

Durrenberger E and Susan Erem
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Talking about the past, the future, other locations, and about "what-ifs" is unique to human languages. Photo by Suzan Erem. Used with permission of Voices of Central Pennsylvania.

CHAPTER 4

LANGUAGE

Language was one of the elements interacting in our evolution along with tools, bipedalism, premature birth, and long periods of infant dependency. It is one of the things that made us human and is now one of the things that sets us apart from other animals.

Other animals have systems of signaling. Bees communicate the distance and direction to sources of pollen by their body motions in the hive. They communicate about the state of the hive and the queen with chemical smells called *pheromones* to let each other know what they need to do about feeding larvae and making honey or wax for the hive. Our primate relatives have ways of signaling about food, dominance, submission, danger, and sexual state. Whether they work by body motions, noises, hand signals, or smell, these systems all have one thing in common: they can only communicate about what is going on right here and right now.

Human languages take us into different places and times. We can understand stories about places we have never been and times we can never experience. We don't just talk about the here and the now but about the past and future and the "what if." "What if we used the flakes for tools?" "What if we shaped the flakes and threw away the core?" The term for being able to talk about different times, places, and hypothetical situations is displacement. It's unique to human languages.

That means we can say new things. In this sense, human languages are open.

Bees communicate by dancing faster or slower in certain directions. Their system is analog—more or less speed or north or south. Our languages are digital—based on discrete units of sound and discrete units of meaning, not on the "more or less" analog principle. Linguists learn about languages by comparing different words and paying attention to the smallest differences that they can detect between sounds and between meanings.

works. Pay attention to the sounds, not the meanings.

- *bit/bite*
- *lit/light/lite*
- *bit/height*

Time out for a footnote. We are going to be talking about language here, and we're both Americans of one kind or another, so we're going to use our own language to illustrate those points. Our language is American. It is not English. If you don't believe American is a different language from English, ask a British person. Or, consult H. L. Mencken's 1919 book *The American Language*, which is still in print and explains the differences between American and English.

If we ask someone who speaks American about these pairs, she will tell us that each one is different. *Bit* means one thing, and *bite* means something else. It's the difference in sound that tells us about the difference in meaning. In these examples we're seeing the difference between what we call the "short *I*" sound and the "long *I*" sound, a difference in sound that signals a difference in meaning. Linguists explore all of these contrasts until they can map out all the differences of sound that make a difference in meaning. It's not as straightforward as it first seems. Let's look at some more examples.

If you hold your hand in front of your mouth and say these words, you can feel the differences, but you probably won't hear them. If you say *tip*, you feel a puff of air on your hand as you say the "t" sound and not much of anything after the "p" sound. If you say it backward, *pit*, what happens? Now you feel the puff of breath after the first "p" sound but not much after the last "t" sound. Linguists call that puff of breath **aspiration** and write it with an "h." So we don't confuse that sound with the "th" sound of *the* and *thing* (two different sounds, one spelling), we're going to make it a superscript *h*, so *t^h*. If we write the sounds that are really there, and not just the ones we hear, it would go like this:

t^hip

p^hit

"Th" and "t" are really two different sounds. So are "p" and "p^h." If they're so different, why don't we hear them as different? Well, a lot of people *do* hear them as different. The alphabets of Indian languages all have four different letters for these four different sounds. The reason that people who speak American don't hear the sounds as different is that we've learned

not to pay attention to a difference that's really there. We group the and the "t" sounds together and we lump the "p" with the "p^h."

The difference between "voiced" and "unvoiced" is another contrast that Americans use to distinguish different sounds. Think of the difference between these two words:

bit

pit

bit
pit

Now put a finger on your larynx or voice box and say *bit*. You'll feel slight vibration. That's the vibration of your vocal chords that linguists call **voicing**. When you say *pit*, you don't feel that vibration. Now *tip* and *d*. You'll see that you voice the *d* but not the *t*. That makes a big difference in American, and we use it all the time.

So, to speakers of American, this is a difference that makes a difference but the aspirated-unaspirated difference is not. We use these differences in sounds to communicate differences in meanings.

