THE
HISTORY OF ATLANTIS

CHAPTER I

INTRODUCTORY

A HISTORY OF ATLANTIS must differ from all other his- tories, for the fundamental reason that it seeks to record the chronicles of a country the soil of which is no longer available for examination to the archæologist. If, through some cataclysm of nature, the Italian peninsula had been submerged in the green waters of the Mediterranean at a period subsequent to the fall of Rome, we would still have been in possession of much documentary evidence concerning the growth and ascent of the Roman Empire. At the same time, the soil upon which that empire flour- ished, the ponderable remains of its civilisation and its architecture, would have been for ever lost to us save as regards their colonial manifestations. We should, in a great measure, have been forced to glean our ideas of Latin pre-eminence from those institutions which it founded in other lands, and from those traditions of it which remained at the era of its disappearance among the unlettered nations surrounding it.

But great as would be the difficulties attending such an enterprise, these would, indeed, be negligible when compared with the task of groping through the mists of the ages in quest of the outlines of chronicle and event which tell of a civilisation plunged into the

such as PHONOLOGY, the study of how sounds are used to represent words in speech, SYNTAX, the study of sentence structure, and SEMANTICS, the study of meaning in language.

In order to use even a very simple word, such as frog, we need to access various types of information from the word-store which we all carry around with us in the MENTAL LEXICON or DICTIONARY that is tucked away in the mind. We need to know:

[1.1]

(i) its shape, i.e. its PHONOLOGICAL REPRESENTATION/frg/ which enables us to pronounce it, and its ORTHOGRAPHIC REPRESENTATION frog, if we are literate and know how to spell it (see the Key to symbols used on page xix):

(ii) its grammatical properties, e.g. it is noun and it is countable so you can have one frog and two frogs:

(iii) its meaning.

But words tend not to wear their meaning on their sleeve. Normally, there is nothing about the form of words that would enable anyone to work out their meaning. Thus, the fact that frog refers to one of these simply has to be listed in the lexicon and committed to memory by brute force. For the relationship between a LINGUISTIC SIGN like this word and its meaning is ARBITRARY. Other languages use different words to refer to this small tailless amphibian. In French it is called (la) grenouille. In Malay they call it katak and in Swahili chura. None of these words is more suited than the others to the job of referring to this small reptile.

And of course, within a particular language, any particular pronunciation can be associated with any meaning. So long as speakers accept that sound-meaning association, they have a kosher word. For instance, convenience originally meant 'suitability' or 'commodiousness' but in the middle of the nineteenth century a new meaning of 'toilet' was assigned to it and people began to talk of ‘a public convenience'. In the early 1960s the word acquired the additional new meaning of 'easy to use, designed for hassle-free use* as in convenience food.

We are the masters. Words are our servants. We can make them mean whatever we want them to mean. Humpty Dumpty had all this worked out. The only thing missing from his analysis is the social dimension. Any arbitrary meaning assigned to a word needs to be accepted by the speech community which uses the language. Obviously, language would not be much use as a means of communication if each individual language user assigned a private meaning to each word which other users of the language did not recognise. Apart from that, it is instructive to listen in on the lesson on the nature of language that Humpty Dumpty gave to Alice (see overleaf).

Let us now consider one further example. All competent speakers of English know that you can add -s to a noun to indicate that it refers to more than one entity. So, you say cat when referring to one and cats if there is more than one. If you encountered in the blank in [1.2a] an unfamiliar word like splet (which I have just made up), you would automatically know from the context that it must have the plural form splets in this position since it is specified as plural by all. Further, you would know that the plural of splet must be splets (rather than spletren by analogy to children or spleti by analogy to stimuli). You know that the majority of nouns form their plural by adding the regular plural suffix or ending -s. You always add -s unless express instructions are given to do otherwise. There is no need to memorise separately the plural form of most nouns. All we need is to know the rule that says 'add -s for plural. So, without any hesitation, you suffix -s to obtain the plural form splets in [1.2b]:

[1.2]
INTRO

a. We put all the big _____on the table.

b. We put all the big splets on the table.

The study of word-formation and word-structure is called MORPHOLOGY. Morphological theory provides a general theory of word-structure in all the languages of the world. Its task is to characterise the kinds of things that speakers need to know about the structure of the words of their language in order to be able to use them to produce and to understand speech.

We will see that in order to use language, speakers need to have two types of morphological knowledge. First, they need to be able to analyse existing words (e.g. they must be able to tell that frogs contains frog plus -s for plural). Usually, if we know the meanings of the elements that a word contains, it is possible to determine the meaning of the entire word once we have worked out how the various elements relate to each other. For instance, if we examine a word like nutcracker we find that it is made up of two words, namely the noun nut and the noun cracker. Furthermore, we see that the latter word, cracker is divisible into the verb crack and another meaningful element -er (roughly meaning an instrument used to do X'), which, however, is not a word in its own right. Numerous other words are formed using this pattern of combining words (and smaller meaningful elements) as seen in [1.3]:

[1.3]

[tea]Noun —- [strain-er]]Noun

[lawn]Noun —- [mow-er]]Noun

[can]Noun —- [open-er]]Noun

Given the frame [[Noun-L _er]] Noun, we can fill in different words with the appropriate properties and get another compound word (i.e. a word containing at least two words). Try this frame out yourself. Find two more similar examples of compound words formed using this pattern.

