# 1.1: What We Study

A science takes phenomena of one kind or another as its subject matter and attempts to describe and explain them objectively. Scientists gather particular kinds of data, analyze them, and create theories that account for the data. Here are some sciences and informal descriptions of the phenomena they are concerned with.

| Science | Subject matter |
|---|---|
| chemistry | how substances combine to form other substances |
| psychology | how individuals behave |
| sociology | how people behave in groups |
| cultural anthropology | how human cultures resemble and differ from each other |
| linguistics | how language works |

How would linguists and other language scientists go about objectively describing and explaining **how language works**? What kind of data would they examine? How would they analyze the data? What would it mean to "account for" the data with a theory? We will look at these questions in this section.

## Social Science and Objectivity

> **Exercise 1.1.1**
>
> You're a female American anthropologist specializing in the study of family structure and the roles that different family members play. You're studying a remote ethnic group, and you discover that the people believe that baby girls need to be brought up more harshly than boys to prepare them for a harsh life and that fathers have no particular role to play in the bringing up of their children. How might it be difficult for you to be objective in your study of these beliefs and behaviors?

Of the sciences listed in the table above, all but chemistry are concerned with *human* behavior. For all of these sciences, the work of the scientist is complicated by the attitudes that we have toward the behavior; that is, it may be difficult to be objective in our study. It is probably cultural anthropologists who face this difficulty most often. The anthropologist described in the box above, having grown up among highly educated people in modern US society, almost certainly believes that boys and girls should be treated equally and that fathers should play an important role in the raising of their children. But she must somehow put these beliefs aside in her work. Instead of labeling the people's practices as "wrong", she must attempt to see how they fit in with the other practices in the society, whether she notices consistent patterns in their behavior. If she is to make any value judgments about the behaviors, they should be based on whether the behaviors contribute to the stability of the society, not on her own feelings about them. Her job is to describe and explain the society, not to judge it.

As another example, consider the case of another anthropologist specializing in the scientific study of religious beliefs and practices. To do this objectively, he has to put aside whatever beliefs he himself has on questions such as the existence of God and life after death. There is no way he can pretend not to have such beliefs; he just has to try to keep them from getting in the way. Note that this is not a problem for chemists; in their work they don't have to worry about their prior attitudes toward particular chemical reactions.

When we attempt to study human phenomena such as religion or family roles or language scientifically, we do not deny the inevitability or even the value of our attitudes toward the phenomena. It's just that *evaluating* the phenomena and trying to convince people to behave or believe in a particular way is not the business of scientists (at least not the main business); it's somebody else's. A priest or minister has a very different purpose from an anthropologist specializing in the study of religion (although the priest or minister can probably benefit from the insights of anthropologists who study religion). A family counselor who advises a husband to allow his wife more freedom is not doing science (although the counselor can probably benefit from the insights of anthropologists who study the family).

It is important to come to grips with some of our preconceptions about language before we begin to approach language as the object of scientific study. The next section is about some of those preconceptions and where they come from.

## Attitudes Toward the Speech of Others

> ### Exercise 1.1.2
>
> You overhear the following conversation.
>
> 1. A: *Did you hear those two girls talking? "He don't mean nothin'." "I seen it." "Me and him fought." Can't they learn to speak English?*
>    B: *I know what you mean. They're just lazy, if you ask me.*
>
> What do you think of comments like this? Do speakers from some regions or speakers belonging to some social or ethnic groups tend to be lazier than others in their speech?

As you certainly know, people are quite conscious of how they differ from people from other regions, social groups, or ethnic groups. They notice differences in dress, in food, in patterns of social interaction, in which qualities are valued or attract attention. And it is natural to evaluate these features of other groups, to think of their dress as fashionable or weird, to think of their food as tasteless or gross, to think of their social behaviors as friendly or offensive. The same is true for language. People hear speech that differs from their own and they may find it sloppy, elegant, or monotonous. These impressions may also be associated with the languages of particular groups rather than (or in addition to) the people themselves: we may find a certain language more expressive, more logical, even more masculine. What's the source of these impressions? Are they accurate?

## Differences Between Languages

Undeniably communities of people do tend to differ. To take an obvious example, food preparation is more important in some cultures than others; some cultures are famous the world over for their cuisine. For language, the differences are again obvious to anyone. It's not just that languages sound different. Some languages make distinctions — in sounds, in words, in grammar — that others don't; in fact most of this book is about just this topic. And people learning a second language often have trouble making the distinctions that aren't part of their first language. What we naturally notice, as speakers of a particular language, is what is "missing" in other languages and what kinds of mistakes second-language learners make in trying to speak our language. This may lead us, consciously or unconsciously, to think there is something deficient about the other language or even about the speakers of the other language. It is very difficult for us to see it from the other perspective, to see that we also fail to make distinctions that matter in the other language and have trouble making them when we try to learn that language.