To make a language, we only need two sounds. Morse code only uses dots and dashes and can say anything. The problem with this is if we only have two sounds, we have to combine a lot of them together to make sure that each meaning is distinct. If we use more different sounds, we don't need so many to signal a difference. Linguists call each distinct sound a **phoneme**. Human languages use between thirteen and forty of them.

When linguists talk about all of the sounds that people can make, they are talking about **phonetics**. In the days before digital recorders, even before tape recorders, they developed the International Phonetic Alphabet (IPA) as a set of symbols for every possible human sound. In those days, to practice using the IPA, students would transcribe stories in some language they had never heard before just to be sure they were getting all of the sounds right. Later, they would figure out which sounds the unknown language grouped together and which ones were distinct. Then another student could read back the **phonetic** transcription to a different speaker of the same unknown language to see whether that person understood it. If the native speaker did not understand, then the transcription was not correct.

When the student worked out all of which sounds the native speaker heard as "the same" (like our American *t* and *t^h*) and which ones as "different" (like our *d* and *t* or *b* and *p*), it was called a **phonemic** analysis. From this, anthropologists took the ideas of **emic** and **etic**. **Emic** means the differences that make a difference inside the culture; **etic** means all the differences that anyone outside the system can see. **Emic** and **etic** are matters of reference. Any system that you use all the time and that you're used to seems natural to you.

This is one of those questions of getting into someone else's reference point. Later on we're going to show you how this emic-etic distinction helps us understand the different ways people deal with things like which relatives they can marry and have sex with and which ones they better not even think about that way.

We've been talking about sounds and how they form into systems of differences to communicate differences of meaning. Language has two different levels—sound and meaning, each with its own system. We call this **duality of patterning**, and it is unique to human languages.

Just as phonemes are smallest units of sound, so the smallest units of meaning are morphemes. *Morph* means "form," as in sexual dimorphism or polymorphic. Morphology, for instance, means the study of forms. Think about prefixes and suffixes in American for an example.

write	writer	writing	writes
speak	speaker	speaking	speaks
sing	singer	singing	sings
lead	leader	leading	leads
hit	hitter	hitting	hits
kick	kicker	kicking	kicks

We see that there's a verb that we can change into different meanings by adding suffixes—*-er* means "one who"; *-ing* means "in the process of doing it"; *-s* means "it's happening now." Linguists analyze languages into their morphemes like a verb plus *er*, *-ing*, or *-s*. In American, each verb is a separate morpheme. So we have morphemes: *write*, *speak*, *sing*, *lead*, *hit*, *kick*. We can use these to make adverbs, as in "She spoke singingly." And so on.

Some languages make verbs out of nouns. Americans do that a little bit, but it's usually really annoying, as in making the verb *surveil* out of the noun *surveillance*, which comes from the verb *survey*. Turkish uses a bunch of suffixes stacked onto the ends of verbs to indicate who is doing what to whom, when, and how many of each.

The last thing about human languages that makes them different is that they are arbitrary learned, and traditional. There is no necessary relationship between a thing and the word for it; there is no necessary reason to use aspiration or voicing as a way of making a difference between consonants. These systems are arbitrary. That means since they aren't coded into nature or our genes, we have to learn them. Learning our languages is part of that long maturation period when our nervous systems are linking up and making connections and pathways based, in part, on our early experiences.

When we're children, what we hear is a lot of noise, but we notice that somehow it seems meaningful to the giants around us. That doesn't come from experience so much as from our genetically wired-in ability to make theories about experience. The first thing we figure out is that the noise is significant. Then we have to make theories about just what is significant in what way. Because kids do this in regular stages about the same way at the same ages, we think that it is connected with the maturation of the brain and nervous system.

