1 Preliminaries

The description of a language comprises three major components: phonology, grammar and lexicon. The phonology describes the sound system: consonants, vowels, stress, intonation, and so on. The two most basic units of grammar are the word and the sentence: one subcomponent of grammar, called morphology, deals with the form of words, while the other, called syntax, deals with the way words combine to form sentences. The lexicon – or dictionary, to use a more familiar term – lists the vocabulary items, mainly words and idioms (such as red herring, give up, and so on), specifying how they are pronounced, how they behave grammatically, and what they mean. In this book we will confine our attention to the grammar, with only occasional passing mention of phonological and lexical matters.

On another dimension we can distinguish between the study of linguistic form and the study of meaning: all three of the major components are concerned with aspects of both. The special term semantics is applied to the study of meaning, and we can accordingly distinguish phonological semantics (covering such matters as the meanings expressed by stress and intonation), grammatical semantics (dealing with the meanings associated with grammatical categories such as past tense, interrogative clause, and so on) and lexical semantics (the meanings of vocabulary items).

The relation between form and meaning in grammar is by no means straightforward. This is one of the issues we shall need to consider in this introductory chapter, where the aim is to explain briefly the model or framework of grammatical description that we shall be using in the book and the methodological approach adopted. We begin with the question of how we can go about defining the various grammatical categories that will figure in the description – categories such as noun, subject, imperative clause, past tense, and so on: there will inevitably be a considerable number of them.

1. Grammatical categories: definitions and prototypes

It is important to distinguish two levels at which our grammatical categories need to be defined: the language-particular level and the general level. At the language-
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particular level we are concerned with the properties that characterise the category in the particular language under consideration, which in our case of course is English but which might equally well be French, Urdu, Vietnamese or whatever. At this level we investigate, for example, how nouns, verbs, adjectives, etc., behave differently in English sentence structure, how English distinguishes between the subject and object of a verb, and so on. At the general level, by contrast, our concern is with the properties that are common across different languages to categories such as noun, verb, adjective, subject, object.

To make the distinction more concrete, consider the part-of-speech analysis of the underlined words in the following sentences:

(1) i The boss had watched the secretary destroy the files
    ii The boss had witnessed the destruction of the files

At the language-particular level we will give the criteria that lead us to put all the words with solid underlining (boss, secretary, etc.) into one part-of-speech, and all those with broken underlining (had, watched, etc.) into a second. At the general level we will give the criteria that lead us to call the first class ‘noun’ and the second ‘verb’. We do not devise a fresh set of terms for each new language we describe but draw, rather, on a large repertoire of general terms: definitions at the general level provide a principled basis for applying these terms to the various categories that need to be differentiated in the grammatical description of particular languages.

Considerable confusion arises when this distinction of levels is not made, when what is really a general definition is in effect presented as though it were a language-particular definition – and this happens quite frequently in traditional grammar, especially traditional school grammar. For example, the standard traditional definition of a noun as ‘the name of a person, place or thing’ is commonly presented as though it provided the criterion for deciding which words in English are nouns (i.e. as though it provided a language-particular definition), whereas it should be construed as providing a criterion for deciding which word class in English should be called ‘noun’ (i.e. as part of a general definition). For when it is construed at the language-particular level, the definition is clearly unsatisfactory. Suppose we take ‘thing’, as it appears in the definition, as equivalent to ‘concrete object’. By this criterion destruction would be excluded from the class of nouns, as it obviously does not denote a concrete object; but in fact all grammarians include it in the noun class – because in terms of the way it enters into the structure of grammatical sentences it behaves like boss, secretary, etc. Nor does the definition fare any better if we say that ‘thing’ is to be interpreted in some abstract sense, since this simply makes it circular and unworkable. For we would have no way of determining whether a word was the name of a thing in this more abstract sense which did not presuppose that we already knew whether it was a noun. Thus the way we decide to assign destruction in (ii) and destroy in (i) to different classes is by noting, not that destruction denotes a thing while destroy does not, but rather that they differ in their grammatical behaviour.

