

CATEGORIES IN LANGUAGE

5.1 NON-RELATIONAL CATEGORIES

This chapter will survey the types of category that need to be referred to in a grammar. As we should now expect, some of these categories are relevant to cognition outside language but some are probably not, though they may turn out to be particular cases of more general categories that are relevant to non-linguistic thought.

One of the most fundamental distinctions applied to categories is that between relational and non-relational categories. Both types are equally important, but most of the chapter will deal with relational categories because these seem to be more varied than non-relational categories. In this first section, then, we dispose of the latter.

The main non-relational category referred to in a grammar is presumably **word**, but as we saw in section 4.7 this is a particular case of **speech** (which in turn is a kind of communication, which is a kind of action, etc.), which is also unique to language (by definition). A grammar needs to refer to various kinds of speech, including words, and **word-strings**. For example, in sentence (1a) the brackets enclose word-strings whose boundaries are controlled by the grammar.

(1a) Fred {[is writing an article] and [has nearly finished]}.

(1b) Fred drinks {[coffee at eleven] and [tea at four]}.

The notion 'word-string' corresponds closely to 'constituent', but it is used in WG only in the analysis of coordination so as to avoid the conflicts raised by examples like (1b), where the constituents demanded by coordination are not phrases as defined by dependency.

Special sub-types are recognized for both 'word' and 'word-string' – 'noun', 'verb', etc. for 'word', and 'coordination' for 'word-string' – and these sub-types are further subdivided. One kind of sub-type of 'word' which deserves special mention is the lexical item, such as the lexical item DOG. My convention for naming these is to capitalize the standard orthography of the base form. The relations among these various categories can be seen in figure 5.1.

The hierarchy of word-types, whose peak is 'word', is the basic system of classification for words. However, this is supplemented by a system of



morpho-syntactic (Chomsky 1965). Concepts – such as the 'number of PEOPLE' possible values, which 'plural'). As we saw in names of word-types even 'singular CAT' (number is singular).

Feature-values are structure. The morphological category 'affix', with morpheme Z, found in so on. 'Affix' is a part believe is essential for a status of 'morpheme' in 'word', because the seems that there is no list the possible word-segments which happen but since they can be separately. (It is possible Latin, some stem concepts which are the stem morphemes

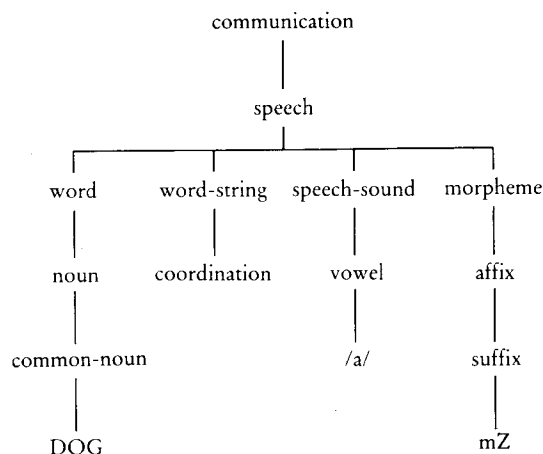


FIGURE 5.1 Sub-types of 'speech'

morpho-syntactic features, which make cross-classification possible (Chomsky 1965). What I shall call 'features' are in fact relational concepts – such as the concept 'number', which is used in expressions such as 'number of PEOPLE is plural'. However, each feature has a range of possible values, which I shall call 'feature-values' (e.g. 'singular' and 'plural'). As we saw in section 2.3, feature-values may be combined with the names of word-types to name 'compound concepts' like 'singular noun', or even 'singular CAT' (meaning 'an instance of the lexical item CAT whose number is singular').

Feature-values are assigned to words on the basis of their internal structure. The morphological rules which do this have to refer to the category 'affix', with various subcategories – 'suffix', the suffix 'mZ' (i.e. the morpheme Z, found in plural nouns and singular present-tense verbs), and so on. 'Affix' is a particular kind of 'morpheme', a category which I now believe is essential for a grammar (contrary to Hudson 1984). However the status of 'morpheme' is much more like that of 'word-string' than that of 'word', because the majority of morphemes are stem morphemes and it seems that there is no more need to list these in the database than there is to list the possible word-strings. This is because a stem morpheme is a string of segments which happens to be the value for the stem of some lexical item, but since they can be derived from lexical entries there is no need to list them separately. (It is possible that in languages with declension classes, such as Latin, some stem morphemes are also recognized as distinct, named, concepts which are assigned to more general sub-types of morpheme – e.g. the stem morphemes in *port-a*, 'door', and *port-us*, 'port', could be

distinguished as 'port-1' and 'port-4', and these could be assigned to declension-types 1 and 4 respectively.) Affixes, on the other hand, do have to be listed as such, together with their internal phonological structure, precisely because this information is not available elsewhere in the grammar.