For instance, kids notice the difference between *talk* and *talked*. They see the same difference in *walk* and *walked*. And in *smile* and *smiled* and in *help* and *helped*, and many more examples. So they figure maybe the *-ed* part is a morpheme about something in the past. So they experiment with constructions like *go-goes*; *buy-buys*; *hold-holds*; *have-has*. These are reasonable applications of the same principle ... at least the way the kids look at it. The giants can tell the kids until they're blue in the face that "It's *went*, not *goed*," but the kids won't get it until their brains are ready to try out a new theory with something that weird in it.

Kids develop a more and more complex theory of the relationships between sounds and meanings as their brains develop and as they experiment with more and more examples. Linguists call the theory of a language that a grown-up speaker of the language has a grammar. A grammar specifies the relationships between sound and meaning in a language. It determines how we can combine morphemes to make words. For us to be able to use a grammar and agree on it, a grammar has to be finite in size. If it were infinitely large, we could each use a different part of it, and we couldn't understand each other at all—there would be no system. And it uses the same rules over and over, like the rules for combining morphemes.

But this finite set of rules can describe all possible sentences in the language. There may be new sentences that nobody has ever heard before, but people can understand new sentences because they fall within the rules of the grammar. And there are a potentially infinite number of new sentences in any language. So finite rules describe infinite sentences. Here's a simple example from arithmetic: Imagine a rule that says "Add 1." That's a simple rule that can describe an infinitely large number of numbers. Start anywhere you want, and add 1. And again. And so on.

We've already looked at systems of sound and seen that when there is a contrast between two sounds that people hear, it's a difference that makes a difference, a *phonemic* difference. When there is no such contrast, it's the *same* phoneme, as in our aspiration examples when we showed you that, to Americans, the *t*^h in *tip* is the same sound as the *t* in *pit*. There are also systematic relationships among meanings—for instance, among

with, and the thing she does it to.

Sally—the one who does something

Sally threw—the thing she does

Sally threw the ball—the thing she does it with

Sally threw the ball to Bill—the thing she does it to.

These are, roughly, the subject of a sentence or actor; the action or verb; the thing she does it with or direct object; and the thing she does it to or indirect object. In American, most nouns are the same no matter what their function in the sentence is. We could say, "Bill threw the ball to Sally," or "Sally threw Bill to the ball" if she's practicing karate on the beach, for instance. But in Icelandic, people have to indicate the role of the noun with a specific ending or suffix. So there's one ending for actors, another for indirect objects, and a third for direct objects. In American, we know the role of the word by where it comes in the sentence. In Icelandic, you know the role of the word by the ending on it.

In American, we could put *ball* first and say, "The ball was thrown to Bill." Did you ever notice that bureaucrats do that a lot? The reason is that they don't have to say *who* did it, and these folks are aces at avoiding responsibility. So they say mealymouthed things like "The decision was made," "The policy was adopted," and "The deed was done."

The American language lets them side-step responsibility as slickly as karate Sally side-stepping Bill's charge at her after she threw him to the ball on the beach. We use exactly the same logical relationships to ask questions just by putting in a question word. In American, we do this by raising the intonation at the end of the sentence. Listen to your voice when you ask this as a question: "Sally threw the ball to Bill?" In Chinese and Turkish, they add a question word to the end of the sentence. In printed Spanish, you get the hint first because the question mark appears upside down in front of the question. It comes to the same thing.

All of these sentences have different word orders, but they are built on the same logical relationships. Linguists call the logical relationships **deep structure**. They call the particular word order **surface structure**. Both of these together, the two parts of a grammar that determine the way words fit together into sentences, linguists call **syntax**.

Now, let's go back to the beginning—we're trying to understand how human languages make the connections between sounds and meanings. Language is digital, a phonological system specifies all relationships among any sounds we can hear—phonemes. In the same way, meaning comes in discrete digital segments. A semantic system specifies all

possible relationships among these units of meaning. We hear sounds and somehow connect them to meanings. Linguists say that a **semantic system** specifies all the possible relationships among meanings just as a **phonological system** specifies the relationships among sounds.

The grammar is the system of matching up sounds and meanings. So it includes all of these components in a system as shown in figure 4.1.

