kā**t**a**b**a	"to correspond"	mu**k**ā**t**a**b**a	"correspondence"
‘in**k**a**t**a**b**a	"to subscribe"	**k**ā**t**i**b**	"writer"
‘i**kt**ata**b**a	"to copy"	**k**i**tb**a	"writing"

The dash over the vowel means that the vowel is long; notice that the difference in vowel length can make a difference in meaning. The apostrophe stands for a glottal stop, as in the first sound one makes in saying "uh-oh."

D. Language families can spread across very different cultures and peoples. Most Semitic languages are actually spoken in Ethiopia, across the Red Sea from the Middle East. This is why, for example, "night" is *laila* in Hebrew and *leylat* in Amharic, the major Ethiopian Semitic language.

E. The sentence "You're wearing it" looks quite different in Hebrew and Amharic. But if we look closely, we can see a similar trio of consonants, the Semitic root for wearing clothes. Hebrew has L-V-SH, and lurking in the Amharic word is the similar L-B-S.

"You're wearing it."

HEBREW	AMHARIC
ata loveš oto	tilebsewalleh
you wear it	

II. East and Southeast Asia.

A. This area actually contains several families. The main three are *Sino-Tibetan*, which includes Chinese, Tibetan, and Burmese; *Tai-Kadai*, which includes Thai and Laotian; and *Austroasiatic*, which includes Vietnamese and Khmer.

B. *Heavy reliance on context*. These languages stand out in being especially telegraphic compared to most languages. It is natural to suppose that a "normal" language has separate words for *he* and *she*, or words for *a* and *the*, or must always express pronominal concepts, such as "I" and "you," either with a word or with the endings that we learn in Spanish. But Cantonese goes against all of these notions, as do most languages in this area. Notice also how differently Cantonese puts a thought together than English does.

Kéuih ngóh tùhnghohk lèihga.
he/she my classmate you-know
"He's my classmate."

Yuhng hùhng bāt sé hóu dī
use red pen write good a-bit
"It's better to write with a red pen."

C. *Particles*. Thus, an English speaker thinks of *a* and *the* and *he* and *she* as crucial things to mark in a language. But there are things that an English speaker would *not* conceive of as "grammar" that speakers of these languages do. For example, where we would say "This machine's very reliable" in a tone of voice objecting to someone denying this, in Cantonese the assertive attitude that this tone of voice conveys is also marked with a particle at the end of the sentence:

Nī bouh gēi hóu hókaau **ge**.
this machine very reliable
"This machine's very reliable."

In the same way, if someone asked us why we weren't sleeping and we answered "It's too noisy," we leave it to context that we are saying this in response to a situation going on at that time. But in Cantonese, this is actually "said," with a particle that conveys immediate relevance:

Taai chòuh **la**.
too noisy
"It's too noisy!" (I can't sleep.)

You can even combine particles like this. In this sentence, the person is both asserting and speaking of something immediately relevant; therefore, *ge* and *la* are used together.

Ngóh yiu Vincent deui ngóh hóu jauh dāk **ge la**.
I want Vincent to me good then okay
"All I want is for Vincent to be good to me."

Cantonese has about 30 particles like this, marking attitudes that English often leaves to context or conveys with intonation. There were particles in the first Cantonese examples we saw in section II.B. of this lecture.

D. *Classifiers*. Instead of marking nouns with articles as in English, languages in this area use classifiers with nouns according to their shape, especially with numbers. This practice is similar to using such English expressions as *two head of cattle*, but these languages use this kind of construction regularly.

yāt jēung tói	"one table"
yāt jēung jí	"sheet of paper"
yāt jek gāidáan	"one egg"
yāt jek sáubīu	"one wristwatch"
yāt jī bāt	"one pen"
yāt jī dék	"one flute"
yāt tìuh louh	"one road"
yāt tìuh sèh	"one snake"

Cantonese uses *jēung* with flat objects, such as tables and paper; *jek* with round objects; *jī* with cylindrical objects; *tìuh* with long, thin objects; and so on. There are dozens of these words.

Essential Reading:

Comrie, Bernard, Stephen Matthews, and Maria Polinsky, eds. *The Atlas of Languages*. New York: Facts on File, 1996.

Crystal, David. 1987. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987 ("Other Families").

Supplementary Reading:

"Languages of the World." *Encyclopedia Brittanica*. 1998.

Kaye, Alan. "Arabic." *The World's Major Languages*. Edited by Bernard Comrie, 1990, pp. 664–685.

Matthews, Stephen. *Cantonese: A Comprehensive Grammar*. London: Routledge, 1994.

Questions to Consider:

1. Languages differ greatly in what kinds of shadings they choose to mark and how. English uses intonation, where many languages might have distinct words. For example, if someone says to you *You've ALREADY seen me happy*, the intonation alone implies that you are about to see the person happy again. Think of some other cases where intonation conveys specific meanings and intimations that would be lost on paper.
2. Try writing out some English sentences where no vowel sounds are indicated except "ee" and "oo" (notice that the correspondence between this and particular letters will be rough). This approximates how Arabic and Hebrew are usually written (it is not that vowels are not indicated at all). Is there a significant disadvantage?

Lecture Eleven
Language Families—Clues to the Past

Scope: How language families are distributed gives information about how humans have spread through migration. Generally, where a language family's members are most numerous is where the family emerged, because there has been more time in the original location for the languages to diverge into new ones. This principle shows that the massive Austronesian family, now spread across Southeast Asia's islands out across the South Seas to Polynesia, began on the small island Formosa, where two dozen languages representing three separate subfamilies are spoken. Similar facts shed light on the history of Africa and North America.

Depending on one's metrics for counting them, there are at least dozens and at most hundreds of language families in the world. Their distribution across the planet often gives us clues as to how humans have migrated over time.

Outline

I. Austronesian.

A. There are almost 1,000 Austronesian languages. They are mostly spoken in the islands of Southeast Asia and eastward of New Guinea and Australia. Most of these languages are relatively similar, even across spaces as vast as that between the Philippines, Malaysia, and the South Seas. Malagasy is an Austronesian language, indicating that people sailed all the way from Southern Asia to Madagascar. The language is still similar to its sisters.

Cognates in Austronesian languages:

	TAGALOG	MALAY	FIJIAN	SAMOAN	MALAGASY
stone	*bato*	*batu*	*vatu*	*fatu*	*vato*
eye	*mata*	*mata*	*mata*	*mata*	*maso*

B. The Austronesian languages that are most different from the others are spoken in Taiwan. In fact, Austronesian consists of four subfamilies, and three of them are spoken on this small island. These three subfamilies consist only of a dozen-odd living languages. But linguists take this kind of contrast in diversity as evidence that the family originated in Taiwan, because where the languages have existed the longest, they would have had the most time to diverge from one another.

