Introduction: What Linguistics Is About and What Syntax Is About

This book is an introduction to one part of the general subject of linguistics: **syntax** (words which are boldfaced are either technical terms or names of languages and language families which may not be familiar; at the end of the book you can find a glossary where these terms are defined). Syntax is the study of the structure of sentences, how these sentences arise and how speakers of a language are able to use and understand sentences by having a mental representation of their structure. In this book, the language we focus on is English, not because there is anything particularly special about English, but just because that's the one language I can be sure you know, since you're reading this book.

Syntax is one of the central sub-disciplines of modern linguistics. The other central areas of linguistics are **phonology** (the study of sounds and sound systems) and **semantics** (the study of meaning). There are many other aspects to linguistics (e.g. **morphology**, the study of the form of words), but these three form the core of language: the fundamental thing about language is that it connects sound and meaning through sentences. Phonology deals with the sounds, semantics deals with the meanings and syntax deals with the sentences. Syntax is the bridge between the sound and the meaning of sentences. We'll have plenty more to say about this in the chapters to follow, but first let's look at linguistics more broadly.

Modern linguistics is the scientific study of language. The education systems in many parts of the world make a major distinction between sciences (like biology, physics and chemistry) and arts or humanities (like history, music or literature). Languages are almost always classified on the arts/humanities side, so it might seem odd to talk about looking at language and languages scientifically. 'Science' conjures up visions of men (mostly) in white coats carrying out experiments using various kinds of specialised equipment, all of which seems a far cry from reading Shakespeare, learning French verbs or trying out Spanish conversation.

But really, looking at something scientifically means two main things. First, it means observing things as part of nature (rocks, stars or slugs, for example). Language is so much a part of us that it can be difficult to think of it as a natural object, the way rocks, stars and slugs obviously are. But imagine you were a Martian observing planet Earth: you'd see rocks, slugs, plenty of insects and a featherless biped building machines (including spacecraft), in control of everything, and making noises with its breathing and eating apparatus. As an

intelligent Martian, you'd soon recognise that there is some connection between the bipeds' noises, their ability to build machines and their control over all the other species. You'd also notice that only the featherless bipeds make these noises and that the young of the species spontaneously start making the noises when they're very small and still dependent on their parents for survival. After abducting some bipeds and looking inside their brains, you'd realise that there's just a couple of areas of the biped brain which seem to control the noise-making ability. The noises are language (Martians would probably first notice phonology, but being super-intelligent they'd quickly realise that there was more to language than just that). By looking at ourselves through Martian 'eyes' (which might of course be infrared heat sensors attached to their feet, but never mind), we can appreciate language as a natural object.

The second thing about science is that it's not just about observing things; it's also about putting the observations together to make a theory of things. One of the most famous of all scientific theories is Einstein's Theory of Relativity. This is hardly the place to go into that, but the point is that Einstein and other physicists wanted to construct a general understanding, based on observation, of certain aspects of nature: the Theory of Relativity is mostly about space, time and gravity. A good theory, like relativity, makes sense of the observations we have already made and also predicts new ones that we should be able to make.

So saying linguistics is scientific doesn't necessarily mean that we have to put on white coats and start a laboratory. But it does mean that we should try to make observations about language and put those observations together to make a theory of language. Since we're going to focus on syntax, we're going to make observations about syntax and make a theory of syntax. So the goal of this book is to present a particular theory of syntax, a scientific theory of what it is that links sound and meaning (as you can imagine, there are separate but connected theories of phonology and semantics). The theory that I will introduce here is called **generative grammar**. The reasons for that name will emerge over the next couple of chapters.

Approaching language, or syntax, in this way means that there are aspects of the more traditional, humanities-style approaches to language that we leave behind, since they do not contribute to the goal of making observations and building theories. First, it implies that the goal of linguistics is not to set standards of 'good' speaking or writing. This is not to imply that such standards should not be set, or that linguists, or others with particular expertise in language, should not be those responsible for setting them. Instead, it means that setting these standards falls outside the scientific study of language, since doing this doesn't involve making observations about what people say, write or understand but involves recommending that people should speak or write in a certain way. Zoologists don't tell slugs how to be slimy; linguists don't tell people how to speak or write. Ideas of 'good' syntax have no place here. **Prescriptive grammatical** statements of a kind once common in the teaching of English in schools in most of the English-speaking world (see below for some examples) are similarly irrelevant to our concerns here.

