part I

Language and the Language Faculty

Humans generally communicate with each other by means of language. In this respect they are very different from other animals. Human language has a number of specific properties that set it apart from other communication systems. Chapter 1 of this book, *From Language to Linguistics*, discusses these properties of human language, explains how they are studied in linguistics, and what sort of phenomena will be covered in this book.

When we say that humans know a language, this means effectively that they have mentally stored a large amount of knowledge about the language and how it is used. Operating as speakers and hearers, they can employ their language faculty in actual language use. In Chapter 2, *The Language User*, we will discuss how this works and review the mental processes that play a role here.

But the knowledge of a language is not present from the beginning. Children have to acquire their first language and adults also sometimes learn one or more other languages later. This is the theme of Chapter 3, *Language Acquisition.*

chapter 1

From Language to Linguistics

1.1   INTRODUCTION

Every person knows a language; many people know more than one. But what do we really know about the language we use every day? What could we say, for example, about the five following sentences:

(1)   Impossible a was job it
(2)   I am hungry
(3)   Why you left wanted to know
(4)   Marilyn Monroe wants to become President of Great Britain
(5)   The tlint was beert

Everybody will probably agree that (1), (3) and (5) are not good, in contrast to sentences (2) and (4), which are at least well formed. In (1) the order of words is not correct; in (3) there is a word missing; and (5) contains two elements that are clearly not words of English. On what grounds can we make statements like these? Is our knowledge of language simply a collection of all the words and sentences we have ever heard? Could we say, for example, that (1) is not

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good because we contrast it with the sentence *It was an impossible job*? Have we perhaps once heard this last sentence and still remember it as a 'correct English sentence'? This is very unlikely, as we can demonstrate with example (4). Sentence (4) is good English, even though it is not true. We know that this is a well-formed English sentence, even though we probably have never heard it before. Language users are capable of deciding whether a sentence is good or not, not just on the basis of memory, but also on the basis of their knowledge of language. This knowledge of language is not conscious; it is rather abstract and often couched in general rules. As a consequence we may not find it easy to explain why a particular sentence is good or not.

What do we mean when we speak of 'abstract knowledge' here? This can be explained with help from the following example. Suppose somebody shows us an unknown object and calls it a *pewt*. What would we say if there were two of these objects? Most probably we would say *two pewts*. Speakers of English do not need time to think about this; they just know that the form *pewten* would not sound right, even though there are a few English plurals that take *-en*, such as *oxen* and *children*. We learn the basic rules for plural noun formation as children, at a very early age: *cat–cats*, *dog–dogs*, *house–houses*, *goose–geese* and *ox–oxen*. But although we have this knowledge, many people may not be able to say why *pewts* is better than *pewten*. Knowing a language for most language users means that they can understand and produce it, but not necessarily that they can explain how the system works. For this reason we say that this knowledge is abstract and unconscious.

In this introductory chapter we will discuss the phenomenon of 'language' and the ways in which it is studied in the discipline of linguistics. In Section 1.2 we will review a number of important properties of language. 'Language' is here taken to mean natural language, that is, languages that are spoken by humans, and that have developed in a natural way in the course of history, probably from some primitive communication system used by our ancestors. There are also, however, other kinds of language, such as the languages used for writing computer programs. These other kinds of languages, and the way they differ from human language, will be discussed in Section 1.3. In Section 1.4 we will consider the variation that exists within the natural languages, including the difference between sign languages and spoken languages. The ways in which language is studied in linguistics will be discussed in Section 1.5. An important aim of linguistics is to try and make explicit, often in the form of a grammar, the unconscious, abstract knowledge that people have of the languages they speak. Section 1.6 will consider the various different types of grammar we may distinguish, such as, for example, a grammar which describes the history of a language versus a grammar that aims to describe the current situation of that language. Finally, Section 1.7 presents an overview of the various subfields within linguistics. This section also serves as an introduction to the rest of the book.

1.2 LANGUAGES

In this section we will consider natural, human languages such as English, Hindi, Turkish, Swahili, etc. What is so special about language as a phenomenon? We can get an idea by looking at the properties of such languages.

Every language is used for general communication. Using a natural language, humans can in principle communicate with each other about anything in their world, from talking about the weather to writing or reading a scientific article about global warming. Depending on the subject a different jargon may be used – when talking about football, people in a café use words that are quite different from those used in a parliamentary debate about health insurance costs. These different jargons are, however, part of the language as a whole. Also, to a very large extent, they employ the same grammar.

As we said in the introduction, languages have a certain structure. We can establish the rules that the sentences of a language need to satisfy. The sum total of those rules is the grammar of that language. The sentence *Tomorrow I will travel to Manchester* is correct, but *I tomorrow will travel to Manchester* is not. This is not to say that the first sentence is the only option we have in English when we want to say this, for we can also say *I will travel to Manchester tomorrow* and *I will tomorrow travel to Manchester*. There are quite subtle differences in meaning between the three correct sentences we have here, though for the moment we will ignore such differences. The key point is that the grammar of English allows for three different word order patterns in which to present the elements of this sentence, and does not allow other orders.

It is a well-known fact that languages may differ from each other in the rules their sentences have to satisfy. Sometimes the difference is only a small one. Compare, for example, the Dutch and German examples below, in (6) and (7) respectively, both meaning 'The publisher had the book translated'.

Dutch
(6) De uitgever heeft het boek laten vertalen.
     The publisher has   the book let   translate
     'The publisher had the book translated.'

German
(7) Der Verlag   hat das Buch übersetzen lassen.
     The publisher has the book translate   let
     'The publisher had the book translated.'

The relative order of the two infinitives ('let translate') at the end in Dutch is the reverse of that in German ('translate let'). Spanish is different again, as is illustrated by (8), where the verbs are not placed at the end but in the middle.

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Spanish
(8)   La   editorial   hizo   traducir   el   libro.
      The   publisher   made   translate   the   book
      'The publisher had the book translated.'

There are other languages that are even more different, as we can see in the
following examples from Japanese and Irish.

Japanese
(9)   Taro   wa   Hanako   ni   tagami   o   kai   ta.
      Taro   *topic*   Hanako   *to*   letter   *object*   write   *past tense*
      'Taro wrote Hanako a letter.'

Irish
(10)   Tà   carr   nua   seo   liom.
       Is   car   new   that   with+me
       'I own that new car.'