C. On the other hand, the Austronesian languages that are most akin to one another are the Polynesian ones.

Cognates in Polynesian languages:

	TONGAN	SAMOAN	TAHITIAN	MAORI	HAWAIIAN
louse	*kutu*	*ʻutu*	*ʻutu*	*kutu*	*ʻuku*
lizard	*moko*	*moʻo*	*moʻo*	*moko*	*moʻo*
to laugh	*kata*	*ʻata*	*ʻata*	*kata*	*ʻaka*

This suggests that they are the newest Austronesian languages, because they haven't had time to diverge significantly yet. Archaeology supports this conception of Austronesian's history. Evidence suggests that western Polynesia was settled between 1500 and 1200 B.C., while the islands furthest from the western ones, such as New Zealand and Hawaii, appear to have been settled between 600 and 1000 A.D. Meanwhile, hill people in Taiwan and Polynesians share some cultural traits, such as using bark beaters to make clothes.

II. Bantu.

A. There are about 500 Bantu languages. The best known is Swahili. They are spoken south of the Sahara in Africa. They are generally quite similar to one another, varying about as much as the Romance languages do.

B. Like Taiwan with Austronesian, Cameroon and eastern Nigeria are the exception with Bantu. Here, the languages differ much more from one another. This suggests that the family emerged here, and archaeology shows that the Bantu people began migrating southward from this area around 3000 B.C. This means that most of the languages are so close because they are mostly rather new.

C. There is another clue that Bantu is a new group. In southwestern Africa, there is an area where click languages—called Khoi-San languages by linguists—are spoken rather than Bantu ones.

Two click languages are also spoken up in Tanzania. The question is why this group is situated amidst Bantu speakers. It would appear that Khoi-San was once much more widespread and that Bantu speakers overran most of these languages and left behind only small islands. In Bantu-speaking areas, fossil skulls have been found of the Bushman type. Some Bantu languages spoken near Khoi-San ones have some clicks.

D. Thus, the distribution of language families today is quite different from the original one. Basque is a similar case, surrounded by Indo-European languages. The Basques have some distinct genetic markers from other Europeans, and this and other evidence shows that Basque is a remnant of a larger group once spoken across Europe. Indo-

European speakers migrated into Europe and largely replaced these earlier languages; Basque is a lone living clue to that past.

III. Native American languages.

A. Before Europeans came to the New World, about 400 separate languages were spoken in North America and about 670 in Central and South America. Most of these languages are now gradually dying out.

B. The distribution of these languages poses a problem. The New World was settled from Asia, across the Bering Strait. We would expect that the highest diversity, then, would be in Alaska and Canada. Instead, the north is covered by just two families, while dozens of others are found further south. Diversity is generally highest in South America, California, and other places.

C. This suggests that something interrupted the linguistic "timeline" in the north; genetic and geographical evidence suggests that the last Ice Age largely drove away people in the north, so that the area was repopulated after the thaw. This means that the languages there have had less rather than more time to diverge from one another. The language distribution alone suggests this, even without the other evidence.

IV. Inferring further back: The first language?

A. The Khoi-San languages, in this light, may shed more light on the human past. There are about 50 of these languages, but they do not form a tidy group as, for example, Indo-European does. There is barely a typical "Khoi-San" grammar—some bristle with case endings like Latin, while others are more "naked" like Chinese, and there are not many words that appear in similar guises in all or even many of them. This suggests that these languages are quite ancient, having diverged over a vast amount of time. In addition, the two click languages in Tanzania are extremely different from the ones spoken in the south, as well as from one another.

B. In this light, it is important that humans emerged in Africa, that early *Homo sapiens* fossils are smaller than today's humans (Bushmen are rather small people), and that it is very hard to conceive of how clicks could emerge in a language. It may be that the clicks were present in the first language(s) and have disappeared almost everywhere but where they originally existed.

C. Thus, the click languages may be the descendants of the first one.

Essential Reading:

Comrie, Bernard, Stephen Matthews, and Maria Polinsky, eds. *The Atlas of Languages*. New York: Facts on File, 1996.

Dalby, Andrew. *Dictionary of Languages*. New York: Columbia University Press, 1998.

Diamond, Jared. *Guns, Germs, and Steel*. W.W. Norton & Co., 1997 (especially chapter 17: "Speedboat to Polynesia" and chapter 19: "How Africa Became Black").

Supplementary Reading:

"Languages of the World." *Encyclopedia Brittanica*. 1998.

Finegan, Edward. *Language: Its Structure and Use*. Fort Worth, TX: Harcourt Brace, 1989.

Oppenheimer, Stephen. *The Real Eve: Modern Man's Journey out of Africa*. New York: Carroll & Graf, 2003 (chapter 7: "The Peopling of the Americas").

Questions to Consider:

1. Two language families share India: the Indo-Aryan group, including Hindi, Punjabi, and Bengali, and the Dravidian group, including Tamil and Kannada. Most of the Dravidian languages are spoken on the southern "tip" of the country, but a few are scattered further north. What does this suggest about ancient population movements in India?
2. It is highly likely that languages related to Basque once coated much of Europe, just as languages now lost were likely spread throughout southeastern Asia before the Chinese moved southward. Language death, then, is a natural process, yet today, many people are dedicated to preserving minority languages in danger of extinction. How do we reconcile these sincere efforts with the realities of the past?

Lecture Twelve
The Case Against the World's First Language

Scope: A few linguists have claimed to reconstruct words from the world's first language, but this work is extremely controversial. For one, language change is so thorough that it is hard to imagine why any words would have stayed identifiable in any language after as long as 150,000 years. Moreover, languages tend to have words in common with similar sounds and meanings just by chance. There are also problems with the "Proto-World" hypothesis in terms of reconstruction of language families' proto-words.

Outline

I. Words from the first language?

A. Linguists Joseph Greenberg and Merritt Ruhlen have claimed to have reconstructed words from the world's first language, which they call Proto-World. They compared words with similar meanings in hundreds of languages and deduced what the original form would have been.

B. Although this work has often been covered with interest in the media, most linguists who specialize in language change have vehemently rejected it. It is tempting to suppose that Greenberg and Ruhlen are typical examples of despised renegades who history will eventually prove right. But based on what we have seen so far in this course, we can see that there is a great deal of validity to the objections.

II. First objection: The depth of language change.

A. The shape of words changes so much over time that the question is why any one of them would stay recognizable in any language after 150,000 years. Recall Proto-Indo-European **snusos* becoming *nu* in Albanian. Languages also substitute new roots for old ones to express meanings: Spanish, Russian, and Greek are all Indo-European but use different roots for bread (*pan*, *xleb*, *psomi'*).