A second consequence of leaving behind the traditional humanities-style approach to the study of language and adopting a scientific approach instead is that we do not evaluate language aesthetically. This does not mean that the aesthetic appreciation of language, in particular literary language, is without interest or value as a study in itself, merely that this represents a different way of studying (and enjoying) language from the scientific one. Botanists may appreciate the beauty of flowers as much as anybody else, and zoologists no doubt admire the beauty of slugs, but the scientific study of flowers and slugs leaves aside any aesthetic response to them. Similarly, linguists may well appreciate the beauty and power of great works of literature, but the goal of modern linguistics is not to explicate our reaction to such works; that is for our colleagues in the literature departments.

There is also a third aspect of a scientific approach to a field of investigation, a really basic one. That is to begin by defining our terms, so let us start in this way. If linguistics is the scientific study of language, then we should start by defining language itself. That, as we shall see, is not as simple as might first appear.

What Is (a) language?

What Is language? vs What Is a Language?

First of all, it is useful to distinguish language as a general concept from individual languages. Our definition of linguistics makes reference to this general concept and, as such, tells us that linguistics is concerned with this general concept rather than with the study of individual languages (and hence tells us that linguistics is not about acquiring proficiency in individual languages; this is another aspect of the traditional humanities approach to language that modern linguistics leaves aside). It is very difficult to give an adequate general definition of language, especially in advance of the first steps in constructing any kind of theory of language or its subparts. For the moment, let us define language as the communicative and cognitive capacity that, as far as we know, most clearly distinguishes humans from other animals; this is what the Martians saw when they observed terrestrial featherless bipeds making noises. All human societies and cultures that have ever been discovered have language, most commonly spoken language; current estimates are that there are over 7,000 languages spoken in the world (www.ethnologue.com), although individual languages are hard to count, and we will see below that there are reasons to question whether English, French, etc., are really natural objects. On the other hand, no non-human animal has a linguistic or communicative capacity comparable to ours. This is not to deny that communication systems of various kinds are easy to observe in other species, but none of these systems seem to have the structural complexity we can observe in human language; as we shall see, the nature of the syntax of human language may lie behind the gulf between human language and animal communication. Indeed it could be argued that language is not just unique to our

species, but a defining property of it. The official biological name of our species (in the **Linnean taxonomy**) is *Homo sapiens*, Latin for 'wise man'. Since a glance at a history book or a newspaper leads one to question the wisdom of our species, one could think that *Homo loquens* ('talking man') might have been a better term to define us.

As just mentioned, the general concept of language, roughly defined above, should be distinguished from individual languages. An individual language can be taken to be a specific variant of the uniquely human capacity defined above, usually part of a given culture: English, **Navajo**, **Warlpiri**, **Basque**, etc. Concepts such as 'English' are thus, at least in part, cultural concepts. The distinction between language (in general) and languages (individual languages as partly cultural entities) distinguishes two variants of a single word in English. This is rather like the way we can distinguish the general concept of cheese from individual cheeses such as Brie, Cheddar, Parmigiano Reggiano and so on. *Language* and *cheese* are mass nouns; they denote general concepts. Individual cultures in different parts of the world produce their local variants of the general thing, associated with countable versions of the same nouns, i.e. individual languages and cheeses. In several European languages, different words are used to make the distinction between language and languages. French distinguishes *langage* (language in general) from *langue* (individual languages); in Italian *linguaggio* is distinguished from *lingua* in a similar way, and Spanish distinguishes *lenguaje* from *lengua*.

Natural Language vs Artificial Languages

A very important distinction in the context of defining the object of study of scientific linguistics is that between natural languages and artificial languages. Natural languages are natural objects (like slugs, etc., as we have seen), and so they can be the object of scientific study. Natural languages are languages spoken as native languages (they are almost always somebody's mother tongue) and are intrinsically capable of fulfilling a full range of communicative functions (making statements, asking questions, giving orders, etc.). Moreover, the origins of natural languages are obscure in that we are unable to fix a specific time or place for where they began. For example, handbooks on the history of the English language typically date the beginning of English to the arrival of the Angles, Saxons and Jutes in the British Isles starting in the fifth century CE. The Angles, Saxons and Jutes spoke closely related **Germanic** dialects which originated where they themselves originated, in what is now Southern Denmark and Northern Germany. As far as we know, nothing changed about their language when it was transplanted, along with its speakers, from the mainland to the offshore islands. Hence, the date attached to the 'beginning of English' reflects a random aspect of external history and almost certainly does not reflect any linguistic change at all. English is a direct continuation of the Germanic dialects spoken on the continent before the fifth century by the Angles, Saxons and Jutes.