Second, speakers need to be able to work out the meanings of novel words constructed using the word- building elements and standard word-construction rules of the language. Probably we all know and use more words than are listed in dictionaries. We can construct and analyse the structure and meaning of old words as well as new ones. So, although many words must be listed in the dictionary and memorised, listing every word in the dictionary is not necessary. If a word is formed following general principles, it may be more efficient to reconstitute it from its constituent elements as the need arises rather than permanently commit it to memory. When people make up new words using existing words and wordforming elements, we understand them with ease-providing we know what the elements they use to form those words mean and providing the word-forming rules that they employ are familiar. This ability is one of the things explored in morphological investigations.

In an average week, we are likely to encounter a couple of unfamiliar words. We might reach for a dictionary and look them up. Some of them may be listed but others might be too new or too ephemeral to have found their way into any dictionary. In such an event, we rely on our morphological knowledge to tease out their meanings. If you heard someone describe their partner as 'a great list maker and a ticker-off, you would instantly know what sort of person the partner was-although you almost certainly have never encountered the word ticker-off before. And it is certainly not listed in any dictionary. The -er ending here has

the meaning of 'someone who does whatever the verb means". Given the verb tickoff, a ticker-off must be a person who ticks off. Similarly, if you know what established words like handful, cupful and spoonful mean, you are also able to figure out the meanings of novel words like fountain-penful (as in a fountain-penful of ink) or hovercraftful (as in hovercraftful after hovercraftful of English shoppers returned from Calais loaded down with cigarettes, cheese and plonk). Virtually any noun denoting a container can have -ful added to it in order to indicate that it is 'full of something".

To take another example, a number of words ending in -ist, many of which have come into use in recent years, refer to people who discriminate against, or hold negative views about, certain less powerful subgroups in society, e.g. racist, sexist. Anyone who knows what racist and sexist mean, given the right context should have no difficulty in understanding the nature of discrimination perpetrated by people who are described using the novel words ageist, sizist and speechist. Ageism is discrimination on grounds of (old) age --for instance, denying employment to people over the age of 60; sizism is discrimination (usually against fat people) on grounds of size and speechism is discrimination against people with speech impediments like stuttering.

Did you notice how I exploited your tacit knowledge of the fact that words ending in -ist and -ism complement each other? You were glad to accept ageism, sizism and speechism because you know that corresponding to an adjective ending in -ist there will normally be a noun ending in -ism. This is important. It shows that you know that certain word-forming bits go together and others do not. I suspect that you would reject putative words like *agement, *sizement and *speechment. (An asterisk is used conventionally to indicate that a form is disallowed.) In word-formation it is not a case of anything goes.

A challenging question which morphology addresses is, 'how do speakers know which non-occurring or non-established words are permissible and which ones are not? Why are the words fountainpenful, hovercraftful and speechist allowed while *agement, *speechment and *sizement are not?

Morphological theory provides a general theory of wordformation applicable to any language but, as mentioned earlier, this book focuses on word-formation in English. Its objective is to provide a description of English words designed to make explicit the various things speakers know, albeit in an unconscious manner, about English words. The emphasis will be on the description of English words rather than the elaboration of morphological theory. So, data and facts about English words are brought to the fore and the theoretical and methodological issues are kept in the background for the most part. The use of formal notation has also been kept to a minimum in order to keep the account simple.

1.2

OVERVIEW OF COMING CHAPTERS

At the very outset we need to establish the nature of the subject we are going to be examining. So, Chapter 2 discusses the nature of words. Then the next three chapters delve deep inside words and investigate their internal structure. In the process, traditional morphological concepts of structural linguistics are introduced and extensively exemplified.

Morphology is not a stand-alone module. After the introductory chapters, in Chapter 6 you are introduced to a theory where morphology is an integral part of the LEXICON or DICTIONARY. This chapter focuses on the interaction of phonology and morphology in word-formation.

Chapter 7 explores the relationship between words in speech and in writing. What is the relationship between saying words and writing them down? Is writing simply a mirror of speech—and an apparently distorting one in the case of English?

The following chapter continues the discussion of the role of the lexicon. It attempts to answer questions like 'what is the lexicon for? What items need to be listed in the dictionary? What is the difference between idioms (like to nail one's colours to the mast) and syntactic phrases (like to nail a notice to the door)?" The next two chapters highlight the fact that the English word-store is vast and infinitely expandable. First, in Chapter 9 we consider the ways in which, using the internal resources of the language, speakers are able to produce an indefinitely large number of words. In Chapter 10 attention shifts to the expansion of English vocabulary through the importation of countless words from other languages. The story of imported words is in many ways also the story of the contacts that speakers of English have had with speakers of other languages over the centuries.

Most of the space in this book is devoted to an examination of the structure of English words. But the analysis of word-structure is seen not as an end in itself, but rather as a means to an end. And that end is to understand what it means to know a word. What sorts of information about words do you need to have in order to use them in communication? So the final chapter is devoted to the MENTAL LEXICON. It addresses the question, 'how is it that people are able to store a vast number of words in the mind and to retrieve the right one so fast in communication?" We will see that words are not piled in a muddle in the mind. Rather, the mental lexicon is very highly organised. This concluding chapter will also pull together the various strands developed in the earlier chapters.