B. Algonquian is a family of Native American languages, including Cree and Cheyenne spoken in Montana and Oklahoma. Proto-Algonquian words have been recovered through comparative reconstruction; the word for *winter*, for example, was *peponwi*. But the word in Cheyenne that has developed from this root is *aa'* —because of gradual changes over just 1,500 years.

winter from Proto-Algonquian to Cheyenne:

p	**e**	**p**	**o**	**n**	**w**	**i**
p	e	p	o	n		
	e		o	n		
	a		i	n		
	a		i			
	a		i	‘		i
	a		a	‘		i
	a		**a**	**‘**		

III. Second objection: Comparative reconstruction *über alles*

A. Language change specialists trace proto-language words by painstaking deduction along the lines that we saw with **snusos*. But writing has existed for only a tiny fraction of the time that language has existed (6,000 years); we have no access to actual data to trace Proto-World words step by step backward. Instead, Greenberg and Ruhlen rely on a broader “eyeballing” technique.

B. Here are various words that lead them to reconstruct **tik* as the first word for “one” or “finger.”

Evidence of Proto-World form **tik*, “one, finger”:

Latin	*digitus*	“finger”
Old English	*tahe*	“toe”
Dinka (Sudan)	*tok*	“one”
Turkish	*tek*	“only”
Korean	(*t*)*tayki*	“one, thing”
Japanese	*te*	“hand”
Tibetan	(*g*-)*tśig*	“one”
Vietnamese	*tay*	“hand”
Southern Tasmanian	*mo-took*	“forefinger”
Eskimo	*tik*(*-iq*)	“index finger”
Mohawk	*tsi’er*	“finger”
Chibcha (S. America)	*ytiquyn*	“finger”

C. Ruhlen objects that comparative reconstruction is not a necessary condition for establishing a relationship between languages:

> Were a biologist to demand a complete reconstruction of Proto-Mammal, together with a complete explanation of how this creature evolved into every living mammal, before he would accept the fact that human beings are related to cats and bats, he would not be taken seriously. Yet it is just this kind of linguistic nonsense that has been taught in universities by Indo-Europeanists for so long that most linguists are unaware of its mythological nature. (Ruhlen, Merritt. *The Origin of Language: Tracing the Evolution of the Mother Tongue*. New York: John Wiley & Sons, 1994, p. 133.)

IV. Chance resemblances.

A. Yet a problem remains: there are many chance resemblances between words with similar meanings in any two languages. Here are examples from English and Japanese, which no linguist considers to be related in any significant way.

JAPANESE	meaning	ENGLISH
mō	more	*more*
sō	like that	*so* (as in *just so*)
sagaru	hang down	*sag*
nai	not	*not*
namae	name	*name*
mono	thing (a single entity)	*mono*- "one"
miru	see	*mirror* (which one sees in)
taberu	eat	*table* (where one eats)
atsui (ott-SOO-ee)	hot	*hot*
hito	man	*he*
yo	emphatic particle	*Yo!*
kuu	"feed your face"	*chew*
inki	dark-spirited, glum	*inky* (dark)
o	honorific prefix	*O* ("O, mighty Isis")

B. A language can have only so many consonants together and so many vowels together: there is a limit on the degree to which syllables in human language can vary. This shows the danger in the "eyeballing" strategy.

V. Comparing proto-language forms.

A. Greenberg and Ruhlen deduce not from hundreds of languages together but from words in the proto-languages that have been deduced, like Proto-Indo-European, for each family. But even here, their conception of "similarity" leads to questions.

B. Here are 12 proto-language forms for *water*. Greenberg and Ruhlen reconstruct from these that the Proto-World form would have been **aq'wa*.

Evidence for Proto-World *aq'wa* for *water* as reconstructed in 12 family proto-languages:

k''ā	nki	engi	ak'^{w}a	rt^{s}'q'a	nīru
ak^{w}ā	'oχ^{w}a	namaw	okho	gugu	akwā

C. **ak^{w}ā, *ak'^{w}a*, and **'oχ^{w}a* are clearly similar, but they are from, respectively, Proto-Indo-European, Afro-Asiatic, and Caucasian. The problem is that these families all arose in regions close to one another— southern Russia, the Middle East, the Caucasus mountains. It is possible that these families share a common ancestor, then— but this is just three out of a great many families in the world. Their ancestor was not the world's *first* language – it would have been one of legions of descendants of that first language.

D. **akwā* is only the proto-form for Algonquian, but Greenberg and Ruhlen present it as a proto-form for most of the languages of North America. Beyond Algonquian, in assorted Native American languages, we find forms for *water* (and related meanings) as disparate as *uk*, *yok-ha*, *'aha'*, *ku'u*, *iagup*, *uku-mi*, and *oxi'*.

Essential Reading:

Ruhlen, Merritt. *The Origin of Language: Tracing the Evolution of the Mother Tongue*. New York: John Wiley & Sons, 1994, pp. 115–119.

Wright, Robert. "Quest for the Mother Tongue." *Atlantic Monthly* 267 (1991): 39–68.

Supplementary Reading:

Matisoff, James. "On Megalocomparison." *Language* 66 (1990): 106–120.

Questions to Consider:

1. Most historical linguists think that comparative reconstruction will never recover the first Native American language or languages and that this closes the issue. The Proto-World specialists object that there must have been such a language, that we can glean at least some information about it through their more general techniques, and that to neglect to try this is to give up on the larger enterprise of charting the birth and migrations of our species. Whose side would you be on?
2. Based on what we have seen about how language changes, what kind of grammar do you think the first language might have had? Why?

Timeline

150,000–80,000 B.C.	Estimated time during which human language arose
4000 B.C.	Probable origin of Proto-Indo-European
3500 B.C.	First attested writing
3000 B.C.	Probable origin of Semitic
2000 B.C.	Bantu speakers begin migrations south and eastward
A.D.	
450–480	First attestation of English
787	First Scandinavian invasions of England
mid-1300s	Beginning of the standardization of English
1400	Beginning of the Great Vowel Shift in English
1564	Birth of William Shakespeare
c. 1680	The origin of Saramaccan creole
1786	Sir William Jones gives first account of Proto-Indo-European
1887	Ludwig Zamenhof creates Esperanto
c. 1900	The birth of Hawaiian Creole English
1916	Discovery of Hittite

Glossary

Algonquian: Family of Native American languages spoken in Canada and the northern and northeastern United States, including Cree, Ojibwa, Shawnee, Blackfoot, Fox, and Kickapoo. Much work has been done on the reconstruction of Proto-Algonquian.

alienable possessive marking: Distinguishing things possessed as objects (alienably) from those possessed as parts of one's body or as personal intimates (inalienably), e.g., *my chair* versus *my mother*. Many languages have different possessive pronouns for these two situations or distinguish between them in various other ways.