In the first place, the verb destroy takes as ‘complement’ an expression like the
files, but nouns do not take complements of this kind: destruction takes a complement introduced by of. Secondly, destruction, like other nouns, enters into construction with the 'definite article' the, but we could not add the before destroy in (i). Thirdly, if we wanted to add a modifier, we would use an adjective with the noun destruction (e.g. the surreptitious destruction of the files) but an adverb with destroy (e.g. surreptitiously destroy the files). And so on. It is properties of this kind that must figure in our definitions of nouns and verbs at the language-particular level. At the general level we will reformulate the definition to avoid misinterpretation, saying that 'noun' is the part of speech which contains among its most elementary members those words that denote persons, places or concrete objects. Because it is a general definition, the fact that not all nouns in English denote persons, places or concrete objects does not invalidate it. Boss, secretary, files, destruction belong to the same part of speech in English because they are alike with respect to the kind of grammatical property mentioned above; this part of speech we then call noun because this is the one to which words denoting persons, places and concrete objects belong – words like boss, secretary, files.

As a second example, consider the category 'imperative clause'. Imperative contrasts with 'declarative' and 'interrogative', as illustrated in (2):

\[(2) \begin{align*}
\text{i} & \quad \text{Be generous!} & \text{Imperative} \\
\text{ii} & \quad \text{You are generous} & \text{Declarative} \\
\text{iii} & \quad \text{Are you generous?} & \text{Interrogative}
\end{align*}\]

An imperative clause is commonly defined as one that is used to issue a command or request. But it is easy to see from examples like (3) that this will not work as a language-particular definition.

\[(3) \begin{align*}
\text{i} & \quad \text{Have a good holiday} & \text{Imperative} \\
\text{ii} & \quad \text{Passengers are requested to remain seated} & \text{Declarative} \\
\text{iii} & \quad \text{Would you mind speaking a little more slowly?} & \text{Interrogative}
\end{align*}\]

The imperative (i) would normally be used to express a hope or wish rather than a request, and conversely (ii) and (iii) would normally be used as requests but are not imperative clauses. A language-particular definition of imperative clause for English will have to refer to the grammatical properties that distinguish clauses like (i) in (2) and (3) from declaratives like (ii) and interrogatives like (iii). Note, for example, the form of the verb in (2): be in (i), but are in (ii) and (iii) – and again it is are that we find in (3ii). Another difference is that the imperatives here have no subject, whereas the declaratives and interrogatives do (you or passengers). On the basis of such differences – which we will need to specify with a good deal more care and precision – we will assign clauses like (2i) and (3i) to a distinct clause class at the language-particular level, and we can draw on the fact that members of this class are CHARACTERISTICALLY used as commands/requests to apply the general term 'imperative' to the class that we have established.

Again, then, we will need to reformulate the traditional definition so as to make clear that it is to be interpreted at the general level: the term 'imperative clause' will be applied to a grammatically distinguishable class of clauses whose
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members are characteristically used as commands/requests. The fact that examples like (3i) are analysed as imperative clauses is now no longer a problem: they are assigned to the same clause class as (2i) because they are like (2i) in respect of their grammatical form, and this class is called ‘imperative’ because the great majority of its members are like (2i) in that they would most naturally be used as commands or requests.

‘A noun is the name of a person, place or thing’ and ‘An imperative clause is one that is used as a command or request’ are both examples of what are commonly called notional definitions – definitions based on the semantic properties of expressions, i.e. their meaning, rather than on their grammatical form. Notional definitions are unsatisfactory at the language-particular level because the relation between categories of grammatical form and categories of meaning is normally too complex for us to be able to define the former in terms of the latter. A central task for the grammarian is precisely to show how categories of grammatical form are related to categories of meaning; a notional definition at the language-particular level thus confuses the very things that we need to distinguish and relate.

Notice, moreover, that we will recognise a grammatical category in analysing a given language only if it is grammatically distinguishable from other categories in the language. To take a very obvious example, we will not recognise ‘pointed noun’ as a subclass of nouns containing words like pin or spire which denote pointed objects, because there is nothing grammatically special about such words: they are not grammatically distinguishable from words like circle or bed. A satisfactory definition or explication of a grammatical category must thus surely make reference to the kind of properties that justify its inclusion in our analysis, properties based on its distinctive grammatical behaviour; this a notional definition completely fails to do.

These objections to notional definitions apply, however, only at the language-particular level. At the general level we are concerned with naming and identifying across languages categories that have already been established by language-particular criteria, and here it is perfectly legitimate to make use of notional definitions. This is not to say that general definitions will be based exclusively on meaning, but normally they will be expected to include some reference to meaning. Although we do not find a one-to-one relation between categories of grammatical form and categories of meaning, we do not expect to find grammatical categories that have no connection at all with semantic categories. Rather they will have their basis in semantics, and a general definition will need to indicate what is the semantic basis for a given category. The grammatical distinction between declaratives, interrogatives and imperatives in English, for example, clearly has its basis in the semantic distinction between statements, questions and requests/commands; we can regard the former as arising through the grammaticalisation of the latter, the process of grammatical differentiation on the basis of semantic differences.