I have already stressed the point that morphology is not a selfcontained module of language. Any discussion of word-formation touches on other areas of linguistics, notably phonology and syntax, so I have provided a key to the list of pronunciation symbols at the beginning of the book. I have also included at the end a glossary of linguistic terms (many of them from other branches of linguistics) which might be unfamiliar. But still I may have missed out some terms. If you encounter any unfamiliar technical terms that are not explained in this book. I suggest that you consult a good dictionary of linguistics like Crystal (1991). Sometimes it is useful to present data using phonetic notation. A key to the phonetic symbols used is to be found on pp. xix-xx.

After this introductory chapter, all chapters contain exercises. Several of the analytical exercises require you to look up words and parts of words in a good dictionary like the Oxford English Dictionary. Access to such a dictionary is essential when you study this book. This is a practical way of learning about the structure of English words (and may also be a useful way of enriching your vocabulary).

Chapter 2
What is a word?

2.1

INTRODUCTION

Often we find it very difficult to give a clear and systematic account of everyday things, ideas, actions and events that surround us. We just take them for granted. We rarely need to state in an accurate and articulate manner what they are really like. For instance, we all know what a game is. Yet, as the philosopher Wittgenstein showed, we find it very difficult to state explicitly what the simple word game means.

The same is true of the term word. We use words all the time. We intuitively know what the words in our language are. Nevertheless most of us would be hard pushed to explain to anyone what kind of object a word is. If a couple of Martian explorers (with a rudimentary understanding of English) came off their space-ship and stopped you in the street to enquire what earthlings meant by the term WORD what would you tell them? I suspect you might be somewhat vague and evasive. Although you know very well what words are, you might find it difficult to express explicitly and succinctly what it is that you know about them.

The purpose of this chapter is to try to find an answer to the question: what is a word? It is not only Martian explorers curious about the way earthlings live who might want to know what words are. We too have an interest in understanding words because they play such an important role in our lives. As we saw in the last chapter, it is impossible to imagine human society without language. And equally, it is impossible to imagine a human language that has no words of any kind. It is impossible to understand the nature of language without gaining some understanding of the nature of words. So, in this chapter we will clarify what we mean when we use the term 'word'. This clarification is essential if our investigations are to make any headway for, as you will see presently, we mean quite a few very different things when we talk of words. A standard definition of the word is found in a paper written in 1926 by the American linguist Leonard Bloomfield, one of the greatest linguists of the twentieth century. According to Bloomfield, 'a minimum free form is a word'. By this he meant that the word is the smallest meaningful linguistic unit that can be used on its own. It is a form that cannot be divided into any smaller units that can be used independently to convey meaning. For example child is a word. We cannot divide it up into smaller units that can convey meaning when they stand alone.

Contrast this with the word childish which can be analysed into child- and -ish. While the child bit of childish is meaningful when used on its own (and hence is a word), the same is not true of -ish. Although according to the Oxford English Dictionary (OED) -ish means something like having the (objectionable) qualities of" (as in mannish, womanish, devilish, sheepish, apish etc.), there is no way we can use it on its

‘acrobat	a’nnoying	ca'hoots
`kingfisher	de`molish	gaber’dine
‘ patriarchate	Chau’cerian	hullaba’loo

Main stress can fall on only one syllable in a word. The location of main stress is part of the make-up of a word and is not changed capriciously by individual speakers. You cannot decide to stress hullabaloo on the penultimate syllable on a Monday (hullabaloo), on the antepenultimate syllable on a Tuesday (hullabaloo), on the initial syllable on a Wednesday (hullabaloo) and on the final syllable for the rest of the week (hullabaloo).

However, in some cases, if we wish to contrast two related words, we can shift stress from its normal position to a new position. This can be seen in 'vendor and ven’dee which normally are stressed on the first and second syllable respectively. But if the speaker wants to contrast these two words both words might be stressed on the final syllable as I heard an estate agent do in a radio interview.

[2.6]

It is ven’dor, not the ven’dee who pays that tax.

This example illustrates well the point that a word is allowed just one stress. Stress can be shifted from one syllable to another, but a word cannot have two main stresses. We could not have *ven'dor and "ven dee where the two syllables received equal stress. Stress has to do with relative prominence. The syllable that receives main stress is somewhat more prominent than the rest, some of which may be unstressed or weakly stressed. By contrast, function words are normally unstressed. We can say Nelly went to town with no stress on to unless we wish to highlight to for contrastive purposes, e.g. Nelly went to town and not far away from town).

It is easy to see how stress can function as a valuable clue in determining whether two content words are a single compound word or two separate words. The nouns street and lamp are both stressed when they occur in isolation. But if they appear in the compound 'street-lamp, only the first is stressed. The stress on lamp is suppressed.

Stress is not the only phonological clue. In addition to stress, there are rules regulating the positions in which various sounds may occur in a word and the combinations of sounds that are permissible. These rules are called PHONOTACTIC RULES. They can help us to know whether we are at the beginning, in the middle or at the end of a word. A phonological word must satisfy the requirements for words of the spoken language. For instance, while any vowel can begin a word, and most consonants can appear alone at the beginning of a word, the consonant [ ] is subject to certain restrictions. (This consonant is spelled ng as in long (see the Key to symbols used on p. xix). In English words [ ] is not allowed to occur initially although it can occur in other positions. Thus, [ ] is allowed internally and at the end of a word as in [II] longing and [1 ge] longer. But you could not have an English word like ngether, *[ee] with [ ] as its first sound. However, in other languages this sound may be found word-initially as in the Chinese name Nga [a] and the Zimbabwean name Nkomo [komo].