Amerind: One of the three families into which Joseph Greenberg divided the notoriously variegated hundreds of Native American languages. Amerind is by far the biggest of the families, comprising most of the languages native to the Western Hemisphere.

Areal: Of or pertaining to an area or region.

assimilation: The tendency for a sound to become similar to one adjacent to it: Early Latin *inpossibilis* became *impossibilis* because *m* is more like *p* than *n* is, in requiring the lips to come together.

Austroasiatic: The Southeast Asian language family that includes Vietnamese and Khmer (Cambodian).

Austronesian: The massive Southeast Asian and Oceanic language family that includes Tagalog (Filipino), Indonesian, Javanese, Malagasy, and Polynesian languages, such as Hawaiian and Samoan.

Baltic: The small subfamily of Indo-European today including only Lithuanian and Latvian, the closest languages in the family to the Proto-Indo-European ancestor.

Bantu: The 500 languages spoken in sub-Saharan Africa, of which Swahili and Zulu are the best known; a subfamily of the Niger-Congo family.

Broca's area: The area of the brain, above the Sylvian sulcus on the left side, that is thought to control the processing of grammar.

Celtic: The subfamily of Indo-European including Irish Gaelic, Welsh, and Breton, all now under threat; the family once extended across Europe.

Chinook Jargon: The pidgin based on Chinook and Nootka with heavy admixture from French and English, used between whites and Native Americans in the Pacific Northwest, most extensively in the 19th century.

classifiers: Equivalents to *head* in such English expressions as *three head of cattle*, used more regularly in many languages, usually after numerals, and

varying according to shape or type of noun (long, flat, round, and so on). Many languages, such as Chinese ones, have dozens of such classifiers.

code-switching: When speakers regularly alternate between two languages while speaking, including in the middle of sentences.

comparative reconstruction: The development of hypothetical words in a lost proto-language of a family of modern languages through comparing the words in all the languages and deducing what single word all could have developed from. This is also done to reconstruct prefixes, suffixes, and sentence structure.

creole: The result of the expansion of a reduced version of a language, such as a pidgin, into a full language, which usually combines words from a dominant language with a grammar mixing this language and the ones the creole's creators spoke natively.

creole continuum: The unbroken range of varieties of a creole extending from one sharply different from the language that provided its words ("deep" creole) to varieties that differ from the dominant language largely in only accent.

critical-age hypothesis: The observation that the ability to acquire language flawlessly decreases sharply after one's early teens, first explicated by Eric Lenneberg in 1967 but since then referred to extensively by the Chomskyan school as evidence that the ability to learn language is innately specified.

diglossia: The sociological division of labor in many societies between two languages, or two varieties of a language, with a "high" one used in formal contexts and a "low" one used in casual ones. The classic cases are High German and Swiss German, practically a different language, in Switzerland, and Modern Standard Arabic, based on the language of the Koran, and the colloquial Arabics of each Arabic-speaking region, such as Moroccan and Egyptian, which are essentially different languages from Modern Standard and as different from one another as the Romance languages

double negative: The connotation of the negative in a sentence via two negator words: *I ain't seen nothing*.

Dravidian: A family of languages spoken mostly in southern India, including Tamil and Kannada, separate from the Indo-Aryan languages spoken elsewhere in the country.

equilibrium (vs. punctuation): A state when many languages share space in constant contact with one another, with no language threatening any other one to any significant extent over a long period of time. Linguist R. M. W. Dixon proposes this as human language's original state, contrasting with *punctuation* in which speakers of one language migrate and conquer other peoples, spreading their language across large areas.

ergativity: The condition in which a language marks subjects with different prefixes, suffixes, or separate particle words depending on whether the subject

acts upon something (*He kicked the ball*) or just "is" (*He slept*). In ergative languages, if the subject does not act upon something it takes the same marker as the object, while subjects that act upon something take a different marker. Ergativity is rather as if in English we said *Him saw* instead of *He saw* in a sentence without an object, but then said *He saw her* when there was an object.

Esperanto: A language created in the late 19th century by Ludwig Zamenhof, who hoped it would help foster world peace; comprised largely of words and grammar based on Romance languages but made maximally simple. Esperanto has been the most successful of many artificial languages.

Eurasiatic: A "superfamily" proposed by Joseph Greenberg comprising Indo-European, Uralic (e.g., Finnish and Hungarian), Altaic (e.g., Turkish, Mongolian), Dravidian, Kartvelian (of the Caucasus mountains), Afro-Asiatic (e.g., Arabic, Hausa), Korean, Japanese, Chukchi-Kamchatkan (of eastern Russia), and Eskimo-Aleut. The Eurasiatic hypothesis differs from the Nostratic hypothesis in that the latter is based on comparisons of the families' proto-languages while the former is based on more general cross-family comparisons.

evidential markers: Markers that indicate how one learned a fact being stated (i.e., seen, heard, suspected, and so on); all languages have ways of expressing such things, but in some languages, one *must* express them with each sentence.

FOXP2 gene: The gene that is connected to humans' ability to speak, also found in slightly different form in chimpanzees and found to be damaged in a family in which a speech defect (specific language impairment) was common.

gender marking: The distribution of nouns into two or more classes, masculine and feminine usually included; the term usually refers to this as applied to inanimate objects, as well as animate ones, such as German's *der Löffel*, *die Gabel*, and *das Messer* for the spoon, the fork, and the knife.

Germanic: A subfamily of Indo-European including German, Dutch, Yiddish, Swedish, Icelandic, and English, distinguished by how very close Icelandic is to Proto-Germanic and how strikingly far English is from it.

grammatical words (vs. concrete words): Words that have no concrete essence but perform grammatical functions in a sentence, such as *would* or *then* or, well, *or*. These are as crucial as concrete words in making human language what it is.

grammaticalization: The development of a word from a concrete one into a grammatical one over time, such as French's *pas* from meaning "step" to "not." Grammaticalization is how most grammatical words, as well as prefixes and suffixes, come into being.

Great Vowel Shift: The transformation of many English vowels into other ones in the 1400s, before which many English spelling conventions had already gelled. This is why *made* is spelled as if it were pronounced "MAH-deh," which at a period before the Great Vowel Shift, it was.

Grimm's law: A curious transformation in the consonants of Proto-Germanic, in which Proto-Indo-European *p* became *f* (hence, Latin *pater*, English *father*), *t* became *th* (Latinate *tenuous*, original English *thin*), and so on.

Indo-Aryan: The subfamily of Indo-European including Hindi, Bengali, Gujarati, and other languages descended from Sanskrit.

Indo-European: The language family now occupying most of Europe, Iran, and India, likely originating in the south of present-day Russia; its proto-language has been reconstructed, called Proto-Indo-European.

