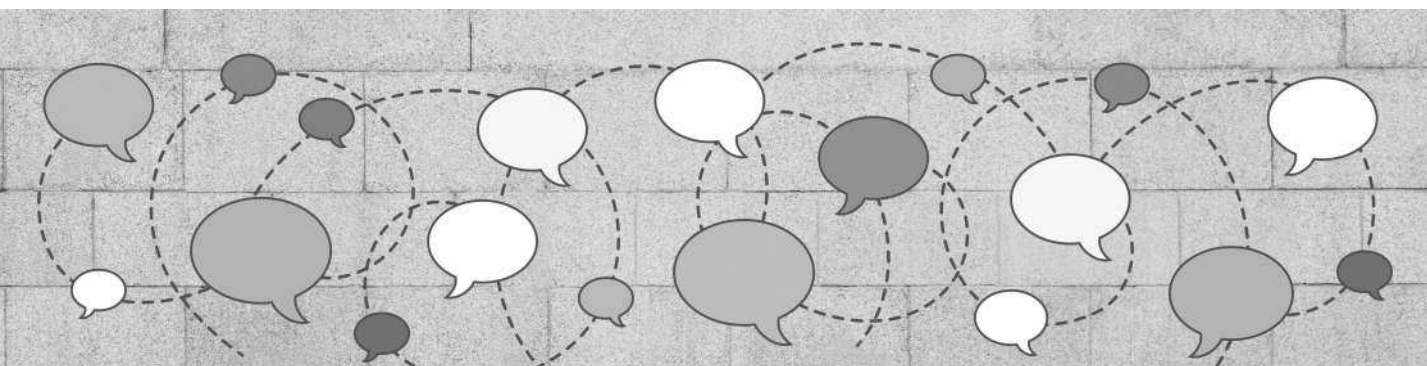




## PART 1

# INTRODUCTION



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# 1 Introducing Linguistics

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## OVERVIEW

In this chapter, you will develop a better understanding of the field of linguistics. Our objectives are to:

- examine how to approach linguistics as a scientific process of inquiry;
- contrast language and other forms of communication;
- compare the notion of *prescriptive grammar* to *descriptive grammar*;
- develop a general idea of the roots of modern linguistics; and
- explore some of the different approaches to the science of linguistics.

## 1.1 What Is Linguistics?

**Linguistics** is the scientific study of language. Although linguists agree on this definition, not all of them agree on what the objectives of linguistics should be.

### 1.1.1 Linguistics and Science

What do we mean when we say linguistics is *the scientific study of language*? Let us first examine the definition for **science** found in the Oxford English Dictionary Online:

The intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment. (<https://en.oxforddictionaries.com/definition/science>).

From this definition, we can extract the following points that are relevant to the science of linguistics:

- Science is an activity. As with all other sciences, linguistics is something we do, it is a process of inquiry. It is the pursuit of knowledge, not a body of truths that must be accepted. The aim of linguistics is not only to describe language, but also to explain why it is as it is.

- Science uses a systematic approach to each field (the study of language, in our case). Linguistics is systematic in the types of methodology it uses, examining data, examining the existing body of knowledge, forming hypotheses (conjectures about possible answers, proposed explanations), testing the hypotheses (evaluating the evidence), constructing theories, and making predictions.
- Science may involve the study of structure and behavior. You will read about both of these aspects of linguistics in this textbook. On the one hand, we discuss the structure and meaning of sounds, words, and sentences in language, and on the other hand, we look at how language is used to communicate and how it is processed. The aim is to explain structure and behavior through general principles.
- Science focuses on the physical and natural world. In our case, language is a physical activity that involves actions by several parts of the body, depending on the type of linguistic expression. For example, sign language (see 1.1.9 below) relies heavily on movement of the hands and arms in relation to the body and on movement of face muscles. Oral communication involves the breathing apparatus, the larynx, the mouth, etc. Writing involves the hands, fingers, and arms. In all cases, the activity of the body is generated and controlled by the brain. Language is essentially a form of knowledge in the mind/brain which constitutes part of the natural world and that is used for social purposes.
- Science uses experimentation and observation. This is an important point because in order to understand how language works, we must rely on data. Data may often be imperfect, so we must construct experiments that are appropriate for explaining the data. Although this is quite easy to discern in the case of language acquisition studies or psycholinguistics, experimentation is also common in areas such as syntax, in which we construct both acceptable and unacceptable sentences with the objective of understanding the underlying principles.

PAUSE AND REFLECT 1.1

Consider the following two linguistic hypotheses and the evidence provided for each. Focusing on what you have learned about linguistics as a science, is the evidence in each case sufficient to support the hypotheses? Why or why not?