These dialects were in turn a continuation of one dialect of **Indo European**, which was originally spoken (as far as we know) three or four millennia earlier in either the Pontic-Caspian steppe region of what is now Ukraine or in Central Anatolia (modern Turkey). Again, the beginnings and endings of 'English', 'Germanic' and 'Indo European' are arbitrarily chosen historical events. The languages themselves simply continue; what came before Indo European is uncertain, and this further illustrates the point that natural languages have an essentially unknown origin. All we can be sure of is that our capacity for language must have evolved at some stage in the history of our species, but this event is lost in the mists of time many millennia before Indo European or its precursors.

Artificial languages, on the other hand, are languages designed for some specific purpose and restricted in terms of their functions. We can usually say when and by whom they were invented. As such, they are not natural objects. So, for example, **logic**, which can be thought of as an artificial language, was invented by Aristotle *ca* 400 BCE, and the various computer-programming languages in use today and in recent years were all invented after roughly 1950, when modern computers themselves were invented. Semaphore, Morse code and other signalling systems are also artificial languages of this general kind, and also highly restricted in function. Artificial languages are of less interest for our purposes here, since they are not natural objects. So I will leave them aside in what follows.

In this context, we should mention other kinds of language and languages. **Sign language** is of great interest. In fact, sign language is not a single linguistic entity: there are various different Sign Languages, e.g. British Sign Language (BSL), American Sign Language (ASL), Nicaraguan Sign Language (NSL), South African Sign Language (SASL) and many others in many parts of the world. Sign languages are primarily used by Deaf communities. It is now an established finding of modern linguistics that sign languages are natural languages in precisely the sense defined above: they are natural objects. Sign languages serve the full range of communicative functions and their origins are obscure. Most importantly, sign languages are not manual versions of the spoken or written language used by the hearing communities around them. For example, BSL is the creation of the British Deaf community. Its history goes back to accounts in the fifteenth century describing deaf people using signs. The first description of those signs appears in the Marriage Register of St Martin's, Leicester, in 1576, describing the vows signed by Thomas Tillsye, who 'was and is naturally deafe and also dumbe, so that the order of the forme of marriage used usually amongst others which can heare and speake could not for his parte be observed' (www.ucl.ac.uk/british-sign-language-history/beginnings/marriagecertificate-thomas-tillsye).

The only difference between sign language and familiar languages such as English is that sign languages use a different medium, the gestural/visual medium, while familiar languages use the oral/aural medium (and of course

writing). One of the striking features of natural languages, both spoken and signed, is that their salient structural properties are independent of their medium of transmission: sign-language syntax, for example, has the same structural properties as English, French and other spoken languages.

Constructed languages, or conlangs, are also relevant here. Conlangs are of two main kinds. First, there are languages which were deliberately constructed as 'ideal' languages intended to serve for more efficient communication than could be afforded by seemingly imperfect already existing languages. Esperanto is probably the best known, although far from the only, language of this kind. Esperanto was invented by L. L. Zamenhof in 1887, at a time when there was no clear international lingua franca in the Western world (since 1945, English has played this role; at earlier times Latin and French did). The vocabulary of Esperanto is a mixture of Romance, Germanic and Slavic elements, and the grammatical system is a highly simplified and artificially regularised. The system is, however, closely based on various European, principally Romance, languages. As such it is arguably a natural language, which happens to have a particular origin and purpose. It is debatable, however, whether Esperanto has any true native speakers, although it is certainly used as a second language by up to 2 million people all around the world (compare this with the estimated 2 billion second-language speakers of English). Many other invented languages (**Interlingua**, **Volapük**, etc.) have the same status as Esperanto, although these days they are hardly spoken at all.

The other principal kind of constructed languages are those invented for fictional purposes, in order to give linguistic realism to invented worlds and their denizens. Among the best-known examples are the languages invented by J. R. R. Tolkien in his extensive mythological writings (*The Lord of the Rings*, *The Hobbit*, *The Silmarillion*, etc.). Tolkien was a professional philologist, and so the languages he constructed have an air of authenticity. Like Esperanto, however, they are largely based on existing, mainly European, languages. They are thus natural languages which are unusual in their origin and purpose; they are also barely spoken at all and certainly have no native speakers. Above all for this last reason, we leave such languages aside here; our interest is in languages which are acquired naturally.

Two other kinds of 'language' should also be mentioned. First, there is 'body language': frowning, shaking or nodding one's head, crossing one's arms or legs, etc. Body language can certainly communicate various attitudes or emotional states (friendliness, aggression, etc.), but it is not a language in the sense that it lacks the structural properties of natural, spoken and signed, languages; it has no discernible syntax, for example. Second, there is music. Music is often said to be a language, and indeed it has been shown to have structural, syntactic properties which are akin to, perhaps even identical to, natural language. However, although music may have a profound emotional impact, it lacks a clear propositional semantics, in that it cannot communicate true or false statements. It may be that music is a cognitive capacity which shares some, but not all, of

the properties of natural languages. Certainly, music appears to be both universal across human cultures and unique to humans; in these important respects, it resembles natural language.