 We will just take a detour here to describe how we will present language
examples in this book using sentences (9) and (10). The first line presents the
example in the foreign language written in Latin script; the second line offers
an almost literal rendition of every individual element it contains into English.
When there is no equivalent English word, we will give the category to which
this element belongs in the other language. Thus, *topic* in (9) means that Taro
is the person about whom something is being said (see also Chapter 10); the
word *o* indicates that *tagami* is the direct object of the verb; and *-ta* is tagged
onto *kai* to mark it as a past tense-form. Labels such as *topic* will be given in
italics. The third line of (9) gives a free translation of the Japanese example into
an English sentence. In (10) the elements meaning 'with' and 'me' are fused in
one form and this is indicated by using a '+'. Other symbols (diacritics) have to
be fused to reproduce the correct spelling of a word such as 'tà' in Irish. Some
languages also use falling and rising intonation on a word to distinguish mean-
ing. In Mandarin Chinese, for example, the word *ma* has at least four different
meanings according to the tone used, so the tone has to be indicated as below:

   mā (level) means 'mother'
   má (rising) means 'torpid'
   mǎ (fall-rise) means 'horse'
   mà (falling) means 'scold'

Let us now take a closer look at (9) and (10) from the point of view of structure.
They reveal considerable differences between English and other languages.
Japanese (9) has no prepositions but only 'postpositions', so *ni* only appears
after *Hanako*. Also, the verb *kai* takes up the final position in the sentence. The

insertion of *wa* to mark *Taro* as the topic is another typical feature of Japanese. Irish is quite different again. From (10) we see that the verb is in first position, the noun 'car' is followed by the adjective 'new' and the expression 'to own' is expressed quite differently from English by locating the object with the person.

So, languages can be quite diverse in structure. Nevertheless, linguists have been operating for centuries on the idea that the languages of the world must have a common basis. As Roger Bacon wrote in the thirteenth century:

Grammar is substantially one and the same in all languages, despite its accidental variations.

Another anonymous writer a century earlier had already written:

He who knows the grammar in one language, also knows it in another, as far as the essentials are concerned.

Which aspects of grammar or structure could constitute these essentials? In (11) we give some examples of universal properties of language.

(11)　a.　All languages consist of small elements. In spoken languages these elements are the speech sounds, and in sign languages they are, amongst other things, hand shapes (see Section 1.3). From these small elements all larger units, words, or signs, are built. And these in turn are combined to make sentences.

　　　b.　All spoken languages have vowels and consonants.

　　　c.　In all languages the users can express a negative statement, ask a question, issue an order.

　　　d.　All languages have words for BLACK and WHITE or DARK and LIGHT. (The capitals indicate that these are concepts and not words.)

These properties, which are shared by all languages, are known as **universals**. They are discussed in more detail in Chapter 17, where we will consider differences and similarities between languages.

Of particular interest here is the property mentioned in (11a) above, since this feature is a specific characteristic of human languages. It is known as the **compositionality** of language. A word on its own has a particular meaning but it is at the same time composed of combinations of sounds that help distinguish meaning, so 'boy' is different from *toy* on the basis of the two sounds *b* and *t*. This will be talked about further in Chapter 14. Words when combined with other words can also form a complex message. And these messages may vary depending on the order in which the words are presented. For example, sentences (12) and (13) consist of exactly the same five words, each with their own meaning. Yet (12) and (13) clearly have different meanings.

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(12) The lifeguard saved the girl.
(13) The girl saved the lifeguard.

An important further property of human languages is illustrated in (14).

(14) the dog [of the man [with the hat [without a feather]]]

In this example we see how the phrase *without a feather* forms part of the
phrase *with the hat without a feather*. These two phrases are of the same type
because they both start with a preposition, *without* in the first case and *with*
in the second. The prepositional phrase *with the hat without a feather* forms in
turn part of the prepositional phrase *of the man with the hat without a feather*.
This phenomenon, where a linguistic unit of a certain type contains another
linguistic unit of that same type, is known as **recursion**.

Recursion is also found when we embed a sentence within another sentence,
as in example (15).

(15) Sheila assumes [that Peter knows [that Ahmed thinks [that he is a liar]]].

As the brackets show, the sentence *that he is a liar* is contained within the
sentence *that Ahmed thinks that he is a liar*, which itself forms part of the sentence
that Peter knows that Ahmed thinks that he is a liar, which is itself contained in the
sentence *Sheila assumes that Peter knows that Ahmed thinks that he is a liar*.

In principle, recursion can go on infinitely. Recursion can be exploited for
amusement as in the nursery rhyme *The house that Jack built* (16).

(16)   This is the farmer sowing the corn,
           That kept the cock that crowed in the morn
           That waked the priest all shaven and shorn,
           That married the man all tattered and torn,
           That kissed the maid all forlorn,
           That milked the cow with the crumpled horn,
           That tossed the dog,
           That worried the cat,
           That killed the rat,
           That ate the malt,
           That lay in the house that Jack built.

A question on a different level is whether only humans can express them-
selves in a human language. Could animals perhaps also learn to use human
language? Here it is more or less natural to think first of certain birds, such as
parrots and cockatoos, that can imitate human speech. These birds, however,
have no clue as to what they are 'saying'. But what about the great apes? They
are, after all, our closest evolutionary relatives and share a large amount of
our DNA. None of the great apes has, however, developed a speech organ
with which it could produce a wide variety of sounds. Experiments to teach
the great apes to do this have failed. One chimpanzee, Vicki, could articulate

no more than four words: *mama*, *papa*, *cup* and *up*, and this only after endless practice and then still with great difficulty.

However, could it be that the great apes can learn language, but not in the form of human speech? There have been many experiments with great apes to try and teach them a language using plastic buttons or computer symbols. Also, because great apes use their hands to make gestures, experiments have been done using a sign language for the deaf, American Sign Language. The results of these experiments are rather contentious. Some researchers claim that the great apes learn enough to be able to combine symbols and gesture signs, that is that they have learnt the syntax of the language in question. American researchers carried out such an experiment with the chimpanzee Nim Chimpsky. In (17) we give some of the most frequent combinations of gestures made by Nim.

(17) PLAY ME   PLAY ME NIM
      TICKLE ME   TICKLE ME NIM
      EAT NIM   EAT GRAPEFRUIT NIM

What can these gesture combinations tell us about the grammar underlying the 'sign language' of Nim? The combinations of three gestures in the first two examples in (17) amount to no more than a relatively redundant extension of the combination of two gestures. After all, NIM and ME refer to the same person, or rather, ape. Also, the combinations remain very restricted. Many of the longer utterances merely consist of repetitions of earlier gestures. A later experiment with a bonobo, Kanzi, showed that the ape could apparently understand many spoken words and sentences without having the explicit training that Nim had received in the earlier research. His production in a symbol system on a board was however quite limited. The spontaneity and creativity that are so characteristic of humans when they are using language is difficult to find in apes. It is claimed that they do transmit some words to others of their kind – but the extent of this is in no way comparable to human adults passing on their language to their children. This last point brings us to another typical feature of natural, human languages: that they are acquired (by children) through interaction with their environment, and thus handed down from one generation to the next.