- i. Hypothesis: Ancient Nahuatl (Aztec, a language spoken in Mexico) and Ancient Greek are related languages.
- Evidence: In both Nahuatl and Ancient Greek, the word for god is quite similar: *teo* in Nahuatl (as in the ancient city of *Teotihuacan* near Mexico City) and *theos* in Greek.

- ii. Hypothesis: All of the following languages are related: the Germanic languages (English, German, Danish, Dutch, etc.), Latin and languages derived from it (Spanish, French, Portuguese, etc.), Greek, Persian, and Sanskrit (see Chapter 7 The Classification of Languages and Chapter 8 Historical Linguistics).
- Evidence: for hundreds of words, and with no exceptions, there are correlations between how words are pronounced in one set of languages and how they are pronounced in another set. For example, the sound /p/ is systematically pronounced as /f/ in the corresponding words of Germanic origin, as shown in the following examples, which all mean *foot*:

PAUSE AND REFLECT 1.1 (cont.)

English: <i>foot</i>	Latin: <i>pes</i>
Dutch: <i>voet</i> (pronounced foet)	Spanish: <i>pie</i>
German: <i>Fuss</i>	French: <i>pi�d</i>
Danish: <i>fod</i>	Greek: <i>����</i> (pronounced pus)
Norwegian: <i>fot</i>	Sanskrit: <i>pada</i>

1.1.2 Linguistics and Language

Although we have explained what we mean by *a scientific study*, we have not explained what **language** is. When asked, most of us would define language as the form of **communication** used by humans. We define communication as the transfer of information from a sender to a receiver.

Strangely enough, linguists do not agree that language and communication are at all equivalent. This is because we now understand that there is a system of knowledge underlying our use of language. Although how we use language to communicate is of the utmost importance, we must also consider the knowledge that allows us to do so. Many of the chapters in this book aim at describing the fundamental linguistic knowledge that we need in order to communicate. We will have more to say about this knowledge below.

However, no linguist would argue that communication is not crucial to the study of language. How we interact with others, how language is used in social groups and communities, how it allows us to express our innermost feelings and ideas, are fundamental areas of study in linguistics (see Chapter 9 Sociolinguistics).

We must also distinguish between *language* and *a language*. English is a language, as are Portuguese, Mohawk, Navajo, Cree, and sign language. Languages vary from each other in their structure and how they are used. However, many linguists go beyond the study of individual languages to examine how language works in the mind and what properties can be considered universal. For example, in all languages, meaning depends on how words are organized in sentences. All languages also include some form of negation and ways of indicating that an utterance is a question, among other properties. If you are interested in the evolution of language, read ‘Delving Deeper’ in Chapter 1’s resources on the website to accompany this book at [www.cambridge.org/introducing-linguistics](http://www.cambridge.org/introducing-linguistics).

In short, for many linguists, though certainly not all, an important objective in linguistics is to understand knowledge of language, although very often the only way to do so is to examine how a particular language is used. Linguistics makes a distinction between **competence** and **performance**. Competence refers to our unconscious



**LINGUISTICS TIDBITS: WHAT IS A LANGUAGE?**

Most of us agree that English is a language. However, as you will read in Chapter 9 Sociolinguistics and Chapter 18 English varieties outside of North America, the dialect or variety of English that you speak is different from the ones that others speak, although none is superior. In some languages, varieties may be so different that communication becomes difficult, as in Mandarin and Cantonese. In other cases, people that consider they speak different languages can communicate quite easily, as is the case with Galician (spoken in Northwest Spain) and Portuguese, or Norwegian and Swedish. In other words, the definition of a *language* is often a question of politics and power more than a linguistic question. For this reason, it is often said that *a language is a dialect with an army and a navy*.

knowledge of language and performance describes how we use language. For example, imagine that someone loses the ability to produce sounds. We would not say the person’s knowledge of language had been affected, their competence would remain intact. However, their performance in speech production would be greatly affected.

1.1.3 Language: A Grammar and a Lexicon

We have said that the linguistic knowledge that constitutes competence is unconscious. By this we mean that we can’t necessarily explain how we build sentences, we just know how to do it, because the rules to do so are in an inaccessible part of our minds (Jackendoff, 2002; Paradis, 2009; Ullman, 2001). In its simplest form, language knowledge consists of the mental representation of a grammar and a lexicon, or our mental dictionary. We will explain these terms below, noting that each of them has a somewhat different definition in linguistics than in our everyday usage.