There are also phonotactic restrictions on the combination of consonants in various positions in a word in the spoken language. As everyone knows, English spelling is not always a perfect mirror of pronunciation. So when considering words in the spoken language it is important to separate spelling from pronunciation (cf. Chapter 7). You know that He is knock-kneed is pronounced /hl Iz nk ni:d/ and not */he Is knk kni:d/. A particular combination of letters can be associated with very different pronunciations in different words or

in different positions in the same word. The spelling kn is pronounced /kn/ at the end of a word, as in / belkn/, but at the beginning of a word as in knee and knock the /k/ is dropped and only the n is sounded. Similarly, other stop-plus-nasal combinations like tm /tm/ and dn /dn/ are allowed at the end of a word (e.g. bottom /btm/ and burden /b :dn/) but these consonant clusters are not permitted at the beginning of a word. Putative words like */tmls/ (*tmiss) and */dnel/ (*dnell) are just impermissible. In the spoken language we recognise as English words only those forms that have the right combination of sounds for the position in the word where they occur.

Moreover, even when a sound or combination of sounds is allowed, often a somewhat different pronunciation is used depending on the position in which it occurs in a word. This can be seen in the pronunciation of the / sound in standard British English (RP) in different positions in a word. Compare the initial / with the final / in the following:

[2.7]

Word-initial clear	*Word-final dark*	*Pre-consonantal dark*
/ [ ]	/ [ ]	/ [ ]
labour lead loft	spill smell fulfil	milk salt belt quilt
lend let lick leaf	cool bull sprawl	spoilt colt wild

The I sound is always made with the blade of the tongue against the teeth-ridge, with the sides lowered to allow air to escape. But there is a subtle difference. When I is in word-final position or when it is followed by another consonant (as it is in the last two columns), besides the articulatory gestures mentioned above, the back of the tongue is also simultaneously raised towards the soft palate (or velum). This type of / is called dark or velarised / (). But when/is at the beginning of a word, no velarisation takes place. This latter type of / is called clear or non-velarised / ([]). Thus, the kind of I we hear gives an indication of where in a word it appears.

Do not fail to note the use of square brackets. They are used to enclose ALLOPHONES, i.e. variants of a phoneme. Allophones are different sounds, e.g. [] and [], that occur in different contexts which all represent the same phoneme /V.

With regard to spelling too, the situation is not chaotic, although admittedly the relationship between letters and phonemes is not always straightforward, as knee being pronounced /ni:/ demonstrates. We recognise as English words only those orthographic words that conform to the spelling conventions of English. If, for example, you saw the word zvroglen you would treat it as a foreign word. The letter combination zvr is not English. There is no way a word in English could start with those letters.

Let me summarise. One sense in which we use the term 'word' is to refer to WORD-FORMS. If we are thinking of the written language, our word-forms are ORTHOGRAPHIC words. These are easily recognised. They normally have a space before and after them. By contrast, in normal spoken language our word-forms are PHONOLOGICAL words. These are more difficult to identify because they are not discrete entities that can be neatly picked off one by one. None the less, phonological words can be identified on the basis of their phonological characteristics such as stress and phonotactic properties.

2.2.2

Words as vocabulary items

We need to distinguish between words in the sense of word-form as opposed to words as vocabulary items. Let us revisit the examples in [2.2.1] on pp. 11-12. If we are considering wordforms, we can see that the

hyphenated word-form street-lamp occurs three times. So if we were counting different word-forms, we would count street-lamp three times. However, if we were counting distinct words, in the sense of distinct VOCABULARY ITEMS we would only count it once.

The distinction between word-forms and vocabulary items is important. Very often, when we talk about words what we have in mind is not word-forms, but something more abstract-what we will refer to here as LEXEMES (i.e. vocabulary items). Anyone compiling a dictionary lists words in this sense. So, although the word-forms in each of the columns in [2.8] below are different, we do not find each one of them given a separate entry in an English dictionary. The first word in each column is listed under a heading of its own. The rest may be mentioned under that heading, if they do not follow a regular pattern of the language-e.g. write, written (past participle), wrote (past tense). But if they do follow the general pattern (e.g. washes, washing, washed; smile, smiling, smiled) they will be left out of the dictionary altogether. Instead, the grammar will be expected to provide a general statement to the effect that verbs take an -ing suffix, which marks progressive aspect, and an -ed suffix that marks both the past tense and the past participle, and so on.

[2.8]

WASH	TAKE	BRING	WRITE
wash	take	bring	write
washes	takes	brings	writes
washing	taking	bringing	writing
washed	took	brought	wrote
washed	taken	brought	written

In [2.8] each lexeme (i.e. vocabulary item) that would be entered in a dictionary is shown in capital letters and all the different word-forms belonging to it are shown in lower-case letters.