Some general categories are universal: all languages, for example, distinguish between nouns and verbs. Many, however, belong in only a subset of languages.
We contrasted (2ii) and (2iii) above as declarative vs interrogative, but the latter belongs more precisely to the category of closed interrogative, as opposed to an open interrogative like Where are they going? – and these categories of closed and open interrogative clause are not found in all languages. They apply to clause constructions whose members are characteristically used to ask questions where the set of answers is respectively closed and open: for Are you generous? the answers are Yes and No, whereas Where are they going? has an indefinite number of possible answers: To Canberra, To New York, and so on. All languages enable their speakers to ask these two kinds of question, but they do not all have distinctive clause constructions based on them. The distinction between statements and closed questions is grammaticalised in English by the different positions of the subject, but there are languages where it is expressed by a difference in intonation rather than by a difference in grammatical construction, and this type of language therefore has no grammatical category of closed interrogative clause. And similarly there are languages which have no grammatical distinction (as opposed to an intonational one) corresponding to that found in English between the open interrogative Where are they going? and the declarative They are going somewhere, and here the grammatical category of open interrogative clause will likewise be not applicable. It is for this reason that our general definitions incorporate a condition of grammaticalisation. Thus the general term closed interrogative will be defined as applying to a grammatically distinct clause class whose members are characteristically used to ask closed questions: the reference to a grammatically distinct clause class ensures that the definition will be satisfied only in languages where the semantic category is grammaticalised – grammaticalised more specifically in the structure of the clause. As we have observed, the grammaticalisation condition is in this example satisfied in English, but there are other categories – including one or two that figure in traditional grammars of English – where it is not. Thus we shall see in Ch. 5, for example, that English has no future tense; we can, of course, refer to future time in English, but the semantic category of future time (unlike that of past time and present time) is not grammaticalised in the tense system of English.

A second important distinction we must make is between prototypical and non-prototypical examples of a grammatical category. We very often find for a given category a central core of examples sharing a number of grammatical properties, with other examples exhibiting some but not all of these properties: the core of examples having the full set of properties we will then regard as the prototypical examples. For example, secretary, friend and idea are prototypical nouns, whereas perseverance and wetness are not: they differ from the prototype in not entering into contrasts of ‘number’, singular vs plural. Thus secretary contrasts with secretaries but there is no plural for perseverance. Perseverance and wetness certainly have enough properties in common with secretary, friend, idea to justify their assignment to the same part of speech, but the lack of number contrast makes them non-prototypical. A good deal further removed from the prototype is an example like umbrage “offence”: this is now restricted to the idioms take umbrage and give umbrage, so that it is unable to enter into many of the grammatical relations that
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are characteristic of prototypical nouns. Not only is there no contrasting form *unbrages, but we cannot have *this unbrage, *my unbrage, *the unbrage that had impressed us so much, and so on. (The asterisk, here and henceforth, indicates that what follows is ungrammatical, at least in the interpretation under consideration.) An example of a non-prototypical verb might be beware, as in Beware of the new boss. It is very different from a prototypical verb inasmuch as it does not enter into contrast with past and present tense forms – we do not have *He bewared of the new boss; there is nevertheless no doubt that it belongs to the part of speech ‘verb’ rather than to any of the others.

What such examples show is that grammatical likeness is often not an all-or-nothing matter but a matter of degree, and that we cannot expect to be always able to give a language-particular definition of a category in the form of a set of sufficient and necessary conditions for inclusion in the category – i.e. a set of properties such that an item will be included if and only if it has all the properties in the set. Instead we will often begin with definitions of the prototype and consider then how far beyond the prototype the category should be allowed to extend – and there may be a certain amount of indeterminacy or arbitrariness over precisely where the boundary should be drawn.

2. Words and lexemes

Syntax deals with combinations of words, we have said, morphology with the form of words. The term ‘word’, however, is used in a variety of senses, so that it will be helpful to begin with some clarification of how it will be used here. Consider then the sentences This tooth needs attention and These teeth need attention. Are tooth and teeth instances of the same word or of different words? In one sense they are clearly different: they differ in pronunciation, spelling, meaning and in their grammatical behaviour. In another sense, however, they are manifestations of a single element, and indeed they are traditionally said to be ‘forms of the same word’. We thus have two distinct concepts here, the second more abstract than the first: I will use word in the less abstract sense and introduce the term lexeme for the more abstract one. Thus I will say that tooth and teeth are different words, but forms of the same lexeme. Words will be represented in ordinary italics, lexemes in bold italics: tooth is the singular form of the lexeme tooth, while teeth is its plural form.