1.3 OTHER LANGUAGES

Natural languages, as we have mentioned above, are used by humans to communicate with each other. There are, however, other languages and communication systems, and the question is in what ways these are different from, or similar to, natural languages. Below, we will discuss in more detail some
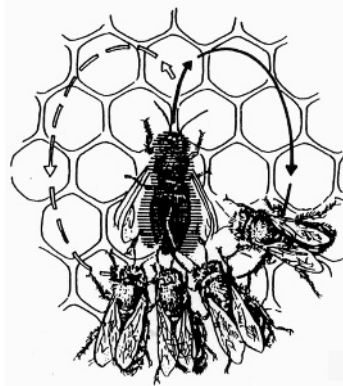
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Figure 1.1   The 'wiggle' dance of bees, according to Frisch (1923). Frisch, K. von (1923) Über die 'Sprache' der Bienen, Jena: Gustav Fischer Verlag.

of these 'other languages'. At the same time, we will use this discussion to highlight the special character of natural languages.

Humans are not the only ones who communicate with each other. Various kinds of animals do this too, and use a communication system or a language for this purpose. Birds, for example, can signal with their call or song that there is an enemy nearby, or that they have taken possession of a certain area, etc. But the range of possible messages they can convey is very limited. This is a key difference with human language. We can see this clearly by looking at an animal language of which the structure has been investigated, that is the language of bees. By executing different dance patterns on the side of the beehive, one bee can signal to another where it can find flowers with the basic ingredients needed to make honey. As the Austrian biologist, Karl von Frisch, discovered early in the twentieth century, Italian and Austrian bees do not speak exactly the same 'language'. The Italian honeybee, for example, knows three dances. The 'round dance' is used to indicate food sources located less than ten metres away from the beehive. By dancing with varying degrees of energy, the bee can indicate how large the food source is. The 'sickle' dance is used when food sources are located at a distance of between ten and hundred meters from the beehive. In addition, the bee can signal the direction of the food source. In the 'wiggle' dance, the intensity of the bee's movement and the number of repetitions signal the size of the food source, and how far away it is. In Figure 1.1 we see a drawing of the 'wiggle' dance.

In an experiment, a computer-controlled artificial bee was used to give messages to other bees. After some initial hesitation, the real bees dutifully flew out to the food source that had been indicated. You might imagine that bees are able to communicate about many more things than just food sources, but the content of their communication seems to remain restricted to this one subject. In another experiment, a bee was made to walk rather than fly to the food

source. Upon its return the dance of this bee signalled a distance that was far too great, because it could only indicate the time it had taken. Its communication system could not be used to tell the other bees that it had not flown but walked.

This example of bee communication shows how their system is rather limited. This holds true for the communication systems of other animals as well. These systems contain far fewer elements, such as movements or sounds, than there are words in human language. But the most important point appears to be that in animal communication these elements cannot be combined to produce new expressions. Neither bee language nor the language of other animals has **creativity**, one of the characteristic features of human language. With 'creativity' we do not mean 'artistic creativity'. In the context of language, creativity means that humans, with the rules at their disposal, can always make new, and possibly unique, sentences. The sentence you just read may well have been such a 'unique sentence'.

In what other ways is the language of bees different from human language? First of all, language use in humans is a matter of 'cooperative behaviour'. People adapt their use of language to that of their conversation partners, who in turn react to what others say, etc. There is interaction. Bees, on the other hand, dance their dances regardless of the response they get from other bees.

Secondly, human language is spontaneous. That is, there does not have to be a direct prompt or stimulus. In principle, at any given moment anyone can talk about anything, and some people actually do. With bees this is quite different. They only do their dance after they have found the flower – the stimulus, in this case – and have returned to the beehive. A bee will never 'just' do a little dance, in the way people can 'just' say anything about any subject they like. Human language is completely independent of the here and now. Bees are also different from humans since they can only tell the truth – and nothing but the truth, for they cannot lie – about what is the case at that particular moment. A bee utterance such as 'Well you know, yesterday I found some honey in that direction over there' is therefore impossible.

Finally, human language, but not that of bees, is largely arbitrary as far as form and meaning are concerned. In English, for example, there is no relation whatsoever between the form of words like *north*, *east*, *south* and *west*, and the various directions denoted by these words. In contrast, we find that in bee language the angle between the axis of the sickle dance and the vertical axis of the beehive corresponds exactly with the angle between sun, beehive and food source. So, the relation between form and content of the message is here not arbitrary, on the contrary. There are, nevertheless, a few exceptions to the rule of arbitrariness in human language, for example in **onomatopoeia**, where the sound shape of the word imitates the sound it denotes, as in *cock-a-doodle-doo*, *miaow*, *barking*, *sneezing* and *whinnying*. In sign languages, too, the relation between the form of a sign and its meaning is not always arbitrary, as we will discuss in Section 1.4. Finally, however, we should note that in many forms of

animal language – such as birdsong – the relation between form and meaning is in fact also arbitrary. So, it is not the case that the difference between human and animal languages coincides with that between arbitrary and non-arbitrary elements.

Very different types of languages are the so-called **constructed languages**, which we shall discuss here only briefly. Constructed languages are languages that have been consciously and deliberately designed by humans. Historically, a range of different constructed languages has been developed in order to solve the practical problems of international communication, or even to further the ideological cause of bringing the many different nations of the world closer to each other. Over the centuries there have been scores of such languages, often with beautiful names like Mundolingue or Interglossa. These often did not last very long. The best known of these is Esperanto, designed in the 1880s by the Polish eye doctor Ludwik Zamenhof, and currently spoken and written by hundreds of thousands of people around the world.

Esperanto makes considerable use of Latin words that function as a kind of lexical stem. New words can be formed by systematically attaching prefixes and suffixes to these stems. For example, *san*, meaning 'healthy', can receive the prefix *mal*, meaning 'opposite of', to give the new word *malsan*, for 'ill'. The suffix *-ul* denotes the person who has the property expressed by the preceding stem, so *malsanul* means 'sick person'. Esperanto's grammar is equally transparent. Questions are formed simply by putting *cu* in front of a statement, a process adopted from Polish, as shown in (18) and (19).