1.1.4 Prescriptive Grammar

In everyday usage, the term *grammar* refers to what we learned early on in school. You may also think of grammar as something that refers to the rules of how we should speak and write. In many cases this advice is useful, for example in a job interview or when writing an essay. However, we often break many of these supposed grammar rules because they rely on someone’s opinion about how we ought to speak, rather than on how language really works. Because these rules are often arbitrary, they may lead to confusion.

We use the term prescriptive grammar to refer to the set of rules that tells us how we ought to speak.<sup>1</sup> The term prescriptive grammar is often contrasted to **descriptive grammar** which describes how we actually use language. Linguists will never tell you how you should speak, in the same way as a biologist will not tell a plant how to grow. They will, however, examine how you speak, and how your speech may differ from the speech of other people.

<sup>1</sup> See <https://www.theguardian.com/books/2014/aug/15/steven-pinker-10-grammar-rules-break> for an amusing look at some prescriptive rules by Steven Pinker.

EYES ON WORLD LANGUAGES: PRESCRIPTIVE GRAMMARS IN DIFFERENT CULTURES

Cultures have distinct views on the need for prescriptive grammars. In some countries, we find academies charged with maintaining a certain standard and often defending the purity of a language. For example, the *Accademia della Crusca* ‘Academy of the Bran’ that regulates the use of Italian was founded in Florence in 1583; *L’Académie Française* ‘The French Academy’ was established in 1635 in Paris; *La Real Academia de la Lengua* ‘The Royal Academy of the Language’ was founded in 1713 in Madrid; and *L’Office Québécois de la Langue Française* ‘The Québec Office of the French Language’ was founded in 1961 in Québec. Today, these institutions are all going strong, producing dictionaries and grammars that continue to be useful to specialists and the general public alike.

There is no equivalent of these academies for English. In fact, the first attempts at standardizing English spelling only took place in the mid-eighteenth century. English has always accepted foreign words without problem, although in the twentieth century, it has begun to be more of an exporter of words rather than an importer.

However, whether there are official entities in charge of language or not, most people have very strong feelings about the ‘correct’ way of using a language. People often criticize the speech of others living a few kilometers away. Let’s face it, most of us are language snobs.

1.1.5 The Term *Grammar* as Used by Linguists

Language can be analyzed at various levels. For example, the sound system constitutes one level and the way sentences are built constitutes another. Linguists use the term **grammar** to refer to our unconscious mental representation of language at all levels, including sounds (see Chapter 2 Phonetics, which looks at how linguistic sounds are produced and heard, and Chapter 3 Phonology, which looks at how languages organize the basic units of sound); words (see Chapter 4 Morphology, which looks at how words are formed); phrases and sentences (see Chapter 5 Syntax, which looks at organizing words into larger units); and meaning (see Chapter 6 Semantics, which studies the meaning of what we hear or produce).

PAUSE AND REFLECT 1.2

Determine if the following statements are examples of prescriptive grammar or whether they belong in a linguistics book.

- i. The verb *will* should be used with second and third persons only (*you will, he will*). With first person the correct form is *shall* (*I shall*).
- ii. In many dialects of the British Isles, the sound /h/ is not pronounced at the beginning of words.
- iii. Second language learners of English often leave off the /s/ of third person verbs: *he say; she come*.
- iv. In some regions of Canada, French speakers refer to a truck as *le truck* instead of the correct form, *le camion*. In France, speakers may use the term *weekend* instead of the correct form, *fin de semaine*.
- v. In many dialects of English the negation of the verb *to be* in the present is produced as *ain’t*.

1.1.6 The Lexicon

The **lexicon** includes all words that make up our vocabulary. However, besides what we all consider to be vocabulary items, the lexicon also includes grammatical information about words. For example, the lexicon includes information about the meaning of a word like *make* (that it can mean ‘to assemble or construct’) and information about the type of sentence the word may appear in (i.e., the sentence must include information about who is doing the making and what is being made). In other words, the lexicon tells us what type of verb *make* is. An example of the use of the word *make* is seen in (1).

- (1) a. Jorge made a pie.
- b. \*Jorge made.
- c. \*Made a pie.
- d. \*Made.

You will notice that examples (1b), (1c), and (1d) are preceded by an asterisk \*. You may have already seen or used the \* in this way when texting a friend. The \* indicates that these sentences are somehow wrong in English. (1b) sounds incomplete because it does not indicate what is made, (1c) sounds incomplete because it does not indicate who does the making, and (1d) sounds wrong because it does not include either. The information in the lexicon is what allows us to make these judgements.