Indo-Pacific: The family of languages including the several hundred spoken on New Guinea and some others spoken on nearby islands; the group is often termed Papuan. Relationships among the languages have only begun to be worked out.

inherent reflexive marking: The extension of reflexive marking (*I hurt myself*) to verbs indicating emotion, movement, and other processes done to or occurring within one's self: German *ich erinnere mich*, "I remember myself," for "I remember"; similarly, French *je me souviens*. Especially common in Europe.

intertwined language: Languages developed by people with a bicultural identity that neatly combine the grammatical structure of one language with words from another one, in various fashions; e.g., Media Lengua and Mednyj Aleut.

Italic: The subfamily of Indo-European that included Latin and is now represented by the Romance languages; Latin's relatives, such as Oscan and Umbrian, are long extinct.

Khoi-San: The family of languages spoken in regions of southern Africa best known for their click sounds; perhaps the world's most ancient language family.

laryngeals: The breathy sounds reconstructed by Ferdinand de Saussure as having existed in Proto-Indo-European, to explain why many of its reconstructed roots were "open-ended" ones with a long vowel and no final consonant. De Saussure was proven correct when such sounds occurred in the places he predicted in Hittite, an extinct Indo-European language discovered in documents in the early 20th century.

Media Lengua: An intertwined language spoken in Ecuador, with Quechua endings and word order and Spanish words.

Mednyj Aleut ("middle" Aleut): An intertwined language, now basically extinct, spoken by children of Russian traders and Aleut women on one of the Aleutian islands starting in the 19th century.

Miao-Yao: A family of languages spoken by isolated groups in South Asia, including Hmong. Presumably, the family was much more widespread before Chinese peoples migrated southward.

Moldovan: A variety of Romanian spoken in Moldova, a country adjacent to Romania formerly incorporated into the Soviet Union. Only this history leads Moldovan to be considered a separate language from Romanian in any sense.

Normans: The French people who took over England in the 11th century, speaking the Norman dialect of French, which profoundly influenced the English vocabulary. Norman was derived from Norsemen, that is, Vikings.

Nostratic: A "superfamily" proposed by Russian linguists Aron Dolgopolsky and Vladislav Illich-Svitych comprising Indo-European, Uralic (e.g., Finnish, Hungarian), Altaic (e.g., Turkish, Mongolian), Dravidian, Kartvelian (of the Caucasus mountains), and Afro-Asiatic (e.g., Arabic, Hausa). See also Eurasiatic.

particle: A short word that is not an ending or a prefix that has a grammatical function.

perfect construction: A construction separate from the ordinary past one, connoting that a past event still has repercussions in the present. *I have decided not to take the job* implies that the impact of the decision is still ripe; *I decided not to take the job* sounds more like recounting a long-past occurrence. This is especially common in Europe.

pidgin: A makeshift, reduced version of a language used by people with little need or inclination to master the language itself, usually for purposes of trade. If used as an everyday language, a pidgin can become a real language, a creole.

poverty of the stimulus: The Chomskyan argument that actual speech is full of mistakes and hesitations and rarely offers demonstrations of various rules of a language that children nevertheless master early; Chomsky and others argue that this supports the idea of language as an innate faculty.

prescriptivism (vs. descriptivism): The school of thought that proposes how language ought to be (e.g., *Billy and I went to the store* is "better" than *Billy and me went to the store* because *I* is a subject), as opposed to the descriptivist approach, which simply describes how language is naturally (the latter fundamental to academic linguistics).

Provençal: The Romance variety of southern France closely related to French. Formerly the vehicle of the music of the troubadours, now represented by modern relatives, such as Occitan, threatened by French.

rebracketing: The redrawing of boundaries between words or parts of words as a result of plausible mishearings, such as *nickname* developing when speakers heard the original word *ekename* used after an indefinite article: *an ekename* became *a nickname*.

Riau Indonesian: A colloquial dialect of Indonesia spoken on the island of Sumatra with unusually little overt grammatical apparatus, leaving more to context than most known languages.

Russenorsk: A pidgin spoken especially in the 1800s between Russians and Norwegians trading during summers, neatly splitting the difference between Russian and Norwegian.

Sapir-Whorf hypothesis: An idea developed especially by Benjamin Lee Whorf speculating that differences between languages' grammars and vocabularies may channel how their speakers think, creating distinct views of the world.

Saramaccan: A creole language spoken in the Suriname rain forest by descendants of slaves who escaped into the interior and founded their own communities; the creole mixes words from English, Portuguese, Dutch, and the African languages Fongbe and Kikongo and has a grammar highly similar to Fongbe's.

Schwäbisch: A dialect of German spoken in the south of Germany, one of the many that is different enough from High German as to essentially be a different language.

semantic broadening: The development over time of a word's meaning into one more general: *bird* once referred to small birds but now refers to all birds.

semantic drift: The tendency for words' meanings to morph gradually over time to the point that the distance between the original meaning and the current one can be quite striking: *silly* used to mean *blessed*.

semantic narrowing: The development over time of a word's meaning into one more specific: *hound* once referred to all dogs but now refers to only a subset of them.

semi-creole: Languages not quite as different from a standard one as a creole is but more different than the typical dialect of that standard language. The French of Réunion Island, further from French than, for example, Canadian French but hardly as different from it as Haitian Creole, is a typical semi-creole.

Semitic: A language family spoken in the Middle East and Ethiopia including Arabic, Hebrew, and Amharic; most famous for its three-consonant word skeletons (K-T-B means "write" in Arabic; thus, *kataba*, "he wrote"; *maktab*, "office"; and so on).

Sinosphere: Linguist James Matisoff's term for the language area in Eastern and Southeastern Asia, where several separate language families have come to share several structural traits, such as tone, over the millennia because of constant contact.

Sino-Tibetan: A language family including Chinese, Tibetan, Burmese, and many other languages spoken in Southern and Southeast Asia; tone is common in the family.

sound shift: The tendency for sounds to change their articulation gradually and become new ones; the Great Vowel Shift in English is one example, as is the increasingly common pronunciation of *aw* as *ah* in America (*rah fish* instead of *raw fish*).

specific language impairment: The condition discovered in an English family in the 1980s, in which sufferers spoke rather slowly and hesitantly and often made errors usually made by foreigners. Those afflicted were found to have a faulty FOXP2 gene.

Sprachbund: An area where separate languages have come to share many grammatical features as the result of heavy bi- and multilingualism over time. A classic case is found in the Balkans, where Albanian, Romanian, Serbo-Croatian, Macedonian, Bulgarian, and Greek have become a Sprachbund. Of late, the term *language area* is becoming increasingly prevalent.

standard dialect: The dialect out of language's many that happens to become the one used in writing and formal situations, typically developing a larger vocabulary and norms for written, as opposed to spoken, expression.