The general concept 'speech' thus breaks down into a number of sub-types which include 'word', 'word-string' and 'morpheme' (with a special sub-type, 'affix'). Another kind of speech is the minimal segment, the 'speech-sound', whose sub-types are the various phonemes and phoneme-types. It would not be surprising to find that a feature-system is needed for speech-sounds comparable with the morpho-syntactic features for words, though no such system seems to be needed for word-strings or morphemes. Taylor (1989, chapter 12) argues persuasively that phoneme categories show the usual prototype effects, so we may expect them to fit comfortably within the general classification framework of WG.

A further similarity between words and speech-sounds is that they both seem to be interrelated syntagmatically in terms of dependency (as claimed not only in Dependency Phonology – e.g. Durand 1986 – but also in other theories, such as the theory of Government and Charm Phonology – Kaye et al. 1988). In the case of words, the dependency structures define syntactic phrases, whereas in phonology they define units such as the syllable, which is a 'phrase' whose root is a vowel. Moreover, just as word-strings need not coincide with syntactic phrases (see the comments on (1b) above), so morphemes need not coincide with syllables (e.g. the morpheme *feel* in *feeling*, whose clear /l/ presumably shows that it is syllable-initial, although this puts it in the same syllable as the suffix).

The general conclusion seems to be, then, that 'word' and 'speech-sound' have a more basic status, as types of 'speech', than do 'word-string' and 'morpheme'. The basic status lies in the fact that the grammar must contain a list of all the particular words (i.e. lexical items) of the language, and also of all the particular speech-sounds (i.e. phonemes). This is not the case with either word-strings or stem morphemes, since these are defined by the grammatical rules that refer to them and therefore there is no need to list them separately from these rules. The subdivisions of 'speech' are summarized in figure 5.1.

At present WG has nothing substantive to say about phonology, so there seems little point in trying to present examples in phonological transcription. Instead I shall follow the usual – and in some respects dangerous – practice of giving examples in standard orthography, and I shall even discuss morphological structures in terms of orthography rather than phonology. This is dangerous because it can lead one to forget that words are basically examples of speech and that their orthographic form is clearly secondary. However this presentation is itself written, and there are obvious advantages in dealing with orthographic patterns rather than phonological ones, which I hope will outweigh these dangers.

One consequence of this is that a letter, which is a basic category, is not related to a syllable, which is a different concept. A letter is not a syllable, and a syllable is not a letter. This is a fact which we should explore further. Nor should we be surprised that some letters are not syllables – and vice versa.

This completes the first part of the paper. The next part of the paper is devoted to the question: 'speech' (and in what extent can we claim that it is a word). It will be noticed that some of the examples given are – notably, 'word' – and some are not. This is something an instance of the difference between words and speech-sounds. The difference between words and speech-sounds is that words are related to written language because they have a structure in terms of space.

On the other hand, words are potentially more interrelated with languages without word-strings. Languages without morphemes are also languages without morphemes. As for feature-values, they are related to morpho-syntactic features. The fact that at least some letters are related to feature-values and letters is thus a fact which is not true of things outside language?

As far as letters are concerned, it is clear that they can be represented visually. The letters of language, for example, are related to geographical and musical. It is clear that we can find parallels outside language. The feature-values found in language (e.g. 'singular' and 'plural', so the feature-value 'male' is a feature-value, just like 'female').

Regarding 'word-string' there are many parallels in the structure of words and when they are combined into bar-lines; this parallels the structure of speech-sounds into syllables. It would then be the notion 'time' which is an integral number of bars. When we consider it would not be too surprising if there were non-linguistic parallels to the structure of words. We can conclude, then, that all the categories related to language are either related to the structure of words or to the structure of speech-sounds.

One consequence of this decision is that we must recognize 'letter' as a basic category. A letter, unlike a speech-sound, is not a type of speech; it fits into a different conceptual hierarchy of visual patterns which we shall not explore further. Nor shall we consider further the range of written symbols which are not letters – punctuation marks, numbers and so on.

This completes the list of non-relational categories that are specific to language: 'speech' (and its various sub-types), 'feature-value' and 'letter'. To what extent can we claim that these categories are unique to language? It will be noticed that some of them are simply part of the definition of language – notably, 'word' and 'speech-sound' – so we cannot draw any conclusions from them as to the uniqueness of language: we would simply not call something an instance of human language if we could not analyse it in terms of words and speech-sounds. (Notice that speech-sounds are relevant even to written language because almost any word that is written down has a structure in terms of speech-sounds.)