Besides knowledge of a grammar and a lexicon, other types of information are also necessary to use language, including social factors (see Chapter 9 Sociolinguistics) and pragmatic factors (see Chapter 10 Pragmatics and Discourse Analysis). These additional elements also constitute knowledge of language, and in many cases, although not all, they fall beneath the level of consciousness too.

1.1.7 Language and Communication

If the foundation of language is a form of knowledge, where does that leave **communication**?

Nobody denies that we use language to communicate. The problem is that we can have communication without having knowledge of a grammar. Imagine you are driving along the highway and you see a sign like the one in Figure 1.1.



Figure 1.1 Moose road sign



Think about the information that Figure 1.1 conveys to drivers. It tells drivers that they are going through an area where moose are likely to cross. As a consequence, drivers know they should slow down and be very attentive. However, there is no grammar involved. We usually pass driving tests to prove that we can interpret signs like this. Therefore, the knowledge involved is conscious and learned.

PAUSE AND REFLECT 1.3

They say a picture is worth a thousand words. Do you think this is accurate? Try to illustrate the following sentences through a drawing (it does not have to be artistic). Do you think the drawing is a true representation of the sentence? Do you think

everyone would understand it in the same way? Why or why not?

- i. There isn't a small hippopotamus in the classroom.
- ii. I believe it may rain.
- iii. Look out the window on your left.

1.1.8 Animals and Communication

Another problem with the use of the word *communication* to define language is that we now know that, in the natural world, communication between animals is common (see Chapter 16 Animal Communication and Language). In other words, animals transfer information to each other. To do so, they develop signals that can be interpreted by other animals. These signals can be of several types: visual (e.g., the use of color to repel or attract; showing teeth to ward off other animals); smell (e.g., to attract mates or repel danger); sound (e.g., singing to attract a mate or growling to repel an enemy); tactile (e.g., touching to bond); movement (e.g., gesturing and posing to indicate dominance or submission); etc. Needless to say, none of these forms include a complex grammar, although, as you will read in Chapter 16 Animal Communication and Language, a careful analysis of the communication system of some animals, such as prairie dogs, lessens some of the differences between animal and human communication. Below you will find a few examples of animal communication:

- Ants lay down pheromones (chemical signals) to tell other ants where they may find food;
- Vervet monkeys have different calls to warn other monkeys about the presence of different types of predators;
- Chimpanzees signal the presence of a threat by raising their arms or slapping the ground;
- The color of some frogs (also some insects and snakes) is a warning to other species that the animal is poisonous and should be avoided;
- Many primates groom one another very frequently, forming social bonds among group members;
- Fireflies glow to attract mates;

- Cobras inflate their hoods (like cats arch their backs) to appear bigger and/or intimidate;
- Birds have complex songs that may differ from region to region. Birdsong may be used to attract mates, to warn off other males, or to call to the fledglings;
- You will find many examples of whale song on YouTube and there is currently a great deal of interest in this topic. Whales are able to communicate over great distances. As with birds, they may be attracting mates or warning other whales.

**PAUSE AND REFLECT 1.4**

Give three examples of non-linguistic communication among humans. In other words, come up with examples where no words or grammar are involved.

**Animal Communication vs. Human Language**

You probably do not need to be further convinced that animal communication is not necessarily like human language. However, besides the presence or absence of a grammar, there are noteworthy differences between animal communication and human language. In Chapter 16 Animal Communication and Language, you will find that some of these differences do not always apply.

- As you will see throughout the textbook, language is characterized by having at least two main levels. The first consists of a sound system (or a sign system in sign languages) made up of units that do not have any intrinsic meaning. For example, the sound /l/ has no meaning on its own. The second level happens when sounds are combined into words and phrases that do have meaning.
- Animal communication is about the here and now. A monkey uttering a cry to warn other monkeys is doing so because right now there is a snake coming through the grass, not because he is retelling a story from last week. Human language escapes the present context. We can talk about past and future, what could happen, what may happen, what we wish would happen, etc.
- Animal communication is not generally linked to mental concepts. That is, the monkey sees a specific snake and detects present danger. He does not generalize the concept of *snake* or, in fact, the concept of *danger*. Humans, on the other hand, have a very rich system of concepts. Just think about the difference between the *birds* ostrich and canary.
- Human language allows for creativity. A grammar constituted by a limited set of principles or rules, combined with an unlimited number of words, allows us to express ideas, thoughts, feelings, etc., that have never been expressed before. That is, we don't just repeat things. Animals are much more restricted in this sense, not only because of the limited number of signs, but also because they do not permit new combinations.