Linguists borrow the idea of "mapping" from mathematics. In our example of odd and even numbers, we can say that the rule "add 1" maps all the odd numbers onto all the even ones. All that means is that if you take any odd number and add one, you get the even number that goes next. It sounds a little simple-minded, but so is all mathematics. It's all a matter of stating the obvious. The question is "Obvious to who?" (Or is it "whom"?)

In this model of language, a grammar is several systems working together. A phonological system maps sounds onto surface structures. Here come some sounds, "yackety yack." The phonological system maps those onto surface structures. "Sally threw the ball." A syntactic system maps surface structures onto deep structures. "Sally is the one doing; what she's doing is throwing; what she's throwing is a ball." A semantic system maps deep structures onto meanings. "Who is Sally, and what is a ball, and who cares if she's throwing it?"

All of this knowledge is unconscious, so we can't just ask people, "Please tell us your grammar." They can't bring all of these details to consciousness without a lot of practice with the kinds of analysis we've been discussing—figuring out all of the sounds and how they contrast with each other, all of the morphemes, all of the meanings and how they form a system, the logic of sentences, and all of the arrangements of words. If they do that, then they're linguists.

Even if we find a person who is a linguist and can tell us the grammar of the language, it wouldn't be of much use to us because it wouldn't

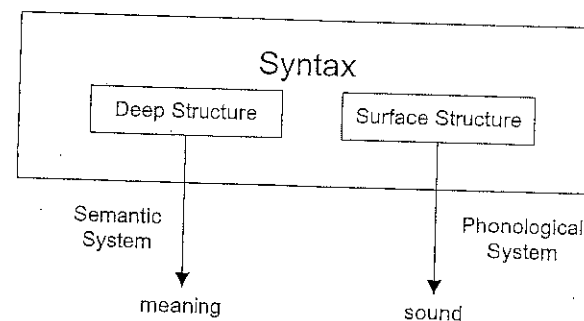


Figure 4-1 How sounds get connected to meanings and meanings to sounds.

help us learn the language. Learning a language is different from learning *about* a language. The only way to learn how to ride a bicycle is by riding one. Nobody can explain it to you. It's the same with language. To learn a language, we have to do what kids do, build an unconscious theory of the language by hearing a lot of examples and letting our brains develop a theory of how they all work together.

Linguists work out the details of different languages and describe the details of just how the grammar maps sounds onto meanings so we can, at the same time, understand what other people say and say what we are thinking—work the system from both directions.

If we compare the grammars of all languages to see what they all have in common, we can talk about the grammar of all human languages, or **universal grammar**. Linguists have concluded that all languages have similar deep structures, but they can have quite different surface structures. We are born with the capacity to construct a grammar of any particular language because the universal grammar, the capacity for language, any language, is built into us by our evolutionary history. What children learn is the details of their particular languages. This view of language is one that was proposed by Noam Chomsky in the 1960s and that he and others have developed since then.

Sociocultural anthropologists consider language to be one dimension of culture. Like language, other dimensions of our cultures are largely unconscious patterns that we learn in much the same way we learn language—by our brains working out theories of the regularities we experience while our nervous systems are developing when we are kids.

So far, we've talked about what language is, how it's different from other systems of communication, its role in the evolution of our species, and how it works. Most anthropologists are willing to let linguists answer the questions that are just about language. But that's only half the story. The other half of the story is what we do with language. We've already hinted at some of that when we said we were writing in American and not English.

Some people say that lots of people on our planet speak English these days. If you've ever talked to an Australian, you probably got lost somewhere after the first "g'day." If the sounds didn't get you, the different use of words may have. They started with some version of English and adapted it to their situations and needs. They made it up as they went along. Just as Americans did. If we wrote our languages as they sound, we'd be in trouble. There'd be several languages just in the British Islands and a bunch more in the United States, and Australian would be its own language, too.