For example, as speakers of English, we may be surprised to find that Japanese has no words corresponding to English *a* and *the*, words that are so basic to English we may almost take them for granted. And we may be struck by the errors that Japanese learners of English make in trying to master these words. Similarly, we are struck by the confusions Japanese learners may have in pronouncing English words with the sounds that we write with *l* and *r*, a distinction not made in Japanese. But these same Japanese speakers may be surprised when they first learn that English has only one word for 'you' (Japanese has at least six possibilities) and struck by the tendency of English-speaking learners of Japanese to always use the same word for 'you'. And they are similarly struck by the difficulty English-speaking learners of Japanese have with distinctions in vowel length and pitch change, distinctions that don't exist in English.

In fact there is no evidence that people in some cultures speak in sloppier or more elegant or more monotonous ways than people in other cultures. And while languages do differ in striking ways, these different features seem to balance each other out. As far as we know, all languages are equally expressive, equally logical. If you're not already convinced of this, I hope you will be after you have read this book.

But the example in the box above doesn't concern two different languages; it concerns a single language, English, and its speakers. The fact is that there is also considerable variation within English (or any other major language); that is, English has dialects. I'll have a lot more to say about dialects in the section on dialects and languages. For now, the main point to be made is that what linguists have learned about the essential equality of languages applies to dialects as well. Though it is often even harder for people to accept this fact for dialects than for languages, as far as anyone knows, there is nothing inherently inferior or superior about any dialect of any language.

### Linguistic Chauvinism and Intolerance

So if impressions like those of the speakers in the box above have no basis in fact, where do they come from? There are three possibilities. First, these people may have been told by an authority, for example, an English teacher, that certain usages are just plain wrong. Clearly, the reasoning would go, anyone who knows this should not be using those forms. We'll return to this issue in the next section. The fact is that what is "wrong" is all relative. The girls quoted in the conversation in the box would almost certainly find it wrong to say *it doesn't mean anything* when speaking to each other. If they wrote *it don't mean nothin'* in a school essay, on the other hand, that would be another matter (though it would still not be reason to call them lazy; it would just be evidence that they had not learned the rules of the variety of English that is appropriate in school). Second, these people may have a stereotype concerning the group in question, and they may be transferring that stereotype to the speech of that group. Third, what they hear differs from the English they speak, and people may be quite intolerant when it comes to speech. Especially if they belong (or believe they belong) to a political, economic, or intellectual elite, their view may be something like the following: "the way I speak the language is the right way; any other way is wrong".

Whatever the reason for the impressions of A and B in the box, a linguist would respond to them by saying that the two girls were simply speaking a different dialect of English, a dialect with its own grammar differing from the grammar of the dialect of A and B.

## Describing and Explaining Language

You're a linguist who wants to study the English spoken in the Caribbean island nation of Grenada. How do you go about this? What sort of data do you gather?

### Data for Research on Language

Linguists and other language scientists, unlike A and B in the box in the last section, are interested in what people do, not what somebody thinks they should do. The English of the girls overheard by A and B is just as legitimate an object of study as the speech of any other group. To carry on their study, clearly researchers need to gather examples of language. There are two sorts of ways to get these.

- By collecting naturally occurring language, either written texts or spoken language.

  Linguists usually study spoken (or signed) language because it is more basic than written language. Most of the human languages that have existed have not been written at all, and among those that are written, many people do not read or write them. In addition, though language learning continues throughout life, most of the basic patterns of a language are probably mastered by the time a child is six years old. So the written form of the language has little or nothing to do with this fundamental early learning of language.

- By eliciting language by asking people particular questions or by doing experiments that call for language.

Linguists use both kinds of data. For example, once you'd arrived in Grenada, you might get permission to record phone conversations, then transcribe the conversations, perhaps using a special notation that shows the speakers' pronunciation. Or you might recruit one or more willing speakers to help you in your study by translating words or sentences from your English into theirs or by telling you whether certain sentences are possible in their English.

### Experiments on Language

Rather than using words and sentences produced by speakers (or writers), linguists and (even more often) other language scientists sometimes gather other kinds of data. For example, they might record the acoustic properties of speech or the movements of the tongue, lips, and jaw during speech. Or they might present people with words, sentences, pictures, or movies (the stimulus) and see how they respond or how long it takes them to respond to them. The responses in experiments like these could involve

- saying something, for example, the first word that comes to mind or a sentence that describes a visual stimulus.
- pressing a button, for example, to make a choice concerning the stimulus.

Given some data, a linguist or other language scientist has to do something with it. Much of this book will be concerned with what they might do, so what follows will be just an introduction to this topic. For every kind of research on language, there are two things to be considered: what aspect of language is being studied and what the research is supposed to accomplish (and how it does this). We'll start with the first and look at the second in the next section.

## The Content of Research on Language

Language, even a particular individual language, is far too complex a subject to be studied in its entirety by any one researcher. As already mentioned in the overview of the book, there is a higher-level distinction we can make concerning what research is supposed to be about, between the study of *language as system* and the study of *language behavior*. In either of these two cases, the language scientist is normally studying only some aspect of the phenomenon, one or more of four sorts of things about a language (or dialect): its sounds, its words, its grammar, and its use in context. A researcher interested in the sounds of the language (or dialect) might try to figure out what the basic sounds of the language are, how they combine to form words, or how speakers produce the sounds. Many researchers in this area believe that it is possible to study the sounds of a language more or less independently from the other aspects of the language.