More precisely, we will say that tooth and teeth are different inflectional forms of tooth, and will speak of ‘singular’ and ‘plural’ here as inflectional properties. Similarly with verbs: sang and sung, for example, are respectively the past tense and past participle forms of the lexeme sing. The paradigm for tooth contains the two forms tooth and teeth, while that for sing contains sung, sung, sing and various others: verb inflection is a good deal more complex than noun inflection and we will be looking at it in detail in Ch. 3 – at this point it is sufficient to be aware of the concept of inflection.

The distinction we have drawn between word and lexeme makes our concept of
3 Constituent structure, classes and functions

word more precise, but there remains one further point to be clarified. Consider the pairs [The window was] clean vs [I'll] clean [the window] and [She drew some cash from the] bank [by the post office] vs [She lay on the] bank [of the river]. The two clean's are forms of different lexemes: the first is a form of the adjective clean, which has cleaner and cleanest as its other forms, whereas the second is a form of the verb clean, which has cleaned, cleans, etc., as its other forms. The difference between the two bank's is lexical rather than grammatical: they are different lexical items – i.e. different items of the vocabulary. I will distinguish between the term word used without qualification and lexicogrammatical-word in such a way that the former does not presuppose any lexical or grammatical analysis while the latter does. Given this terminology, the two clean's or the two bank's will be instances of the same word but of different lexicogrammatical-words. I shall have more occasion to talk simply of words than of lexicogrammatical-words and it will not be necessary for our purposes to investigate in detail the far from straightforward question of what kinds of grammatical and lexical criteria establish a difference between lexicogrammatical-words.

3. Constituent structure, classes and functions

Syntax is concerned with the way words (strictly, lexicogrammatical-words) combine to form sentences. The sentence is the largest unit of syntax, the word the smallest. But we need also to recognize units of intermediate size: instead of analysing a sentence immediately into a sequence of words we will assign it a hierarchical or layered structure. For example, the sentence *The boss made a bad mistake* may be broken down step-by-step as shown in (4):

(4)

```
                   The boss made a bad mistake
                    /            \
       the boss     made a bad mistake
               /     \
         the    a bad mistake
               \
            made   bad mistake
```

All the boxed units other than the topmost one are said to be constituents: a constituent is a part of some unit higher in the hierarchy. More specifically, we say the *boss* and *made a bad mistake* are the *immediate constituents* of the sentence, those that it is first divided into; similarly, *made* and *a bad mistake* are the immediate constituents of *made a bad mistake* and so on. (4) is said to be a representation of the constituent structure of the sentence.

Complementary to the concept of constituent is that of construction. All the boxed units in (4) other than the lowest ones, the words, are constructions: con-
struc- tions are made up of units lower in the hierarchy. Made a bad mistake, then, is both a constituent (by virtue of being part of the sentence as a whole) and a construction (by virtue of being analysable into the constituents made and a bad mistake); analogously for the boss and a bad mistake. The words, by contrast, are not syntactic constructions because they are the minimal units of syntax, and the sentence is not a constituent because it is the maximal unit of syntax. An equivalent but typographically simpler way of representing constituent structure is shown in (5), and this is the form that we shall use henceforth:

(5)

The constituent structure analysis identifies all the syntactic units in the sentence: we must next consider how they are to be further described. In the first place, we will assign them to syntactic classes on the basis of properties shared with other expressions in the language. The traditional parts of speech are special cases of such classes, namely word classes. Thus boss and mistake in (4) are analysed as nouns because they have the properties sketchily mentioned in §1 above as characteristic of that class. Similarly, made is a verb and bad an adjective; the and a are traditionally called the definite and indefinite articles respectively: here we will treat them as belonging to a class of ‘determinatives’, which also includes words like my, some, this. The classification of the larger units is for the most part derivative from that of the words. The boss and a bad mistake are ‘noun phrases’ because they each have a noun as their major or ‘head’ element, and similarly made a bad mistake is classified as a verb phrase because (for reasons we will go into in due course) we take the verb made as the head element. Finally, the topmost unit, the sentence itself, is classified as a ‘clause’. All these terms will need of course to be explained more fully, but for the moment we are using them simply for illustrative purposes. The classificatory information just outlined can be incorporated into (5) as follows:

(6)

1 Strictly speaking, the parts of speech cover both word classes and lexeme classes: we will take up this point in 2.3.
This of course is only a start: a more detailed analysis will need to recognise subclasses of various kinds. For example, boss and mistake are, more specifically, common nouns, contrasting with proper nouns, such as Mary or Paris.