On the other hand, word-strings, morphemes, feature-values and letters are potentially more interesting, because it is possible to imagine human languages without word-strings (i.e. without coordination), and there are languages without morphemes (as opposed to words), and without letters. As for feature-values, they are presumably needed only where there are morpho-syntactic features, so uninflected languages must lack these. The fact that at least some languages have word-strings, morphemes, feature-values and letters is thus not just a matter of definition. Do we find such things outside language?

As far as letters are concerned, language is not the only conceptual system that can be represented visually; there are visual-display systems, parallel to the letters of language, for many types of knowledge (e.g. mathematical, geographical and musical). Likewise for feature-values – here too we can find parallels outside language, although of course the particular feature-values found in language (e.g. 'past', 'plural', 'superlative') are unique to language. For example, just as the feature 'number' ranges over the values 'singular' and 'plural', so the feature 'sex' ranges over 'male' and 'female', so 'male' is a feature-value, just like 'singular'.

Regarding 'word-string' and 'morpheme', it is tempting to look for parallels in the structure of music, where individual note-types are listable, and when they are combined they can be grouped into 'phrases' by bar-lines; this parallels the organization of words into phrases, and of speech-sounds into syllables. The parallel for word-strings and morphemes would then be the notion 'tune', which need not be a single bar, or even an integral number of bars. Whatever the merits of this particular comparison, it would not be too surprising if further research produced clear evidence for non-linguistic parallels to the notions 'word-string' and 'morpheme'. We can conclude, then, that all the concepts considered so far which are specific to language are either related to language by definition, or may be particular

cases of more general types of concept for which parallels can be found outside language.

In addition to these specifically linguistic concepts, a grammar must refer to a great many other kinds of non-relational concept, in dealing with the meanings and deictic or sociolinguistic properties of words – to general categories such as ‘person’, ‘time’ and ‘set’, and to particular categories such as ‘Scotsman’, ‘morning’ and ‘family’. We discussed some of these categories in chapter 4, and we shall refer to others as the need arises in later chapters.

5.2 AN OVERVIEW OF RELATIONAL CATEGORIES

We now turn to relational concepts. As mentioned earlier (section 2.2) these are only one of the two means for expressing relations, the other way being by means of predicates, so we can start with a category that has been used in one application of WG as an alternative to a predicate. The relational concept is ‘quantity’, and the corresponding predicate is ‘has’. Thus [1a] and [1b] are alternative ways of expressing the same fact, given that ‘[1–1]’ defines the minimum and the maximum of the quantity.

- [1a] tensed verb has [1–1] subject.
 [1b] quantity of subject of tensed verb = [1–1].

It is hardly necessary to point out that ‘quantity’ could be applied, in just the same way, in the analysis of non-linguistic concepts – e.g.

- [2a] person has [1–1] mother.
 [2b] quantity of mother of person = [1–1].

Another very general concept is ‘structure’, which is used for the internal structure of an event. As we have already seen, speech inherits the properties of events, including the fact that they have an internal structure, so this concept plays an important part in the grammar. One area in which it is applied is in defining the internal structure of a word, where a distinction is made between two sub-types of ‘structure’, ‘whole’ and ‘stem’.

- [3a] whole of FOR = <for>.
 [3b] stem of CAT = <cat>.

The use of ‘stem’ allows us to relate stems and affixes, as we shall see in the next section. However, ‘structure’ is also applied to word-strings, which are analysed in terms of constituent structure. Here ‘whole’ is contrasted with

‘part’, a more general concept which is further subdivided into these categories can be seen in the notions ‘structure’, ‘whole’ and ‘part’. No illustrations are given.

The concept ‘whole’ is used for the whole of a word or phrase outside language (as in the case of the word ‘whole’ between two types of structure). The use of these terms will be seen when the referent is a mental concept (as in the case of an imaginary one). The concept varies from occasion to occasion referred to. A non-relational sense is easy to find in the word ‘three’, but its referent is a mental concept.

A related concept is ‘part’, which is used for a part of a set; this is the case in section 4.7, but the concept is clearer. This turns out to be the case where the referent is a mental concept concerned. For example, the word ‘cat’ – i.e. each one of the cats – is a semantic treatment of the concept ‘cat’, thinking, and not of the cats themselves whenever I consider them (as in the case of cats on my desk) I am concerned with the concept.

A rather difficult concept is ‘companion’, which is another word for the concept ‘whole’ governed directly by the concept ‘whole’. The concept ‘companion’ relates to the concept ‘whole’ in that some of the concepts in the language.

The discussion of the concept ‘companion’ when applied to a word or phrase need for any further discussion should be included in the concept of completeness. It is a non-relational concept, linguistic and non-linguistic.