Esperanto

(18) Petro   legas   revuon.
      Peter   read   journal
      'Peter reads a journal.'

(19) Cu   Petro legas revuon.
      question Peter read journal
      'Does Peter read a journal?'

Constructed languages share a number of properties with natural, human languages, such as their compositionality and the arbitrariness of their units. But in at least two respects they are quite different from natural languages. First of all, constructed languages generally do not change over time, whereas natural languages constantly do. The English language in the twenty-first century is different from the English of around 1900. But Esperanto, like constructed languages in general, has a deliberately constructed form that changes relatively little. The second difference has to do with the fact, mentioned before, that natural languages are acquired by children from birth and through direct interaction with their environment. This is not the case in constructed languages, although to some extent this may be different for Esperanto. Children who grow up in a family where both parents are speakers of Esperanto

sometimes learn this language in the same way as other children may acquire English as their mother tongue.

A third type of language we need to discuss here are **computer languages**, that is languages used for writing computer programs and for giving instructions to computers. Just like constructed languages, they have not evolved slowly over the millennia through natural interaction between humans, but have been constructed by somebody for a specific purpose. Among the computer languages we find programming languages such as Prolog and Java, operating languages like DOS, and languages such as SQL that can be used to question databases. Other languages that are similar to computer languages are the formal languages of algebra, mathematics and logic.

The most noticeable feature of computer languages is that there is a fixed, one-to-one relation between form and meaning. In a natural language like English on the other hand, words and sentences can easily carry various different meanings at the same time. In a newspaper headline HOUSE DEFEATS BILL nobody thinks that the house refers to a building; clearly a government body is meant. It is also highly unlikely that a person Bill has been defeated; more probably a government paper is referred to. The same goes for jokes, which often depend on utterances being ambiguous. In formal languages, however, utterances always have one, and only one, meaning. For example, the basic rule of arithmetic that multiplication takes precedence over addition ensures that the outcome of (20) is always 23 and cannot be 35 as well.

(20) $3 + 4 \times 5 = 23$

Another, though less noticeable, difference between natural and formal languages is that users of natural languages often omit things which they can assume their listeners will fill in on the basis of their knowledge of the matter under discussion. Thus, during a soccer match somebody may say:

(21)   . . . and then in the same move he headed it in.

Here the listener, assuming of course he or she is familiar with the sport of soccer, will normally be able to fill in who *he* refers to since they will know the players, to tell that *it* refers to the ball, and that *in* means 'into the goal of the opposite team'. In formal languages it is impossible as a matter of principle to omit such things, for computers do not have the knowledge of the world they would need to fill in the missing information.

On the other hand, ordinary language users, especially in spontaneous conversation, may well produce a lot of 'redundant noise' in their utterances. A speaker who produces (22) could probably have limited himself to (23).

(22)   I am inclined to agree with most of what the last speaker just said.
(23)   I think so too.

Note, however, that the elaborate construction of (22) does have an effect, in that it expresses a certain reservation the speaker may have in supporting

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the previous speaker. In formal languages there is no room for such nuances. Everything written in a formal language is taken literally, and cannot be interpreted as nuance, colouring, flavouring, innuendo or spin. It remains a great challenge to write programs for computers in such formal languages that can interpret or produce human natural languages.

A fourth type of language we shall discuss here is that of non-verbal communication, that is, language without words. In oral communication humans often make use of non-verbal and non-language means such as gestures, body position, and facial expressions. When two humans are talking to each other, the distance between them may be an indication of their intimacy, or lack of it. In other words, the distance between speakers may carry meaning: the closer you stand, the more intimate or personal your relation. In different cultures there may be different rules for such distances. Arabs generally stand much closer to each other than people from the western world. In the trains on the London Underground, on the other hand, the convention is that people first sit down as far apart as possible from each other.

Non-verbal communication is more limited than ordinary language. Certain gestures, such as the abusive gesture of pointing to your forehead in Britain or Germany, have only one meaning in that specific culture. The gesture cannot be broken down into smaller parts, and is thus not compositional. The vocabulary, that is the repertoire of gestures and other non-verbal elements, is also fairly restricted. Combining such gestures into a message with a completely different meaning is generally not possible. Of course, you can combine gestures, for example pointing at someone and then pointing to your forehead, but the order in which this is done is irrelevant. That is, in non-verbal communication, unlike in natural, human languages, there is no grammar or fixed structure.

Languages are systems of symbols that represent something. This is an aspect of language that we also find in pictograms such as the signs used in railway stations and airports to indicate the exit, the baggage lockers, etc. Traffic signs constitute a comparable sign system. They all differ considerably from natural, human language. There is no compositionality possible. And, again, there is no interaction. Apart from the notion of representation, none of the other features of natural, human languages applies.

The term 'language' is often used metaphorically, for anything used by humans to transmit meaning. Thus, for example, we speak of the 'language of fashion'. When a woman wears a smart two-piece suit, she sends out a different message from when she is dressed in jeans and a T-shirt. Similarly, the term 'language of architecture' is used to indicate that an architect may be aiming to express an idea or make a statement with a building he or she has designed. The expression 'Let the music do the talking' as used in the title of the song by Aerosmith also reflects this metaphor. In these various cases the term 'language' is used not literally, but in a figurative sense, as a metaphor. Music or clothes are not 'real languages', in the sense in which we consider natural, human languages as 'real'.

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We can summarise the features of natural, human languages and their use, as discussed in Section 1.2 and Section 1.3, as follows:

- Languages have structure; utterances are formed according to certain rules.
- An important distinguishing property of languages is that of compositionality.
- Languages are acquired by children via interaction with their environment, and they are transmitted from one generation to the next.
- Creativity is a property of the human language faculty.
- Human language use is a form of 'acting together' or interaction.
- Language use is not bound to the here and now, that is, language use does not have to be directly linked to present experiences and circumstances.
- In language there is often an arbitrary relation between the form of the language symbol and the meaning of that symbol.
- Many utterances have more than one meaning, but with the help of the context it is usually possible to establish what the intended meaning is.