In addition to assigning the units to classes, we will give an analysis in terms of syntactic functions, accounting for the grammatical role of units within the construction immediately containing them. In (6), for example, we say that the boss functions as ‘subject’ of the clause, while made a bad mistake is ‘predicate’; then within the VP that forms the predicate, a bad mistake is ‘object’ and made is ‘predicate’. (Note here the terminological distinction between ‘predicate’, the function of the verb, and ‘predicate’, the function of the verb phrase.) The boss and a bad mistake are both noun phrases, but they have different functions in this particular sentence: in A bad mistake would annoy the boss, by contrast, a bad mistake is subject and the boss object.

Syntactic functions make a very obvious contribution to the meaning – so that Kim shot Pat (with Kim subject and Pat object) means something quite different from Pat shot Kim (with Pat subject, Kim object). But as with other kinds of grammatical category, they cannot be defined notionally at the language-particular level. At this level we need to look at the strictly syntactic properties of the subject. In the most elementary kind of clause (what we shall call a ‘kernel’ clause) the subject precedes the predicate – while the object, if there is one, follows. Secondly, the first verb very often agrees with the subject. For example, in He likes it the verb likes agrees with the subject he: if we change singular he to plural they we must also change likes to like (whereas changing the object it to them would have no effect on the verb). Thirdly, a few pronouns such as I, he, they have contrasting inflectional forms, with the subject selecting the ‘nomina- tive’ form, I, he, they, and the object selecting the ‘accusative’ form, me, him, them: I shot him/He shot me.

‘Subject’, ‘object’ and ‘predicate’ are likely to be familiar from traditional grammar, but the latter does not provide a comparable set of terms for the functional analysis of smaller units. The main concepts we will use here are, in the first instance, ‘head’ for the function of the major element and ‘dependent’ for the subordinate elements, with various more specific terms then used where appropriate. Thus in a bad mistake the noun mistake functions as head, while a is determiner and bad modifier. Predicator and object in the structure of the VP are, as we shall later argue, special cases of head and dependent respectively – and so too indeed are predicate and subject in the structure of the clause.

Incorporating such functional information into (6) gives (7), overleaf, as the representation of the structure of our sample sentence. No function is assigned to the topmost unit because the question of what function an element has arises only when that element is part of a construction at the next higher layer in the constituent structure: the clause which forms the sentence as a whole in (7) has no function precisely because it is not part of any other syntactic unit.

The head position in a given class of phrase is always filled by the same class of smaller units: the head position in an NP is always filled by a noun, the head (predicator) position in a VP by a verb, and so on. But very often a dependent posi-
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Clause

Subject: NP

Predicator: VP

Object: NP

Detn: Det

N

Head:

V

Adj

N

made

bad

mistake

the

boss

The diagram illustrates the structure of a clause, with the subject being a noun phrase (NP), the predicate as a verb phrase (VP), and the object as another noun phrase. In the example given, the subject is the noun phrase "the boss," the predicate is the verb phrase "made," and the object is another noun phrase "a bad mistake." This analysis can be filled by expressions from different classes. For example, such a verb as know can take as object either an NP, as in [They] knew the result, or a subordinate clause, as in [They] knew that it had failed. The same goes for the subject of a verb like surprise: compare The decision surprised everyone (subject position filled by the NP the decision) and That he was allowed to stay on surprised everyone (subject position filled by the subordinate clause that he was allowed to stay on). This complex relation between function and classes reinforces the need to keep them conceptually and terminologically distinct.

Before concluding this section, it is worth observing that many sentences are ambiguous and very often the ambiguity is attributable to the fact that the same sequence of words has two (or more) analyses of the kind we have been discussing. An elementary example is Liz attacked the man with a knife, whose constituent structure (simplified slightly) can be as shown in (8) or (9).

In (8) with a knife enters into construction with the and man, so that the man with a knife forms a single constituent (an NP functioning as object of attacked): under this analysis the meaning is “Liz attacked the man who had a knife.” In (9), by contrast, attacked the man with a knife has three immediate constituents, attacked (predicatior), the man (object) and with a knife (‘adjunct’): there is here a direct structural relation between with a knife and attacked, so that with a knife