The examples in [2.8] are all verbs. But, of course, lexemes can be nouns, adjectives or adverbs as well. In [2.9] you will find examples from these other word classes.

[2.9]

Noun	*Adjective*	*Adverb*
a. MATCH	*KIND*	SOON
match	kind	soon
matches	kinder	sooner
b. GOOSE	BAD	WELL
goose	bad	well
geese	worse	better

In [2.9] we have three pairs of lexemes: the nouns, match and goose; the adjectives kind and bad; and adverbs soon and well. In each case the word-forms belonging to each lexeme in [2.9a] follow a general pattern for words of their type and need not be listed in the dictionary. But all the ones in [2.9b] are irregular and must be listed in the dictionary.

The lexeme is an abstract entity that is found in the dictionary and that has a certain meaning. Word- forms are the concrete objects that we put down on paper (orthographic words) or utter (phonological words) when we use language. The relationship between a lexeme and the word-forms belonging to it is one

c. fair: fair (Adjective) "beautiful, attractive"

fair (Noun) 'holiday'

By contrast, word-forms may have the same pronunciation but different spellings and meanings. Such forms are called HOMOPHONES. See this example from a joke book:

[2.12]

Why does the pony cough?

Because he's a little hoarse.

(Young and Young 1981:57)

The joke is a pun on /h:s/, the pronunciation of the two lexemes represented in writing by horse and hoarse. Other examples of homophones include tail~ tale, sail-sale, weather- whether, see ~ sea, read - reed, reel - real, seen scene, need - knead.

Conversely, it is also possible to have several closely related meanings that are realised by the same word- form. The name for this is POLYSEMY. Often you find several senses listed under a single heading in a dictionary. For instance, under the entry for the noun force, the OED lists over ten senses. I have reproduced the first six below:

[2.13]

1. Physical strength. Rarely in pl. (= Fr. forces-1818.)

2. Strength, impetus, violence, or intensity of effect ME.

3. Power or might; esp. military power ME. b. In early use, the strength (of a defensive work etc.). Subseq., the fighting strength of a ship. 1577.

4. A body of armed men, an army. In pl. the troops or soldiers composing the fighting strength of a kingdom or a commander ME. b. A body of police; often absol. the force=policemen collectively. 1851.

5. Physical strength or power exerted on an object; esp. violence or physical coercion. ME.

6. Mental or moral strength. Now only, power of effective action, or of overcoming resistance. ME.

The line that separates polysemy from homonymy is somewhat blurred because it is not altogether clear how far meanings need to diverge before we should treat words representing them as belonging to distinct lexemes. In [2.13], it is not entirely clear that the sixth sense of the noun force is not sufficiently removed from the other meanings to merit an entry of its own. The other meanings all show a reasonably strong family resemblance. But mental or moral strength shows a somewhat weaker relationship.

In the OED, there is a separate entry for the lexeme force, the verb. It is considered a different lexeme because it has a different meaning and belongs to a different word-class, being a verb and not a noun. Belonging to different word-classes is an important consideration in determining whether separate dictionary entries are needed.

In real-life communication, the lack of a one-to-one match between lexemes and word-forms does not necessarily cause ambiguity. In context, the relevant meaning is normally easy to determine. But there are cases where it is not. For instance, the homonymy of bat in [2.14] can cause semantic confusion:

[2.14]

I saw a bar under the tree.

It could be a bat with which you play cricket or a small, flying mammal. This is a case of LEXICAL AMBIGUITY. We have in this sentence a word-form that represents more than one lexeme with a meaning that is quite plausible. It is not possible to determine the right interpretation of the sentence without looking at the wider context in which it appears.

We have established that the relationship between a word-form and the meaning that it represents is a complex one. This is exploited not only in literature and word-play as we saw above but also in the language of advertising. For instance, a recent British Gas newspaper advertisement for gas heating said:

[2.15]

You will warm to our credit. It's free.

This advertisement exploits the lexical ambiguity that is due to the fact that warm (to) can mean 'become enthusiastic' or 'experience a rise in temperature'. Next time you look at an advertisement, see whether it exploits any of the relationships between lexemes and word-forms that we have examined.

2.2.3

Grammatical words

Finally, let us consider the word from a grammatical perspective. Words play a key role in syntax. So, some of their properties are assigned taking into account syntactic factors. Often words are required to have certain properties if they serve certain syntactic purposes. Thus, although in [2.16a] we have the same sense of the same lexeme (play) realised by the same word-form (played), we know that this word does at least two quite different grammatical jobs in the sentence of which it is a part:

[2.16]

a. She played the flute.	b. She took the flute.
She has played the flute.	She has taken the flute.

If you compare the sentences in [2.16] above, you will see that in [2.16a] the verb play is realised by the word-form played regardless of whether it simply indicates that the action happened in the past as in the first example or that an action was (recently) completed as in the second example. Contrast this with the situation in [2.16b] where these two grammatical meanings are signalled by two different forms. Took indicates that the action happened in the past while taken (after has/had) indicates that the action is complete. In She played the flute and She took the flute the words played and took are described grammatically as the 'past tense forms of the verbs play and take'. By contrast, in She has played the flute and She has taken the flute we describe played and taken as the 'past participle' of play and take.