1.4   DIFFERENCES

We have seen that languages have much in common. But they can also be quite different, especially in structure, as we mentioned in Section 1.2. A first distinction to be made is between **spoken languages** and **sign languages**. A spoken language is produced by using the tongue, the lips and the vocal chords, and is heard through the ear. A sign language uses a different **modality**, which is visual. Sign languages are *seen*, and signers use above all their hands. The linguistic universals mentioned above in (11) apply equally to spoken and sign languages. But the use of a particular modality, for example the visual modality in the case of signs, can affect the form of a language. In (24) we see examples of signs from three different sign languages: American Sign Language (ASL), British Sign Language (BSL) and Sign Language of the Netherlands (NGT). What do they mean? In (24c) we can probably guess that the sign means 'baby'. Examples (24a) and (24b) are more difficult. The ASL sign in (24a) means 'to know'. The place where the sign is made is related to the fact that knowing is a mental activity. The ASL signs for 'to dream' and 'to plan' are also made near the head. The BSL sign in (24b) means 'cruel'. Here there is no clear relationship between the meaning of the sign and the form. There does seem to be such a relationship in (24a) and (24c); this is called the iconicity of signs. Certainly it is not the case that the relationship between the form and the content is iconic in all cases, but the visual mode in the case of signs seems to promote iconicity. In this respect, a number of signs can be compared to the onomatopoetic words we discussed earlier, such as *cock-a-doodle-doo*, *miaow* and *cuckoo*, which imitate the sound of certain animals.

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(24)
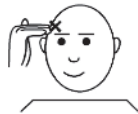
a: ASL: KNOW   b: BSL: CRUEL   c: NGT: BABY

When hearing people see two deaf people communicating in a sign language, BSL, for example, they will find it probably impossible to follow the conversation. The same holds true for a deaf person who communicates in a different sign language, like Italian Sign Language. This person would not be able to understand a BSL conversation. The number of iconic signs with a very clear relation between form and meaning is really rather limited. In many other respects, sign languages are completely comparable to other natural, human languages. For example, sign languages have structure or grammar. Also, deaf children acquire their sign language in interaction with other sign language users. And in sign language, too, in principle anything can be said, asked, requested, etc. at anytime, about anything.

A completely different type of distinction is that between languages that are only spoken, and those that are also written. Writing is a fairly recent invention. Humans have been speaking for tens of thousands of years, but the oldest known form of writing is only about 5,000 to 8,000 years old. Children can speak long before they can write, and writing is always related to speaking. The written form of a language is based on its spoken form, and therefore a secondary form of language. Writing turns a language into a visual and much more permanent phenomenon. Writing makes it possible to store information without burdening our memory. It enables a society to record its culture and history. Still, there are many societies in the world that do not use a writing system for their language; in such cases cultural transmission takes place via an extensive oral tradition. There is a great deal of variation in the forms used in writing. Some writing systems use one symbol for one word; others use one symbol per syllable; others have one symbol per speech sound. We will come back to this in Chapter 15.

Languages that have no written form are often spoken in communities that are less developed technologically or economically. For this reason they are often called 'primitive' languages. Is this correct? Can we indeed make a distinction between primitive and more developed languages? In linguistics, the general assumption is that there are no primitive languages. Each language can in principle express all the meanings that can be expressed in other languages. But the means used in different languages to express these meanings can vary significantly, as will become clear in the course of this book.

Some languages may have a limited vocabulary in a particular field, though, usually when this field is not very important for the language community in question. Kwaza, for example, an American Indian language spoken in the Amazonian area, does not have any words for *word processor*, *life insurance* or *disco* – as you might expect. Having a less extensive vocabulary in a particular field does not, however, mean that a language is primitive or simple. New concepts can always be expressed by circumscribing them with existing words. A good example of this comes from the North American Indian language Comanche. When the previously unknown lemon was introduced to the Comanche, it was called 'sour little brother of the orange'. Another option is to 'borrow' words from a different language, as we can see in many languages of the world, where numerous concepts that are to do with the computer have been borrowed from English, just as English has coined most of its scientific vocabulary on the basis of Greek and Latin.

The last major difference between languages that we want to discuss here is that between complex and simple languages. Is there such a difference? Second language learners often find one language harder to learn than another, but this is more related to the fact that their first language is more or less similar to the second language. In linguistics we are cautious about assuming that there is such a difference in complexity. Every language has both relatively simple rules as well as rules and features that are quite difficult or complex, and it is rather problematic to 'weigh' these up against one another. Some people insist, however, that we really can make a distinction between simple and complex languages. English is often held up as an example of simplicity in comparison with Chinese or Russian. On the other hand, many Russian and Chinese speakers find the English language extremely hard. The notoriously low scores and achievements in English of many people from the Far East is a case in point. On the other hand, children can learn any language and have no more difficulty learning one than another. Aspects of Chinese that may present an insuperable difficulty for a native speaker of English, for example, are picked up effortlessly by little Chinese children.

1.5   LINGUISTICS

Language is essential in order to function as a human being. To understand humans, we also need to understand the phenomenon of language. As Noam Chomsky, one of the most important linguists of the twentieth century, wrote in 1972:

When we study human languages, we are approaching what some might call 'the human essence', the distinctive qualities of the mind, that are, as far as we know, unique to man.

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In linguistics, we usually begin by describing a language, or rather languages. The question then is, how are languages organised, and what are their rules? A simple rule of English grammar, for example, could be written down as follows:

(25)   In English an adjective always precedes the noun it is describing.

According to this rule, *He bought a similar book yesterday* is a correct sentence in English. But it is also possible to say *the book is similar*. So, could we perhaps rephrase (25) in a more general way, as for example (26)?

(26)   In English an adjective precedes the noun it is describing unless it occurs after the verb *to be*.

The answer to this question is 'no'. Rule (26) is too general, since it excludes perfectly acceptable English sentences like *the book appears similar* and *He bought a book similar to mine*. So, rule (26) – and for that matter (25) – will have to be reformulated, if we want to do justice to the facts of English. It is an important principle of linguistics that we always aim for maximum generalisation. We could, of course, give a separate description of where the adjective would be placed for each individual sentence type, but, when writing linguistic rules, we generally aim to formulate them in such a way that they will apply to as many cases as possible.

Within linguistics we try, among other things, to write rules that can 'predict' what a possible correct sentence of the language in question will be. This may seem easy, but we will see that this is often quite hard. Also, in linguistics we not only deal with the form of sentences, but also describe other aspects of language. Take, for example, the formation of plural nouns in English. As we saw in Section 1.1, the plural of the nonsense word *pewt* will naturally be *pewts*, and a linguist who wants to describe this will have to draw up a satisfactory rule. The rule in (27) seems plausible.

(27)   English nouns form the plural by adding -s to the singular form.

Many well-known words illustrate that this rule is right: *maps*, *tasks*, *hats*. But what about *buses*, *fishes* and *bosses*? These words do not follow rule (27), since they form the plural by adding *-es*. In fact the situation is even more complicated than this. So if we want to account for English plural formation in nouns, we will need either to amend rule (27) or to add some other rules.