Chinese use characters instead of an alphabet to write their language. So spelling isn't an issue. They don't pretend that the characters have

much to do with sound. You have to learn a different character for each word. So it doesn't matter what it sounds like. That's the reason that no matter what dialect of Chinese you speak, you can get along with other people who can write some kind of Chinese. The writing unifies diverse dialects. Japanese imported the Chinese characters, and even Japanese speakers can get along to some extent with Chinese speakers by "drawing" the characters with a finger on the palm of the other hand.

English does pretty much the same by not insisting on a tight connection between sounds and spellings. Kids learn the languages they hear. If they hear one language at home and another at school, they'll learn both. One will be the home language; the other will be the school language. Anthropologists who have kids with them in the field are often amazed that the kids learn the language of the folks they are with faster than the grown-ups. One of the things the kids are learning in addition to all the stuff about sounds and meanings that we discussed earlier is the rules about when to use which language. This is like Paul knowing when to drop into Texan and when to try to speak American.

Sometimes language differences are stigmatized. If you're speaking Texan in the Northeast, people are likely to think that you're an ignorant hick. And if you're trying to speak New Yorkese in Texas, people may not think too well of you, either. So, along with grammar, kids learn when to use what languages.

Some people think that English should be the only language that we allow in the United States. There may be a few Americans who can manage English, but mostly they want American to be standard and to outlaw any other languages, such as Spanish, Navajo, or any dialects of Athabaskan, Polish, Italian, Yiddish, and other languages from schools, and to ensure that everyone speaks American. They are the ones who don't want multilingual education in schools. They say that kids who speak Lao or Vietnamese or Spanish or Polish should just be forced to speak English for their own good.

There's a destructive and malicious form of unlogic that says whatever you are whining about is your own fault. One label for this is **blaming the victim**. A woman wears a short dress, has a drink in a bar, and walks home alone. A man rapes the woman. It's her fault. A National Guardsman gets killed in Iraq. It's his fault? Well, he was there. He was dressed for it. He was in the wrong place at the wrong time wearing the wrong clothes and looking the wrong way. It's his fault.

It doesn't make sense in either example. Nor does it when it's applied to kids in schools. Another label for this is **deficit theory**. That's the idea that if some group of kids doesn't do well in school, there's something wrong with *the kids in that group*. There's some deficit. They may be

relatives, and he doesn't understand why that should be an issue since she just said it was a problem.

The difference is that the woman just wanted to talk about it, but the guy wanted to fix it. That goes back to those gender roles we discussed earlier. Those are culturally defined, and one of the ways people act them out is in how they talk to each other, even if it sometimes doesn't work very well. Goldschmidt (2006:143) says, "Anyone who thinks that language is a useful way to communicate feelings has never had a lovers' quarrel or been to a faculty meeting."

These are some of the things that anthropological linguists work on—language and ethnicity, education, nations and nationalism, and gender. They study how people use their languages to live out their cultures. Another place for the study of language is in understanding how people think.

Discussion Questions

- Write a story about your first memory of language. When you're done, pull out the details that explain how your experience with language was arbitrary, learned, and/or traditional.
- How does our capacity to learn and use language make us different from bees, ants, or dogs?
- A number of scientists have performed experiments to prove that dolphins and chimps have the capacity for language. Look up some of that research and argue the case for or against that work.
- If you're learning a second language or have a native speaker of a language other than American in your class, write a sentence in that language and translate it directly in English underneath. Discuss the order of the words and how they translate. Why doesn't this method work very well as translation? What do you need to do to make it a better translation?

Suggested Reading

- Lindquist, Julie. *A Place to Stand: Politics and Persuasion in a Working-Class Bar*. New York: Oxford University Press, 2002.
- Tannen, Deborah. *Linguistics, Language and the Real World: Discourse and Beyond*. Washington, DC: Georgetown University Press, 2003.
- . *Talking from 9 to 5: How Women's and Men's Conversational Styles Affect Who Gets Heard, Who Gets Credit, and What Gets Done at Work*. New York: Oxford University Press, 1993.

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- . *You Just Don't Understand: Women and Men in Conversation*. New York: Ballantine, 1991.
- . *You're Wearing That? Understanding Mothers and Daughters in Conversation*. New York: Random House, 2006.