Linguists use the term SYNCRETISM to describe situations such as that exemplified by played where the same word-form of a lexeme is used to realise two (or more) distinct grammatical words that are represented separately in the grammatical representations of words belonging to some other comparable lexemes. The phenomenon of syncretism is one good reason for distinguishing between word-forms and grammatical words. It enables us to show that words belonging to the same lexeme and having the same form in speech and writing can still differ.

A further example should make the ideas of grammatical words and syncretism even clearer. Consider the verbs in the following sentences:

[2.17]

a. You hit me.	(=you hit me some time in the past)
	or
	(=you hit me habitually)
b. You cut it.	(=you cut it some time in the past)
	or
	(=you cut it habitually)

As the paraphrases show, the word-form hit belonging to the lexeme hit can represent either the present tense or the past tense form of the verb. In other words, there is syncretism. We have two different grammatical words hit [+verb, present) and hit [+verb, +past] but a single word-form. The same analysis also applies to cut. It can represent either the present or past tense of the verb cut.

Syncretism is not limited to verbs. It can apply to other word classes (e.g. nouns) as well:

[2.18]

(a) The wolf killed a sheep and one deer.

(b) The wolf killed two sheep and three deer.

In these two sentences, although the word-form sheep belongs to the same lexeme and is unchanged in form, we know that its grammatical value is not the same. In [2.18a] it realises the word with the grammatical properties of noun and singular, but in [2.186] it represents a plural form. Likewise, the same word-form deer represents a singular noun in [2.18a] and a plural noun in [2.18b).

What can we say about the word as an entity that functions as a grammatical unit in the syntax of a language? As mentioned already, the (grammatical) word is normally defined as the MINIMAL FREE FORM that is used in the grammar of a language. Let us now put some flesh on this terse and somewhat cryptic statement.

By free form we mean an entity that can stand on its own and act as a free agent; it is an element whose position in a sentence is not totally dictated by other items. In order to explain what 'freedom' means in this context, we need to take on board two ancillary ideas: POSITIONAL MOBILITY and STABILITY. Although words are not the smallest grammatical units used to construct sentences (see the discussion of morphemes in the next chapter), at the level of sentence organisation the rules of sentence formation treat words as unanalysable units. Often it is possible to change the order in which words appear in a sentence and still produce a well-formed sentence. Words enjoy considerable positional mobility. However, the elements inside a word do not enjoy such mobility. While syntactic rules can transport words to new places in a sentence, they cannot shift in the same way elements that are found inside words. Moving words around in the following produces grammatical sentences with basically the same meaning, but with somewhat different emphasis:

[2.19]

a. This old industrialist revisited Lancaster, fortunately,

b. Fortunately, this old industrialist revisited Lancaster

c. Lancaster, this old industrialist revisited, fortunately,

d. Fortunately, Lancaster was revisited by this old industrialist

---

Evidently, the position of words in a sentence is not rigidly fixed. They can, and often do, get moved around if the communicative needs of the speaker or writer require it. However, the interior of a word is a no-go area for syntactic rules. They are strictly barred from manipulating elements found inside a word. As far as syntax is concerned, words are indivisible units that cannot be split and whose internal units are inaccessible (cf. Bauer 1988, Matthews 1991, Lyons 1968, Di Sciullo and Williams 1987).

The word as a grammatical unit shows stability (or INTERNAL COHESION). The order of elements inside a word is rigidly fixed. If the elements of a sentence are shifted, certain meaningful units (in this case re-visit-ed and fortun-ate-ly) all move en bloc, and their order always remains unchanged. The internal structure of the word cannot be tampered with. We are not allowed to perform operations that would yield words like "ed-visit-re. *ate-fortune-ly etc. We will return to this point on p. 33 below.

The definition of the word includes the term 'minimal' for a good reason. This is intended to separate words from phrases like this old industrialist. Like words, phrases can occur in isolation and they can be moved from one position to another (as we have seen in [2.19]). But the expression this old industrialist is not a minimal form since it contains smaller forms capable of occurring independently namely, this, old and industrialist. Furthermore, the sequence this old industrialist does not have the kind of internal cohesion found in words. It can be interrupted by other words e.g. this wealthy old industrialist; this very wealthy, old, benevolent industrialist.

The assumption that the grammatical word is 'a minimum free form works well as a rule of thumb. But it encounters difficulties when confronted by a COMPOUND WORD like wheelbarrow which contains the words wheel and barrow which can stand alone. In such cases it is clear that the word is not the smallest meaningful unit that can be used on its own. It is for this reason that the definition of the word as the unit on which purely syntactic operations can be performed is preferable. In the case of compounds this definition works. The interior of a compound is a syntactic no-go area. Syntactic rules are not allowed to apply separately to words that make up a compound. Thus, for example although the nouns wheel and barrow can be modified by the adjective big ([big barrow]. [big wheel]), and although we can talk of [big wheelbarrow]. in which case big modifies the entire compound, there is no possibility of saying wheel [big barrow], with the adjective only modifying the second element of the compound word.

2.3

SUMMARY

In this chapter we have established that normally, the term 'word' is used ambiguously. To avoid the ambiguity, we need to distinguish between three different types of word: (i) a word-form (i.e. a particular physical manifestation of one or more lexemes in speech or writing); (ii) a vocabulary item (i.e. lexeme); and (iii) a unit of grammatical structure that has certain morphological and syntactic properties.