SVO: The word order subject-verb-object, such as in English; SOV order is actually more common worldwide.

Tai-Kadai: A language family of Southeast Asia including Thai, Laotian, and lesser known languages, such as Shan.

Tocharian: An extinct Indo-European language once spoken by white peoples who migrated eastward to China, known from Buddhist manuscripts discovered in Central Asia.

Tok Pisin: An English pidgin spoken in Papua, New Guinea, now spoken as a native language by many and, thus, a creole; one of the few such languages used commonly in writing and in the government.

Tsez: A language spoken in the Caucasus Mountains in Asia, typical of languages in this area in having an extremely complex system of sounds and grammar.

Volapük: An artificial language created by Johann Schleyer in the 19th century based on a European pattern; initially popular but less user-friendly than Esperanto, which quickly replaced it as the most popular artificial language.

Wernicke's area: The area of the brain, below the Sylvian sulcus, that is thought to control the processing of meaning.

Bibliography

Abley, Mark. *Spoken Here: Travels among Threatened Languages*. Boston: Houghton Mifflin, 2003. Abley subscribes too much to the Sapir-Whorf perspective for my taste, but this book provides vivid descriptions of assorted language revival movements, giving nicely balanced assessments of their likelihoods of success.

Arlotto, Anthony. *Introduction to Historical Linguistics.* Boston: University Press of America, 1972. An especially clear introduction to comparative reconstruction of proto-languages, often assigned in undergraduate courses some years ago. Newer books in the vein have come along, but this one is worth seeking in a library for its conciseness because the newer ones cover the historical linguistics field more broadly.

Bailey, Richard. *Nineteenth-Century English*. Ann Arbor: University of Michigan Press, 1996. A useful examination of how English just a little more than a century ago was more different from today's than one might suppose. The chapter on slang also gives a useful portrait of the "underbelly" of English so difficult to glean from most writings before the 1960s.

Baker, Mark. *The Atoms of Language*. New York: Basic Books, 2001. This complements Steven Pinker's *The Language Instinct* in describing an area of inquiry pursued by syntacticians working in the Chomskyan school in accessible terms. Pinker's classic is, ultimately, somewhat challenging in its length, while this one hews to a more compact point.

Barber, Elizabeth Wayland. *The Mummies of Ürümchi.* New York: W.W. Norton & Co., 1999. An accessible account of the discovery of historical evidence of the Tocharian-speaking people, knitting the linguistic issues into archaeology and history.

Baugh, A. C., and T. Cable. *A History of the English Language*. Englewood Cliffs, NJ: Prentice-Hall, 1978. One of those deathless staple sources, a standard accessible history of English for those hungry for the details but not the trivia.

Bickerton, Derek. 1990. *Language and Species.* Chicago: University of Chicago Press, 1990. Argues that human language began with a "proto-language" substrate now preserved in the language ability of apes, infant speech, and pidgins, incorporating the author's pioneering theories about the birth of an English creole in Hawaii (there termed "Pidgin").

———. 1995. *Language and Human Behavior.* Seattle: University of Washington Press, 1995. A collection of lectures filling out the author's theory about human "proto-language" and its implications for how language began.

Bodmer, Frederick. *The Loom of Language*. New York: W.W. Norton, 1944 (paperback edition, 1985). Getting a little long in the tooth—not much on Third World languages—but remains a valuable compendium of data on many of the world's "grand old" languages, with a comparative focus. Still in print after 60 years for a reason.

Bryson, Bill. *The Mother Tongue: English and How It Got That Way*. New York: William Morrow and Co., 1990. Unsurpassed as a jolly, often laugh-out-loud trip through the history of English. Baugh and Cable will give the details, but this is a great introduction.

Burgess, Anthony. *A Mouthful of Air: Language, Languages…Especially English*. New York: William Morrow and Co., 1992. Burgess intended his tour of the world's languages as a primer for teaching us how to master them. I fear he was a bit idealistic on that goal, but he was a marvelous tour guide nonetheless and was less obsessed with Europe than writers in his vein back in the day.

Calvin, William H., and Derek Bickerton. *Lingua ex Machina: Reconciling Darwin with the Human Brain*. Cambridge, MA: MIT Press, 2000. A leading neurophysiologist and a specialist in language origins join forces in an engaging discursive exchange about how language began, within the framework of modern syntactic theory. Both are born teachers—a nice ride.

Cavalli-Sforza, Luigi Luca, and Francesco Cavalli-Sforza. *The Great Human Diasporas.* Cambridge, MA: Perseus Books, 1995. A general-public summary of what Luigi Cavalli-Sforza has discovered about human migrations in antiquity, using relationships between language families as support.

Chafe, Wallace, and Jane Danielewicz. "Properties of Spoken and Written Language," in *Comprehending Oral and Written Language*, ed. by Rosalind Horowitz and S. Jay Samuels, pp. 83–112. New York: Academic Press, 1987. This article illuminates in clear language the differences—often shocking—between how we actually talk and how language is artificially spruced up in even casual writing, showing that spoken language, despite its raggedness, has structure of its own.

Comrie, Bernard, Stephen Matthews, and Maria Polinsky, eds. *The Atlas of Languages*. New York: Facts on File, 1996. One of several tours of the world's languages now available, especially useful for its maps, charts, and diagrams; attractively laid out. A nice introduction to the Indo-European languages, including the folk tale in full.

Crystal, David. *The Cambridge Encyclopedia of Language*. Cambridge: Cambridge University Press, 1987. An invaluable encyclopedia, lavishly illustrated, on anything one might want to know about language and languages. This selection has been at arm's length from my desk for 10 years now.

———. *The Cambridge Encyclopedia of the English Language*. Cambridge: Cambridge University Press, 1995. A magnificent, almost imposingly rich trip through English past and present in all of its facets, as beautifully illustrated as the volume described directly above. Captures between two covers a magnificent volume of information, much of it otherwise hard to access.

———. *Language Death*. Cambridge: Cambridge University Press, 2000. The crispest and most down-to-business of the various treatments of this topic

released recently, by an author personally familiar with the travails of the Welsh revival movement.

Dalby, Andrew. *Dictionary of Languages*. New York: Columbia University Press, 1998. A feast of information on any language one might want to know about, clearly written and utilizing countless obscure sources. Especially good on writing systems and history.

Deacon, Terrence W. *The Symbolic Species: The Co-Evolution of Language and the Brain*. New York: W.W. Norton & Co., 1997. The most detailed account of the neurological perspective on the origins of language, representing a common view among such specialists that language "rides" on more general cognitive abilities. Many generative syntacticians would disagree, but Deacon's is an especially comprehensive argument from the other side.