To sum up, our focus here is on natural language. Modern linguistics is really about natural language in the sense described at the beginning of this section and, henceforth, I will restrict the discussion along these lines. Linguists thus believe that it makes sense to study natural language in general and not just individual languages. If natural language forms a coherent object of study, and if individual languages are specific variants of language in general, then this implies that all individual languages must have something in common. Hence, a major focus of linguistic research, particularly since the middle of the twentieth century, but with much older historical roots, has been the following question: what are the common properties of natural languages not shared by other systems of communication?[1] One of the central goals of modern linguistic theory is the attempt to answer this question, and we will address this question as it applies to syntax in much of what follows.

Language and Languages

Once we define natural language in the way we have done so far, its study can still be approached from various perspectives. As we mentioned earlier, one approach, which comes from the traditional humanities, is the prescriptive one. This involves defining precepts of 'good' English, in principle independently of how native speakers might actually speak or write the language. This has led to the formulation of precepts such as 'Don't use two negatives, since that makes a positive.' In many varieties of non-standard English all over the English-speaking world, it is easy to observe people saying things like *I don't like no-one* or *Mick can't get no satisfaction*, and so on. Here two negatives are used, but the result is not a positive. Invoking an artificial kind of logic, which does not correspond to the facts we can observe about the syntax and the meanings of these sentences, is not in line with the scientific approach to language we are adopting here. Such artificial 'rules' mostly originate in the eighteenth and nineteenth centuries and reflect little of substance about the true nature of English or any other language.[2] So I will say no more about 'rules' of this kind (although negative sentences of the kind shown above are very common in many languages of the world, including French; they illustrate a phenomenon known as **negative concord**).

[1] See R. Robins (1967), *A Short History of Linguistics from Plato to Chomsky*, London: Longman, and V. Law (2003), *The History of Linguistics in Europe*, Cambridge: Cambridge University Press, for discussion.

[2] See R. Freidin (2020), *Adventures in English Syntax*, Cambridge: Cambridge University Press, for a very illuminating discussion.

Another perspective is a teleological one. This is certainly relevant for the study of individual languages with the goal of attaining proficiency in speaking and/or writing them, another important aspect of the traditional way of studying language and languages. If I say *I am learning to speak Catalan*, then 'speaking Catalan' here is defined as a goal I am striving towards. It does not correspond to any currently existing knowledge or ability I have. But this is clearly something distinct from studying Catalan, or any other individual language, with the goal of understanding its structure; in particular, understanding its structure in relation to the general question of the possible structural commonalities of all natural languages, as discussed in the previous section. Hence, the teleological approach to the study of individual languages, although of course worthwhile, falls outside of modern linguistics as we understand it here.

Still another perspective on language is the sociopolitical one. One very important distinction in this connection is that between a dialect and a 'standard' language. Despite the social and political importance of this distinction, if we consider individual languages and dialects to be variants of the more general notion of language, then we are led to consider all natural-language systems as equal, whatever their social or political status (or that of the people who speak them). If we consider language to be a single coherent entity, then we expect to find the same general structural characteristics in all individual languages and dialects; this, of course, is the initial hypothesis that we intend to investigate and, if possible, substantiate.

Moreover, all natural languages and dialects appear to be of roughly the same level of complexity. Although this point is hard to assess and verify in detail and in a fully satisfactory way, there does not appear to be any reason to assert that one or another language or dialect is 'simpler' or 'more basic' or 'more primitive' than another. In structural terms, then, there is no reason to privilege one language or dialect over any other; the fact that one particular variety may have emerged as a standard is usually just a historical accident. For example, Standard (British) English emerged in the fifteenth and sixteenth centuries as English became the main language of commerce and correspondence. Standard English came to predominate as the written form of the language and came to be taught in schools as the 'correct' or 'standard' form. The emergence of Standard English was a consequence of social and political factors; it had nothing to do with the structural features of that variety of English, and there is accordingly no reason to think that that particular variety is in any way intrinsically superior to any other.

So, from the point of view we adopt here, the distinction between dialects and standard languages is an artificial one, extrinsic to the structural features of the varieties in question. When we look at language variants as natural objects, we see that the language vs dialect distinction is spurious; it comes from culture, not nature. Back in 1945, the American sociolinguist Max Weinreich captured this point by saying that 'a language is a dialect with an army and a navy'. Political, economic and military power confer prestige on standard languages, but from a purely linguistic point of view, they are not distinct from dialects.