In Section 1.1 we highlighted the unconscious and abstract character of the knowledge that language users have of their language. This knowledge is represented by the rules linguists draw up, for example the rule of plural noun formation just mentioned. The central aim of linguistics is to make explicit, in a grammar of the language, what knowledge of that language its users have 'in their heads'. In the first instance, we do so by studying the individual grammars of individual languages, but – following Bacon's lead – at the same time we also aim to elucidate the general principles of language, stating these

in terms of the linguistic universals we discussed earlier in Section 1.2. These general principles can then be taken as an explanation of the way languages are organised.

This may seem to suggest that all linguists are looking for one particular kind of grammar. But this is not the case. Linguistics, even when it is dealing with the problem of grammar, is a vast and diverse domain of study and investigation, as we will see this in the next section.

1.6 DIFFERENT KINDS OF GRAMMAR

What should we think of the sentences *Oh you're awful warm* or *Did you post all them letters?* Are these wrong or not? Or were they, perhaps, once wrong in the past, but not anymore? The question of what is wrong in a particular language and what is not is a difficult one, and has to do, essentially, with change. Look at the following sentences. Can we decide whether these are correct or not?

(28)   Me and Jody had a contest for the ugliest pictures
(29)   They were by the pub what we stayed in
(30)   *She already live London two year

Most speakers of English will probably say that (30) is wrong, although many non-native speakers learning English actually produce such sentences. Nevertheless, (30) is not an acceptable structure in English. Linguists mark such sentences with an asterisk, which means that they are incorrect or ungrammatical. In other words, the rules of English grammar predict that this sentence is not amongst the possible sentences of English. The other two sentences, (28) and (29), are judged differently by native speakers; they often say something like 'I might say this, but you can't use it in writing', or 'You'll often hear this, but it isn't really correct English'. Sentence (28), for example, uses a construction (*Me and Jody*) that is becoming more frequent in the spoken language. Sentence (29) uses *what* in a way that occurs only in certain dialects of English.

The job of the linguist is to describe the language forms produced by native speakers, and, if possible, to indicate the variety of language they belong to. A grammar as written by a linguist represents, at least in theory, the knowledge all native speakers have of the rules of their language. In principle, this so-called **descriptive grammar** describes the rules for all varieties of the language. No variant is considered to be intrinsically better or worse than the others, though the description usually only covers those variants that are more or less systematic in character. That is, if a single individual native speaker of English were to say *Those jobs has got to be done*, this variant would not normally appear in a descriptive grammar of English. Since quite large numbers of English speakers now use the construction with *me* instead of *I*, as in (28), then this needs to be described in such a grammar.

Of course, a descriptive grammar may report whether a certain form is part of the standard language, whether it is more common in spoken English, or whether it only occurs in certain well-defined regions. Nevertheless, many linguists restrict their descriptions to the standard language or to the variety that is in general use, and ignore the many different dialect forms that may also occur.

Quite different from a descriptive grammar is a **prescriptive** grammar. This is a grammar that does not describe, but prescribes which forms of a language are good and which are not. In this kind of grammar, change may be regarded as a threat to the 'pure' form of the language. This purist view of language goes back a long way, in fact all the way to Classical Antiquity, when Latin was the dominant language in Europe. The purist view was especially dominant in the 18th and 19th centuries. But language is living and continually changing, and the process of change cannot be stopped. In a complete descriptive grammar, a linguist describes what the speakers of a language actually do and say in all their varieties. A real prescriptive linguist will dictate what they should say and write according to the linguistic norms prevalent at the time. For second language learners a grammar describing the standard variant is, however, often very useful and such grammars fall between the two types, as we will see.

So far, we have spoken about language as it is at a given moment in time, the language of today. But, as we have just seen, languages change. When we describe a language from the perspective of change, we are giving a **diachronic** description. In (31) we see two sentences that are variants of the same meaning: (31a) is formed according to the rules of the fifteenth century and (31b) is the modern variant.

(31)   a. For to dihyte a swan, tak & vndo hym & wasch hem.
        b. To prepare a swan open him up and wash him.

The diachronic description must cover the fact that *for to* is no longer used and now just *to*, although interestingly the *for to* variant survives in some dialects such as Irish English. Diachronic description is also known as historical grammar. The opposite of a diachronic description is a **synchronic** one, which offers a representation of a language at a particular moment in time (with considerable leeway in defining the limits of the notion 'particular moment').

Almost everyone who has learned or is learning a foreign language in school or at university will one day come across a grammar of the language, often as part of a coursebook that also deals with other aspects of the language. In general, such a grammar does not have scientific or scholarly aims. This type of grammar is known as a **pedagogical** grammar, or learner's grammar. It explains the rules of a language for the purpose of teaching and learning.

Sometimes this is done by giving a number of examples to illustrate a particular rule of grammar. The following passage, for example, comes from a learner's grammar of German for secondary schools:

The comparative and superlative in German:

klein	*klein*er	*klein*st
lieb	*lieb*er	*lieb*st
schön	*schön*er	*schön*st

Note special forms such as am schönsten, am kleinsten, *etc, where English has* the most beautiful, the smallest, *etc.*
German also has irregular comparatives, for example:

gut	*besser*	*best*
viel	*mehr*	*meist*

Note that after the comparative, German has als *(where English has* than*):*
kleiner als, mehr als, reicher als, besser als.

Following this explanation, there would normally be a series of exercises, to practice the rules just given. Often this involves translations and comparisons with the mother tongue of the learners, as for example when German *am schönsten* is compared to its English equivalent *the most beautiful*. Very often, pedagogical grammars have a prescriptive character. They will not refer to the variation in forms used, so for example in an English grammar for speakers of other languages in the section on the use of pronouns the form *me* in the construction *Me and Jody* would not be mentioned.

There are quite a number of important differences between pedagogic and scientific descriptive grammars. As we have just mentioned, pedagogical grammars are often prescriptive, whereas scientific grammars are not. The most important difference is the ground covered. A scientific grammar contains much more information than a pedagogic grammar; it is also much more explicit in stating rules and exceptions. Learner grammars may only cover some ten per cent of this. They may also present the grammatical information concerning a particular issue in a number of different chapters or sections, because learners have to work their way through these step by step. The German coursebook mentioned above, for example, returns to the comparative in the following chapter, where it is explained that adjectives ending in *d*, *t*, *s*, *sch* or *sz* form the superlative by adding *-est* instead of *-st*, as in *laut–lautest (loud–loudest)*, *weiss–weissest (white–whitest)*, *rasch–raschest (quick–quickest)*.