Diamond, Jared. *Guns, Germs, and Steel*. New York: W.W. Norton & Co., 1997. Diamond's now classic account of why some societies have acquired more power than others incorporates ample information about how languages have spread across the globe, admirably accurate as well as readable.

Dixon, R. M. W. *The Rise and Fall of Languages*. Cambridge: Cambridge University Press, 1997. A muscular little monograph arguing that languages typically stew amongst one another in one place, becoming increasingly similar, and that only post-Neolithic migrations have led some languages to travel and give birth to brand-new offshoots taking root in new lands. The dedicated layman will glean much from the argument, which parallels Stephen Jay Gould's on punctuated equilibrium.

Dyer, Donald L. *The Romanian Dialect of Moldova*. Lewiston, NY: Mellen Press, 1999. A readable account of a "language" that is really just a minor dialectal variant of Romanian and how the confusion arose.

Finegan, Edward. *Language: Its Structure and Use*. Fort Worth, TX: Harcourt Brace, 1989. A textbook that combines layman-friendliness with detailed surveys of certain issues, such as the Polynesian languages and their history. I have used this one for years to usher undergraduates into the linguistic frame of mind.

Ferguson, Charles A. *Language Structure and Language Use* (essays selected and introduced by Anwar S. Dil). Palo Alto, CA: Stanford University Press, 1971. Ferguson wrote his seminal work when linguists still wrote important work in a style accessible to interested readers; this essay of 1959 remains the classic introduction to the subject.

Flodin, Mickey. *Signing Illustrated: The Complete Learning Guide*. New York: Perigee, 1994. This is an especially esteemed introduction to sign language for those stimulated by the subject.

Geertz, Clifford. "Linguistic Etiquette," in *Sociolinguistics*, ed. by John Pride and Janet Holmes, pp. 167–179. Harmondsworth, England: Penguin, 1972. A classic and readable article on layers of language in Java—and, by analogy, the fashion in which a language varies according to social factors, divested of the

loaded sociological implications that, inevitably, coverage of this subject referring to dialects closer to home tends to entail.

Goody, Jack, and Ian Watt. "The Consequences of Literacy," in *Literacy in Traditional Societies*, ed. by Jack Goody, pp. 27–84. Cambridge: Cambridge University Press, 1968. This is a truly magic piece that shows how the sheer fact of language written on the page transforms consciousness and history. It's long but thoroughly readable and worth the commitment.

Grillo, Ralph. *Dominant Languages: Language and Hierarchy in Britain and France*. Cambridge: Cambridge University Press, 1989. A solid coverage of how standard English and standard French became what they are, rather than the marginal dialects that they were at their inception. For those interested in a closer look at a process usually described in passing, this is a good place to look, although available only in university libraries.

Halliday, M. A. K. "Spoken and Written Modes of Meaning," in *Comprehending Oral and Written Language*, ed. by Rosalind Horowitz and S. Jay Samuels, pp. 55–82. New York: Academic Press, 1987. A useful comparison of the spoken and the written, which like the Chafe and Danieliwicz article, highlights a difference that is easy to miss.

Hockett, Charles F. "The Origin of Speech." *Scientific American* 203 (September 1960). This article is still useful in getting down to cases as to what distinguishes human speech from the fascinating but "not quite it" renditions of language seen in parrots, apes, and even dogs. Few have done it better since.

Hopper, Paul J., and Elizabeth Closs Traugott, eds. *Grammaticalization*. Cambridge: Cambridge University Press, 1993. Grammaticalization has been commonly discussed among linguists for only about 20 years, and this is the leading textbook on the subject. It is rather compact and written in terms that will not overly tax the interested layman.

Kaye, Alan. "Arabic," in *The World's Major Languages*, ed. by Bernard Comrie, pp. 664–685. Oxford: Oxford University Press, 1990. Kaye writes in a distinctly "human" way in a book intended as drier than what he submitted. This is a nicely readable introduction to Arabic and its structure.

"Languages of the World." *Encyclopedia Brittanica*. 1998 edition. This chapter, nowadays festooned with gorgeous, crystal-clear color maps, has been one of my own staples since I was 13. It covers the language families of the world in admirable and authoritative detail.

Lucy, John A. *Language Diversity and Thought: A Reformulation of the Linguistic Relativity Hypothesis*. Cambridge: Cambridge University Press, 1992. For those with a serious interest in the "Does language channel thought?" hypothesis that so often intrigues laymen, this monograph summarizes and critiques all of the relevant sources and experiments on the Sapir-Whorf hypothesis up to its publication. (There have been a few studies slightly more promising for the hypothesis since.)

Matisoff, James. “On Megalocomparison.” *Language* 66 (1990): 106–120. A cool-headed objection to Proto-World and related theories by a linguist who pulls off the feat of writing academically respectable linguistics papers in prose reasonably accessible to the layman, including a puckish sense of humor.

Matthews, Stephen. *Cantonese: A Comprehensive Grammar*. London: Routledge, 1994. Reference grammars can be forbidding to those outside academia, but this one is relatively accessible, as well as admirably detailed.

McWhorter, John. *The Power of Babel*. New York: HarperCollins, 2001. The basic thesis of this course, that human language is a natural history story, just as the evolution of animals and plants is, is encapsulated in this book. Solely as a result of lack of competition, the book is unique in giving a tour of human language from a modern perspective, including recent developments in the study of language change and how languages color one another.

———. *Word on the Street: Debunking the Myth of a “Pure” Standard English.* New York: Plenum Publishing, 1998. In this book, I attempt an argument that there is no such thing as “bad grammar,” using Black English as a springboard but also addressing bugbears of the “Billy and me went to the store” type. There is also a chapter on how Shakespearean language is less accessible to us than we often suppose, useful in illuminating the subtleties of how languages change.

Nettle, Daniel, and Suzanne Romaine. *Vanishing Voices: The Extinction of the World’s Languages*. New York: Oxford, 2000. As informed as David Crystal’s *Language Death* but also founded on a sober (if, in my view, sadly unlikely) political argument for those interested in this view on the subject.

Norman, Jerry. *Chinese*. Cambridge: Cambridge University Press, 1988. A compact survey of Chinese in its “dialectal” variety, easy to read, trimming most of the fat (although one might skip the details periodically), and in print.

Ong, Walter. *Orality and Literacy: The Technologizing of the Word*. London: Routledge, 1982. A readable and invaluable classic exploration of the impact on the human experience created by something as seemingly mundane as the encoding of speech in written form; truly eye-opening and one of my favorite books.