We will revisit the distinction between lexemes, grammatical words and word-forms mainly in Chapters 7 and 11. In Chapter 7 our main concern will be the realisation of words in speech and in writing. In Chapter 11 we will show that this distinction is not an artefact of the linguist's analysis. Rather, it is a distinction that is well supported by studies in the way in which we store words in the mind and retrieve them for use in communication in real life.

In the coming chapters, in cases where the relevant sense of the term 'word' is clear from the context I will not spell out whether it is the word as a vocabulary item, grammatical word, phonological or orthographic form that is being dealt with. But where it is not clear, I will indicate the sense in which I am using this term. We are now in a position to consider in detail the internal structure of words. That is the task of the next chapter.

EXERCISES

1. Comment on the problems you encounter in determining the number of words in the following nursery rhyme. Relate your answer to the different senses in which the term 'word' is used.

The grand old Duke of York

He had ten thousand men.

He marched them up to the top of the hill,

Then he marched them down again.

When they were up, they were up.

And when they were down, they were down,

And when they were only half way up

They were neither up nor down.

2. Find and analyse at least three examples of advertisements that exploit the homonymy, polysemy or homophony of words.

3. Which ones of the italicised word-forms in the following sentences belong to the same lexeme? What difficulties, if any, have you come across in determining whether word-forms belong to the same lexeme?

a. She saw him saw through that plank of wood.

b. Bill will pay the bill.

c. I saw Farmer near your farm again this morning.

d. Jan looked pale when she walked towards the pail. e. I am sick of your claiming to be sick all the time.

f. I was looking at the book when she booked the ticket.

4. Using at least two fresh examples, show how syncretism can be used to support the distinction between word-forms and grammatical words.

5. This is the beginning of W.H.Auden's poem 'Musée des Beaux Arts'.

About suffering they were never wrong.

The Old Masters…

These lines can be paraphrased as 'The Old Masters were never wrong about suffering."

Referring to the definition of the word given in this chapter, explain why it is correct to regard suffering as a word but incorrect to treat about suffering also as a word.

Chapter 3
Close encounters of a morphemic kind

3.1
THE QUEST FOR VERBAL ATOMS

We saw in the last chapter that the word is the smallest meaningful unit of language that can function independently in the grammar. A word can be used on its own, without appending it to some other unit. Thus, in the word childish we can isolate child and use it on its own because it is a word in its own right. But we cannot use -ish as a stand-alone unit, for -ish is not a word.

While recognising that words are the smallest meaningful units which function independently in the grammar, we also need to recognise that words can be decomposed into smaller units that are also meaningful. Our task in this chapter is to explore the internal structure of words in order to gain some understanding of the basic units which are used to form words.

3.2
CLOSE MLOGICAL ENCOUNTERS: ZOOMING IN ON MORPHEMESORPHO

Originally morphology' meant the study of biological forms. But nineteenth-century students of language borrowed the term and applied it to the study of word-structure. In linguistics MORPHOLOGY is the study of the formation and internal organisation of words.

Let us begin our morphological analysis by considering half a dozen words (not altogether randomly chosen):

[3.1]

hope soon mend boil safe leaf word elephant

Obviously all the words in [3.1] have a meaning, but lack internal structure. We cannot identify any smaller units that are themselves meaningful which occur inside them. If a Martian stopped you in a street near the local zoo and enquired what phant in elephant or ho in hope means, you would think she was asking a most bizarre question that did not merit an answer. Or you might condescendingly explain that, of course, in each case the whole word means something, but its parts cannot be said to mean anything on their own. Though somewhat puzzled, the Martian might accept your explanation.

But, being the persistent type, let us suppose she enquired further whether the words in [3.2] were also indivisible into smaller meaningful units:

[3.2]

childish hopeless sooner mended elephants re-boil unsafe ex-wife

---

You would have to give a different answer. You would need to tell your interrogator, who by now would be getting increasingly bewildered, that the words in [3.2] can be divided into smaller units of meaning as shown in [3.3]:

[3.3]

child-ish hope-less soon-er mend-ed elephant-s re-boil un-safe ex-wife

---

The part of the word that is not italicised can function as an independent word in the grammar. Indeed, each of the nonitalicised chunks is a word (i.e. vocabulary item) that is listed as such in the dictionary. By contrast, the italicised bits, though meaningful (and their meanings can be indicated as shown in [3.4]). cannot function on their own in the grammar.

[3.4]

-ish	*having the (objectionable) qualities of	child-ish= 'having the qualities of a child'
-less	'without X	hopeless= 'without hope"
-er	'more X'	sooner= 'more soon
-ed	'past	mended= "mend in the past
-S	'plural	elephants="more than one elephant'
re	'again'	re-boil= 'boil again'
un	'not X'	unsagfe= 'not safe'
ex	*former	ex-wife- former wife

What we have done to the words in [3.4] can be done to thousands of other words in English. They can be decomposed into smaller units of meaning (e.g. re- *again') or grammatical function (e.g. -ed 'past').

The term MORPHEME is used to refer to the smallest unit that has meaning or serves a grammatical function in a language. Morphemes are the atoms with which words are built. It is not possible to find sub- morphemic units that are themselves meaningful or have a grammatical function. Thus, given -less or un-, it would make no sense to try to assign some identifiable meaning to any part of these forms. Of course, it is possible to isolate the individual sounds 1-1-s/ or / -n/, but those sounds in themselves do not mean anything.