We can take this line of thought further. The notion of a standard language is really a type of idealisation, one specially constructed by language planners and educationalists often interested in telling people what to do. In many countries, one of the goals of teaching the standard language is teleological, in the sense discussed above. In reality, nobody really speaks the ideal standard language; everybody speaks some form of dialect. One very clear result of the scientific study of the social aspects of language (the field known as sociolinguistics) is that no language is homogeneous. Everybody, including people who consider themselves speakers of 'Standard English', actually speaks a slightly different variant of the language, approximating an ideal standard in slightly different ways (which, in practice, one may hardly ever have cause to notice). As pointed out well over a century ago by the German historical linguist Hermann Paul, 'we must in reality distinguish as many languages as there are individuals'. No two speakers of a given language actually know precisely the same things about that language or use it in precisely the same way. Alongside dialects, then, we recognise **idiolects**, the variety of a language employed by a particular person. We may also want to recognise **sociolects** (varieties associated with particular social classes), **ethnolects** (varieties associated with particular ethnic groups) and so on.

All of this may leave you feeling perplexed. If all speakers have different idiolects, is there a notion of an individual language that can really be usefully defined at all? Atkinson (1992:23) gave the following definition of an English speaker:

> The person in question has an internal system of representation … the overt products of which (utterance production and comprehension, grammaticality judgements), in conjunction with other mental capacities, are such that that person is judged (by those deemed capable of judging) to be a speaker of English.[3]

We can see from this that defining 'a language' isn't as simple as we might have at first thought.

Leaving aside the social, cultural and political dimensions (which are evident in Atkinson's definition), we can try to understand what 'language' is so that we can then define 'a language' as a specific variant (token) of this more general entity (type). In this way, we take the everyday terms for individual languages (English, French, etc.) to be primarily sociocultural. Strictly speaking, these terms are not, in fact, part of scientific linguistics, since they designate cultural rather than natural objects.

Natural Language

Leaving aside the sociocultural dimensions, then, we concentrate on looking at natural language from a scientific perspective. More precisely, we

[3] M. Atkinson (1992), *Children's Syntax*, Oxford: Blackwell.

will look at language from a cognitive perspective. This approach treats language as a form of knowledge; the central idea is that our uniquely human language capacity is part of our cognitive make-up. Language is really a kind of instinct humans, and no other species, are pre-programmed with (in fact, *The Language Instinct* is the title of an influential and important book by Stephen Pinker in which this approach is explained in detail; see Further Reading at the end of this Introduction). This is the view that forms the basis of the theory of generative grammar and so this is the view I will adopt here. This approach, and most of the concepts introduced in this section, are due to Noam Chomsky (see Further Reading at the end of the Introduction for more details).

The cognitive approach treats our capacity for language as an aspect of human psychology which is ultimately rooted in biology. In this way, it clearly treats language, and our capacity for language, as natural objects. On this view, there are **three factors in language design**. The first is contributed by genetics: an innate aptitude for language that is unique to our species, our 'language instinct'. The second factor is experience, particularly in early life. The language we are exposed to as children represents the crucial linguistic experience; when I was growing up in England, everyone around me spoke English and so I acquired English. My great-grandfather was surrounded by Welsh speakers when he was growing up in nineteenth-century North Wales, so he acquired Welsh. Whichever language, or languages, we are exposed to as small children, our innate language-learning capacity is brought to bear on this experience in such a way as to result in our competence as native speakers of our first language (I will say more about **language acquisition** below). Third, general cognitive capacities, not specific to language and perhaps not specific to humans, clearly play a role in shaping our knowledge and use of language, although the exact role these capacities play and how they interact with (and can be distinguished from) the language-specific aspects of our linguistic capacities are difficult questions. Together, these three factors constitute the human **language faculty**. It can be extremely difficult to distinguish the specifically linguistic aspects that contribute to forming the language faculty from more general cognitive abilities, but the distinction can certainly be made in principle and is of course very important for our general cognitive theory of language.

In these terms, **Universal Grammar (UG)** is the theory of the first factor which makes up the language faculty: our innate genetic endowment for language. As already mentioned, UG is assumed to play a central role in language acquisition. It is also vital in helping us to understand how we can make sense of the idea that specific languages are actually variants of a single type of entity, language. Our goal here, then, is to look at one part of UG: how words combine to form sentences. In so doing, we will construct the theory of syntax.

We can now make an important distinction. Language can be seen from an internal, individual perspective, **I-language**, or it can be seen as external to the individual, **E-language**. Here we are going to focus on I-language, which arises from the interaction of the three factors just introduced. This is a natural approach,