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1.7   THE CONTENTS OF THIS BOOK AND THE SUBFIELDS OF LINGUISTICS

There are, broadly speaking, two different perspectives or approaches you can take when studying language. The first is a thematic approach, where you explore language from the point of view of a certain theme, for example the way in which the human language faculty operates. In the second perspective you start from the language itself and study its different parts or levels, for example the level of speech sounds or that of sentences and sentence construction. Each of these two different approaches will be adopted in the various parts of this book.

Part I, *Language and Language Faculty*, which includes the present chapter, is thematic in character. Several times in the preceding sections we have mentioned that people have the rules of language 'in their heads'. This is what is also known as the 'language faculty'. In Chapter 2, *The Language User*, we will explore the way in which this language faculty operates in actual usage. How is it that language users are able to put the vocabulary and the rules they (unconsciously) know to use when producing and understanding language? 'Language' is a uniquely human property, which is acquired by children at a very early age. The way in which their language acquisition works, and the processes involved, will be discussed in Chapter 3, *Language Acquisition*. In this chapter we will also discuss the acquisition of a language other than a first language, that is, second language acquisition, and how this often does not proceed as smoothly and easily as mother tongue acquisition.

The next four parts of the book are not thematic but structural, and are organised on the basis of the linguistic levels or units of analysis.

In Part II the focus is on *Language and Interaction.* The main function of language is that humans can talk to each other and can produce longer stretches of text, that is, coherent series of sentences. This forms the largest unit of analysis. Both in texts and in conversations there is a certain system. Conversations have a certain structure, and the people taking part in them expect their conversation partners to react and not talk at cross-purposes. Chapter 4, *Discourse*, will discuss a number of characteristic systematic properties of conversations and of longer texts or monologues. The next issue we will discuss is how humans use language in order to transmit meanings. Thus, they 'do' something with language. In verbal interaction, utterances function as speech acts. For example, when someone says 'I have a pit-bull terrier', they may actually be issuing a warning. In other words, this utterance functions as the speech act 'warning'. In Chapter 5, *Speech Acts*, we will consider in more detail this aspect of language utterances and explore the systematic phenomena we can observe in this domain. The subfield of linguistics dealt with in Chapters 4 and 5 is usually referred to as **pragmatics**.

In Part III of the book, *Sentences and Their Meaning*, the focus is on the sentence as the unit of analysis, and we will consider in particular how sentences

are constructed and what meanings we can attach to them. In Chapter 6, *Constituents and Word Classes*, we will discuss the building blocks of sentences. The notion of 'constituent' refers to the units, often consisting of more than one word, that sentences are made up of. Put simply, in *The man is doing nothing*, *the* and *man* together form one constituent. Many people will be familiar – from school or from a pedagogical grammar – with notions like 'subject' and 'direct object'. These notions refer to constituents that serve a particular function in the sentence. Chapter 7, *Simple Sentences*, is largely concerned with this type of function, though from a scientific, and not a pedagogical, point of view. The way in which complex sentences are formed will be the subject of Chapter 8, *Complex Sentences*. When discussing the first example in this book – (1) to (5) in Section 1.1 – we indicated that sentences have a certain structure, by which we mean that its constituents will have to be placed in a certain order. Word Order and the form of sentences will be the subject of Chapter 9, *Constituent Order*. Chapters 6 through 9 are concerned with the subfield of linguistics that is usually referred to as **syntax**. But sentences have more than just a particular form; they also have meaning. How, for example, do we know that in a sentence such as *He got the ball, but didn't want to give it away*, the *it* refers to *ball*? Language users again need rules that enable them to come to such an interpretation. Chapter 10 will explore the domain of *Sentence Meaning*. The subfield of linguistics that is concerned with the rules for assigning meaning is known as **semantics**.

Semantics will also be discussed in the first chapter of Part IV, *Words and Their Meaning*. In Chapter 11, *Lexicon*, we will discuss the collection of words that make up a language. Words are not immutable units, as we can see when we compare a verb like *to work* with the forms *worked* and *working* that have been derived from it, as in for example *She worked* and *He was working*. Such derivations, and other processes through which words can change, will be discussed in Chapter 12, *Word Formation*. The subfield of linguistics that is concerned with processes such as these is known as **morphology**. Part IV closes with a chapter on *Compounds and Idiomatic Expressions*. Here we will discuss compounds like *road map* and *homework*, as well as expressions like *beavering away* (for 'working very hard'). Note that Chapter 13 cannot be placed within any one specific subfield of linguistics. The information it presents is relevant for both syntax and semantics, as well as morphology.

In Part V we reach the 'lowest' level of language and the smallest units of analysis, that of *Speech Sounds*. In Chapter 14 the (physical) process of *Speaking and Listening* will be studied from the point of view of **phonetics**. How do humans form sounds, and how can they hear and interpret them? The role of individual sounds in the words of a language, that is, the linguistic significance of these sounds, will be discussed in Chapter 15, *Sound Systems and Phonological Processes*. In this chapter we will also take a look at differences between languages in the domain of sound. Chapter 16 is devoted to larger units than individual speech sounds, in particular *Syllables*, *Stress and Intonation*. Together,

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Chapters 15 and 16 cover the main topics in the subfield of **phonology**, which can be seen as the linguistic twin of phonetics.

Finally, Part VI, entitled *Languages and Communities*, is, like Part I, thematic in character. Part VI is not concerned with one particular linguistic level, but concentrates rather on a number of themes that involve a range of different levels of analysis. In Chapter 17 we will come back to a subject that has been mentioned briefly in this introductory chapter, that is *Differences and Similarities between Languages*. Here we will discuss issues to do with 'language families', the investigation of earlier forms of languages, and the relation between language and culture. Chapter 18, *Language Variation*, looks at the variation that occurs within a language. There is, for example, not one single language English or Turkish or Chinese that is spoken by everybody in the corresponding language community, as very often people are speaking different dialects of that language. Also, languages are not only 'varied', they are variable as well. The English or French language of today is not the same as the English or French of two hundred years ago, as we will discuss in Chapter 19, *Language Change*. Here, too, we will explore the different kinds of change that may occur inside a language, for example at the level of sounds or sentence structure, as well as changes that may be occur between social groups. So far, we have mostly dealt with single, individual languages, but in fact in nearly all communities and societies around the world more than one language is being used, and very often these different languages do influence each other. Such *Bilingualism* will be discussed in the final chapter of the book.