Oppenheimer, Stephen. *The Real Eve: Modern Man’s Journey out of Africa*. New York: Carroll & Graf, 2003. A survey of recent genetic evidence tracing human migrations, including evidence of higher-level mental activity further back in time than traditionally supposed by those pursuing a “Big Bang” 30,000 years ago. This is an updated report on the topic of Cavalli-Sforza’s classic book: a bravura detective story, only occasionally tiring the non-specialist a bit.

Pei, Mario. *The Story of Language*. Philadelphia: J.B. Lippincott, 1949. Now available only on the library shelf but worth a read; this grand old “The World’s Languages” trip inspired many a linguist (including myself). Put on your historical-perspective glasses and savor an old-fashioned scholar’s best of his many books for the public.

Pepperberg, Irene Maxine. *The Alex Studies: Cognitive and Communicative Abilities of Grey Parrots*. Cambridge, MA: Harvard University Press, 2002. Battling the skeptics, Pepperberg tells us about her uncannily articulate parrots. Push aside the arcane and the dry and marvel at how human a pop-eyed bird can seem.

Pinker, Steven. *The Language Instinct*. New York: HarperPerennial, 1994. This is the classic introduction to what many linguists do in the modern world, examining whether there is an innately specified ability to use language in our brains. Pinker writes with hipness and wit.

Ramat, Anna Giacalone, and Paolo Ramat, eds. *The Indo-European Languages*. London: Routledge, 1998. This book includes survey chapters for each family, written by experts; it assumes some familiarity with linguistic terminology but will be of use to interested laymen who desire more detail than Dalby, Crystal (1987) or Comrie, Matthews, and Polinsky on this list give in their surveys.

Richardson, David. *Esperanto: Learning and Using the International Language*. El Cerrito, CA: Esperanto League for North America, 1988. This is the best source for learning, or learning about, this fascinating and beautiful experiment.

Rickford, John Russell, and Russell John Rickford. *Spoken Soul: The Story of Black English*. New York: Wiley and Sons, 2000. Most literature on Black English is written from a political and cultural point of view, specifically from the left. This book is no exception, but for those interested in exploring these aspects of the dialect, which will be natural given its charged nature in our times, this book is the most up-to-date and solid and includes some coverage of grammar and history, as well.

Roberts, Peter. *West Indians and Their Language*. Cambridge: Cambridge University Press, 1988. A readable survey of Caribbean creoles, which a great deal of the creolist literature focuses on, despite my aim to give a more global picture in this lecture series. This book also covers the sociological issues that, despite their interest, are not especially germane to the thrust of our story here.

Ruhlen, Merritt. *The Origin of Language: Tracing the Evolution of the Mother Tongue*. New York: John Wiley & Sons, 1994. Merritt Ruhlen and the Proto-World camp's articulate call to arms for the general public. One cannot come away from this book without suspecting that these people are at least on to something.

———. "Taxonomic Controversies in the Twentieth Century," in *New Essays on the Origin of Language*, ed. by Jürgen Trabant and Sean Ward, pp. 97–214. Berlin: Mouton de Gruyter, 2001. For those who would like to dig in somewhat more specifically to the Proto-World perspective without being inundated with long lists of words and comparisons only a historical linguist could love, this is the handiest presentation I am aware of.

Sampson, Geoffrey. *Educating Eve: The "Language Instinct" Debate*. London: Cassell, 1997. A gifted rhetorician tears away at the Chomskyan perspective,

unique among those making such attempts in having thoroughly engaged the often forbidding literature in question. A valuable counterpoint to Pinker's *The Language Instinct*.

Sebba, Mark. *Contact Languages: Pidgins and Creoles*. New York: St. Martin's Press, 1997. Of the various textbooks on pidgins and creoles, this is the clearest, most up-to-date, and most worldwide in its orientation. Run, don't walk—this one made me decide not to write one of my own.

Simonson, Douglas (Peppo). *Pidgin to da Max*. Honolulu: The Bess Press, 1981. A jocular illustrated glossary of the creole English of Hawaii, focusing on "colorful" vocabulary but giving a good sense of a creole as a living variety.

Stavans, Ilan. *Spanglish: The Making of a New American Language*. New York: HarperCollins, 2003. "Spanglish" has inspired a fair degree of semi-informed musings, but here is finally a more considered and informed piece, also situating the variety sociopolitically.

Thomason, Sarah Grey. *Language Contact: An Introduction*. Washington, DC: Georgetown University Press, 2001. A recent textbook on language mixture—a topic unknown to the textbook until recently—by a linguist with a gift for clarity, as well as relentless good sense. One of my favorite thinkers who has endlessly inspired me—highly recommended.

Versteegh, Kees. *The Arabic Language*. New York: Columbia University Press, 1997. This book includes anything anyone, other than a specialist, would want to know about the awesome cathedral that is Arabic, in accessible language. Details can be bypassed, but this will serve as one's dependable Bible (or Koran) on the subject.

Wallman, Joel. *Aping Language*. Cambridge: Cambridge University Press, 1992. This selection usefully compiles, between two covers, the issues regarding how closely apes approximate human speech. Not too closely, Wallman argues, but the book offers all one needs to know about the field of inquiry as a whole.

Watkins, Calvert, ed. *The American Heritage Dictionary of Indo-European Roots*. Boston: Houghton Mifflin, 1985. This will serve those who want a brass-tacks look at how Indo-Europeanists go about their business. It is a book version of an appendix included in the *American Heritage Dictionary*, aimed at a general readership.

Wells, Spencer. *The Journey of Man: A Genetic Odyssey*. Princeton: Princeton University Press, 2002. An alternative rendition of a story updating Cavalli-Sforza, told more comprehensively by the Oppenheimer book on this list; somewhat lesser on renegade insight and narrative suspense but more compact for those with less time.

Whorf, Benjamin Lee. *Language, Thought, and Reality: Selected Writings of Benjamin Lee Whorf*, ed. by J. B. Carroll. Cambridge, MA: MIT Press, 1956. The take-home version of Whorf's ideas on how language channels thought. Now available only at university libraries, but a useful way to get the insights at

their source without trawling the obscure and scattered venues in which the work originally appeared.

Wright, Robert. "Quest for the Mother Tongue." *Atlantic Monthly* 267 (1991): 39–68. A general-public account of the Proto-World thesis and its notably acrid reception by most other linguists; this is a nice introduction to whet the appetite for Ruhlen's book.

Internet Resources:

http://www2.arts.gla.ac.uk/IPA/index.html. On the Web site of the International Phonetic Association, you will find charts of the International Phonetic Alphabet, many of whose symbols were used throughout this booklet.

http://www.languagehat.com. A feast for language lovers, consisting of essays, comments, and links to dozens of language-related Web sites, including linguablogs, language resources, and more.

http://www.languagelog.org. A composite of language-related essays; some funny, some serious, all thought-provoking.