We have now established that words are made up of morphemes. But how do we recognise a morpheme when we see one? Our definition of the morpheme as the smallest unit of meaning (or grammatical function) will be the guiding principle. Any chunk of a word with a particular meaning will be said to represent a morpheme. That is how we proceeded in [3.3] and [3.4] above.

Morphemes tend to have a fairly stable meaning which they bring to any word in which they appear. If we take re- and un-, for example, they mean 'again' and 'not' respectively-not just in the words we have listed above, but also in thousands of other words. Usually morphemes are used again and again to form different words. Thus re- meaning 're-do whatever the verb means' can be attached before most verbs to yield a new word with a predictable meaning (e.g. re-run, re-take, re-build etc.). In like manner, un- meaning 'not X' (where X stands for whatever the adjective means) can be attached to various adjectives (e.g. un-real, un-clean, un-happy etc.) to yield a new word with a predictable negative meaning.

that allomorphs are forms that are phonologically distinguishable which, none the less, are not functionally distinct. In other words, although they are physically distinct morphs with different pronunciations. allomorphs do share the same function in the language.

An analogy might help to clarify this point. Let us compare allomorphs to workers who share the same job. Imagine a jobshare situation where Mrs Jones teaches maths to form 2DY on Monday afternoons, Mr Kato on Thursday mornings and Ms Smith on Tuesdays and Fridays. Obviously, these teachers are different individuals. But they all share the role of 'maths teacher' for the class and each teacher only performs that role on particular days. Likewise, all allomorphs share the same function but one allomorph cannot occupy a position that is already occupied by another allomorph of the same morpheme. To summarise, we say that allomorphs of a morpheme are in complementary distribution. This means that they cannot substitute for each other. Hence, we cannot replace one allomorph of a morpheme by another allomorph of that morpheme and change meaning.

For our next example of allomorphs we will turn to the plural morpheme. The idea of 'more than one' is expressed by the plural morpheme using a variety of allomorphs including the following:

[3.8]

	Singular	*Plural*
a.	*rad-ius*	*radi-i*
	cactus	cact-i
b.	dat-um	dat-a
	strat-um	strat-a
c.	analys-is	analys-es
	ax-is	ax-es
d.	skirt	skirt-s
	road	road-s
	branch	branch-es

Going by the orthography, we can identify the allomorphs -i, -a, -es and -s. The last is by far the commonest: see section (7.3).

Try and say the batch of words in [3.8d] aloud. You will observe that the pronunciation of the plural allomorph in these words is variable. It is [s] in skirts, [z] in roads and [Iz] (or for some speakers [ez]) in branches. What is interesting about these words is that the selection of the allomorph that represents the plural is determined by the last sound in the noun to which the plural morpheme is appended. We will return to this in more depth in section (5.2).

We have already seen, that because allomorphs cannot substitute for each other, we never have two sentences with different meanings which solely differ in that one sentence has allomorph X in a slot where another sentence has allomorph Y. Compare the two sentences in [3.9]:

[3.9]

a.	They have two cats	b.	They have two dogs
	[el hæv tu: kæt-s]		[el hæv tu: dg-z]
	*[el hæv tu: kæt-z]		*[el hæv tu: dg-s]

words by using sounds in a non-imitative way. There is an overriding tendency for the relationship between sounds and meanings to be arbitrary. Normally there is no reason why a particular morpheme is realised by any particular sounds. The choice of the allomorph or allomorphs that represent a particular morpheme is arbitrary.

Obviously, as everyone knows, all languages do not have the same words. Since virtually any arbitrary match of sound and meaning can produce a word, it is not surprising that words vary greatly in their structure across languages. But this does not mean that chaos reigns. The ways in which morphs are used to form words is regulated by general principles. So, the amount of crosslinguistic variation in word-formation falls within certain broad parameters. It is as if there is a menu of blueprints for word-formation from which all languages make their selections:

[3.14]

(i) ISOLATING (or analytic) languages

(ii) AGGLUTINATING languages

(iii) INFLECTING (or synthetic) languages

(iv) POLYSYNTHETIC languages

No language makes all its choices from just one part of the menu. To varying degrees all languages make mixed choices. The idea of this menu is to indicate the predominant word-formation tendencies, if they exist. In the subsections below we shall consider in turn examples of the different morphological types.

3.6.1

Tiny words (isolating languages)

In an archetypical isolating language the word is virtually indistinguishable from the morpheme, for every word contains just one morpheme. Every morpheme is a free morpheme. There are no bound morphemes. Vietnamese comes close to this ideal:

[3.15]

Vietnamese

a.	Tôi	á	a	qua	bóng	vä	hn	a	da	tôi
	I	kick	past	class	ball	and	he	punch	past	me

'I kicked the ball and he punched me."

b.	Chúng	tôi	mua	a	g o
	Pl.	I	buy	past	rice

'We bought the rice.

Typically, the words are short and contain just one morpheme each. Almost every concept is expressed by a separate word. Look again, for example, at the treatment of past tense in verbs (e.g. punched, bought) and the plurality of we (plural plus first person).