A second area of research is the words of a language, usually thought of as organized in some sort of abstract dictionary, referred to as the **lexicon**. A researcher interested in words might study how speakers find words when they are formulating sentences or how abstract meanings build on simpler meanings (how is *over* in *get over a problem* related to *over* in *jump over the puddle*?).

Another possible kind of research would try to characterize what counts as a possible sentence in the language, that is, what's **grammatical** in the language. It is not as easy as it might seem to define this concept. We must be careful to avoid any bias on the speaker's part based on what they have heard from teachers of their language in school because what we care about is what people actually say, not what someone tells them they should say.

But we also cannot just treat any sentence that occurs as grammatical because people make **speech errors**. By "errors", we do not mean that they break rules that apply to dialects other than theirs (for example, by saying *ain't* or *he don't*). Instead we mean slips of the tongue, false starts, and hesitations. For example, the following example includes several speech errors.

   2. *Well, I think you ... I mean, the ... the ... um, this isn't coming out right at all.*

People produce such "sentences" all the time, but they clearly also know that there is something wrong with them. That is, linguists probably do not want their descriptions of a language to include such sequences. So grammatical sentences are possible sentences that do not contain speech errors.

This is not to say that there is nothing interesting about speech errors. In fact, like human errors more generally, they can give us lots of insights about the underlying mechanisms. There is a whole community of researchers that take speech errors of one kind or another as the data they try to explain.

## Degrees of Grammaticality

But there is another complexity; grammaticality doesn't seem to be an all-or-none matter. That is, while some forms may be completely acceptable to all of the speakers of a given dialect all of the time and other forms may be completely unacceptable to all of the speakers all of the time, there may also be intermediate cases that are not so clear. For example, some English speakers use *a chalk* for a stick (or piece) of chalk; others would be less comfortable with this (though they would not find it as unacceptable as, say, *a clay* for a lump of clay). There may even be variation within a single speaker. For example, an English speaker may say *for my wife and me* on some occasions and *for my wife and I* on others.

Returning to the examples ridiculed by A and B in the box above, we see that by the definition of grammaticality that linguists work with, such sentences as this one may be perfectly grammatical for the girl who said it.

   3. *He don't mean nothin'.*

A complete description of the grammar of these girls (and the community of speakers that they belong to) would have to specify just what counts as a grammatical sentence (for example, sentence 3) and what doesn't (for example, *he don't nothin' mean* or *he don't meant nothin'*), possibly singling out areas of grammar where there is disagreement and variation among the speakers. This description would obviously have to say something about word order and about which forms can go with which other forms (*meant* is a perfectly good word in their dialect, but not following *don't*).

But some linguists are not satisfied with just describing the grammatical sentences because this says nothing about what those sentences are for. Instead these linguists are concerned with describing how meanings and functions of language relate to words and grammatical sentences (for more on this idea, see this section). So an account that includes sentence 3 above as a grammatical sentence (for some English speakers) doesn't help us understand how this sentence conveys information about some person familiar to the hearer (*he*) and about the speaker's belief about that person's intentions. This book follows this second position on what we should be describing, that is, that we should be saying how language accomplishes things for speakers and hearers.

Finally, those same linguists who are interested in how sentences convey meaning may also be interested in describing a fourth sort of aspect of the language, a sort of "correctness" that is different from grammaticality. A sentence can be grammatical and meaningful — that is, the words and grammatical patterns in the sentence can sound right and correctly describe some possible situation in the world — but the sentence can still be inappropriate. Consider the following sentence.

4. *There is no life on the moon.*

This sentence makes perfect sense and describes a true state of affairs. But if you walked up to a stranger on the street and said it, they'd think you were crazy. It would not be an appropriate way to begin (or end, for that matter) a conversation with a stranger. Just as speakers of a language have knowledge about what is grammatical in their language, they also have knowledge about what is **appropriate**.

## Learners' Errors

Of course not everyone who uses a language or dialect (see this section for the difference between dialects and languages) knows how to do so grammatically and appropriately in all situations. In particular, language learners have only imperfect knowledge of the language or dialect they are learning, and they can be expected to make errors. Children learning English as a first language may say "doos" for *juice* or *me up* when they want to be picked up. Teenaged speakers of English as a first language may still commit errors of appropriateness, using informal expressions such as *bigtime* in formal contexts. And adults learning English as a second language may say "diss" or "dees" for *this* or *I make the homework* for *I am doing the homework*. We consider these to be errors, but there are only errors from the perspective of the system defined by the behavior of the adult native speakers of the language or dialect that is being learned. Such examples can also be seen relative to the learner's own linguistic system, which has its own pronunciation, vocabulary, grammar, and patterns of usage. Researchers studying second-language learning often find it useful to treat the learner's knowledge of the second language as a sort of language in its own right, what they call "interlanguage".

This section has looked at the kinds of topics that interest linguists and other language scientists and the kinds of data that they might look for to help them in their research. But we haven't thought much about what the outcome of the research is. What would it mean to describe or explain language? We'll look at these aspects of research on language in the next section.

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