At the end of each chapter there will be a *Summary*, a number of *Assignments*, an opportunity to *Test Yourself*, and a short list of *Acknowledgments and Further Reading* suggestions. The summary will revisit all the main concepts (printed in **bold**) covered in the chapter. The aim of the assignments is to work through the chapter's subject matter and take it further, for example by applying certain ideas to phenomena from a different language, or by finding and analysing examples that are characteristic of a particular linguistic phenomenon. By answering the questions in *Test Yourself*, you can check whether you have a reasonable grasp of the subject matter of that chapter. The questions here are asking for a reproduction of parts of the subject matter that has been presented. In the *Acknowledgments* section, finally, we provide the details of the sources used, and refer the reader to other, mostly introductory, books or articles on the different topics.

SUMMARY

Human knowledge about language is unconscious. It is not the knowledge of a list of utterances, but of an abstract system. Languages have a specific structure, and may be quite different from each other in this respect. Some properties are shared by all languages; these are the linguistic **universals**. A characteristic feature of human language is that of **compositionality**, which

holds that, while the words of a language each have their own meaning, they are made up of smaller elements that distinguish meaning and combine to make different meanings in sentences. Another important characteristic is **recursion**, that is, where one linguistic unit is contained within another of the same type. Animal languages are very different from human languages in that they are far more restricted. This holds true for the languages that some great apes have been taught in experiments as well as for bee language. These languages also lack the property of **creativity**, another characteristic of human language. The possibility of using a limited number of symbols or signs (words or gestures) and a limited number of rules (the grammar) to produce an unlimited number of new, and possibly unique, utterances is not available to animal languages. Human languages are to a very large extent arbitrary, though in the case of **onomatopoeia** there is a definite link between form and meaning.

Constructed languages such as Esperanto constitute a different type of language, though they are for the most part similar to natural languages. **Computer languages**, used to write computer programs, are generally very different from natural, human languages. The term 'language' is also used for other systems with which humans transmit meaning, as in the term 'body language' for the system of non-verbal communication, but in general they are not comparable to natural, human languages.

Languages can be produced in different **modalities**. There are **spoken languages** and **sign languages**. In sign languages, the relationship between form and meaning is closer than in spoken languages; but on the whole it is arbitrary. Languages can also be written, and they can differ from one another in the type of writing used. Written language is based on spoken language, and therefore secondary. From a scientific linguistic perspective it is impossible to distinguish between 'primitive' languages and more developed or 'advanced' languages. Equally, there are within linguistics no grounds for distinguishing between 'simple' and 'more complex' languages.

The aim of linguistics is to make explicit the unconscious knowledge people have of the language they speak. To this end, linguists study how languages are organised as systems, with a view to describing and explaining their grammars. In a **descriptive grammar** all forms of a language are accounted for, not just the standard form. **Prescriptive grammars** do not describe, but prescribe the rules for 'correct usage'. Changes in language are the subject of a **diachronic grammar**. In contrast, a **synchronic grammar** describes the rules of a language at a given moment in time. **Pedagogical grammars** describe the rules of grammar in order to help learners of the language in question.

A grammar of a language contains different subparts, which will be discussed in this book: the construction of sentences in **syntax**; meaning (**semantics**); the way language use is organised in interaction and in longer texts (**pragmatics**); the sounds (**phonetics and phonology**); and word formation (**morphology**). These various aspects are also known as 'linguistic levels'. Linguistics furthermore investigates a number of topics: the way in which humans use their language faculty in comprehension and production; the way in which

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language is acquired; and the way languages function in their communities.
These various topics will also be discussed in this book.

ASSIGNMENTS

1. Put an asterisk (*) before the sentences that are ungrammatical. Can you explain why they are ungrammatical?
   (a) There walks the woman in the street.
   (b) Mary said that I should wash himself.
   (c) I haven't heard the postman yet.
   (d) John has studied.
   (e) Bill has murdered.
2. Discuss why the rules for forming the English comparative (for example *lovely → lovelier*, *good → better*) can be considered a form of unconscious, abstract knowledge.
3. In examples (12) and (13) in the text we find the same words, but in a different order, hence the meaning is different. Can this principle also be applied to sounds?
4. Suppose you could teach a dog a hundred different commands, such as *Go, fetch the newspaper* or *Sit, Bobby, sit.* Does this mean the dog now knows English? Give arguments to support your view.
5. In what way could you call a hairstyle or way of wearing your hair a 'language' in the figurative sense? In what way would this 'language' be different from human, natural languages?
6. In mime, hands are used to make gestures, just as in sign languages. Explain the difference between mime gestures and the sign languages of deaf communities.
7. British Sign Language (BSL) is one of many sign languages in the world, as are Sign Language of the Netherlands (NGT) and Italian Sign Language (LIS). Compare the following sentences:
   (a) BSL: MAN HELP WOMAN
   (b) NGT: MAN WOMAN HELP
   (c) LIS: MAN WOMAN HELP
   What conclusion can you draw from these examples about differences and diversity amongst sign languages?
8. Traditional grammar lessons often consisted of exercises in 'parsing' and naming sentence parts and word categories. What is the difference between this 'parsing' and the scientific approach to language structure in linguistics?
9. Assignment (1.2) involved a discussion of the English comparative. In what subfield of linguistics is this subject located?

TEST YOURSELF

1. How do we know that our knowledge of language is not a list of utterances that is stored in our memory?
2. What is the technical term for those properties that are shared by all languages?
3. Explain what is involved in the phenomenon of compositionality?
4. Does the language of bees, like human language, have creativity, in the sense that one can always construct new 'messages' in it?
5. What is onomatopoeia?
6. What are constructed languages? Are they very different from natural human languages?
7. Can you identify some differences between human languages and computer languages?
8. Can sign languages be compared to other human languages?
9. Is it possible to make a clear distinction between complex languages and simple languages?
10. Leaving aside the writing system, are there any other differences between languages that have a written form and those that do not?
11. What is the difference between a prescriptive and a descriptive grammar?
12. What is a linguist doing when he or she studies language from a diachronic perspective?
13. Can you name the linguistic terms for the study of the following aspects of human language:
    (a) the sound system;
    (b) the structure of words;
    (c) the structure of sentences;
    (d) meaning;
    (e) language use in interaction.

ACKNOWLEDGMENTS AND FURTHER READING

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chapter are taken. Other books consider specific sign languages such as British Sign Language (Sutton-Spence and Woll, 1999) or Australian Sign Language (Johnston and Schembri, 2007). The quotes from Roger Bacon and Anonymous come from Lyons (1968:15–16). The quote from Chomsky is taken from Chomsky (1972:100).