

I What is morphology?

Branches of linguistic theory: morphology as the study of 'forms of words'. Morphology in antiquity, and in nineteenth century: flecational, isolating and agglutinating languages. Morphology in structural linguistics: fusion of morphology with syntax (Bloomfield, Chomsky); and with generative phonology. Revival of morphology since 1970s; morphology and historical linguistics.

The scope of morphology. Double articulation of language; grammar vs phonology. Morphemes. Categories and inflections: inflections as markers, alternation of inflections. Compounds, word-formation. Limits of analysis: where should the division of words stop?

Morphology and general linguistic theory. Is a general theory possible? Theories of motivation; of laws and universals. Problems of universality; different models appropriate to different languages.

In the traditional view of language, words are put together to form sentences. The words differ from each other in both sound and meaning: *clock* and *gong*, for example, denote different sorts of object and are distinguished by different consonants at the beginning and end. Hence the sentences too will differ in sound and meaning, *The clock has been sold* being distinguished from *The gong has been sold* as a function of the words *clock* and *gong*. However, not only the words but also the construction and the 'forms of words' will vary from one individual sentence to another. *The gong has been sold* has a Passive construction, with *the gong* as Subject; contrast the Active *He has sold the gong*, in which it is Object. In both sentences, *gong* is Singular, and when it is the Subject the Auxiliary is *has*. Contrast *The gongs have been sold*, where *gongs* is Plural. In such examples, the choice between different forms of words – between the endings of *gongs* and *gong* on the one hand and *have* and *has* on the other – varies independently of the variation in construction (Passive versus Active). But in other cases the construction itself requires that a word should be in one form rather than another. For example, in *He hit them*, the word *them* is Object and must therefore appear in what is traditionally called the 'Accusative' Case. Contrast *They have sold the gong*, where the same Pronoun is Subject and must

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therefore appear as the 'Nominative' *they* instead. In describing a language all four varying facets – sounds, constructions, meanings and forms of words – have to be given due attention.

In the same spirit, the field of linguistic theory may be said to include at least four major subfields. The first is concerned with the study of speech sounds, a subject which in modern structural linguistics is handled on two theoretical levels. Of these the level of **phonology** is concerned with the functioning of sound-units within the systems of individual languages, whereas that of **phonetics** is concerned with the nature and typology of speech sounds in themselves. The second major subfield is that of **syntax** (from a Greek word meaning a 'putting together' or 'arranging' of elements), which traditionally covers both the constructions of phrases and sentences and also the features of meaning which are associated with them. For example, the Interrogative (*Has he sold the gong?*) is different both in construction and in meaning from the Non-Interrogative or Declarative (*He has sold the gong*). The third subfield of **semantics** then reduces to the study of word meanings – to which perhaps we may add the meanings of idioms (see chapter 5) or of special phrases generally. Traditionally, the problems of semantics have often been assigned to the dictionary. However, the oppositions of word meanings also lend themselves to structural analysis, most notably in specific 'semantic fields' such as those of kinship, colour terms, occupations, types of skill and knowledge, and so on. In addition, the limits of syntax and semantics have frequently been disputed both within and between the various structural schools. According to some, constructional meanings would also belong to semantics – syntax being reduced to the formal distribution of words and groups of words. Other writers make a further distinction between semantics, as a study of the meanings of words and sentences in the abstract, and **pragmatics**, as that of sentences used in specific situations. According to others, syntax itself is partly a matter of word meanings: for example, it is implicit in the meaning of 'to sell' or 'to hit' that it can take an Object. On many such issues, the debate continues in full vigour.

The last major subfield is that of **morphology**, and it is this that forms the central theme of this book. The term itself is a Greek-based parallel to the German *Formenlehre* (the 'study of

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forms'), and like many linguistic terms is nineteenth-century in origin, the first references for this sense in the *OED* being from the 1860s (s.vv. 'morphology', 'morphological', 'morphologically'). As a biological term it is older by at least thirty years (the first references for English in the *OED* being to 1830), and its linguistic sense was at first conceived in the same intellectual framework. It must be remembered that the science of language was at that time influenced by the evolutionary model of Darwin's *On the Origin of Species* (published in 1859). But the parallel between linguistics and biology is now seen as spurious. Philologists have long given up the hope (expressed so seductively in Max Müller's Oxford lectures of 1889) that by studying the 'evolution' of words in Indo-European, and their 'four or five hundred' basic roots in particular, the 'world-old riddle of the origin of language' can be solved.¹ On a less fanciful level, we no longer think of languages as organisms, which are born and grow and compete with each other. 'Morphology', therefore, is simply a term for that branch of linguistics which is concerned with the 'forms of words' in different uses and constructions. What precisely this means will be distinguished more carefully in the next section of this chapter.

The analysis of words has had varying fortunes in twentieth-century linguistic theory. In antiquity it was paramount: both Latin and Greek show complex variations in the forms of words, and their classification, into Cases such as Nominative or Accusative, into Numbers such as Singular and Plural, into Tenses such as Present, Past Perfect and so on, took the lion's share of ancient grammars. As we will see in chapter 10, ancient ideas are still worth debating. In the nineteenth century it lay at the heart of comparative linguistics. In the light of the ancient Indian analysis of Sanskrit, itself a masterwork in our field, it was possible to confirm and make precise its relationship to the classical languages of the West. As the understanding of other languages grew, it became attractive to group them into types. In Latin or Greek, each word is a whole but may subsume a range of distinguishable meanings. For example, a Verb has a time

¹ F. M. Müller, *Three Lectures on the Science of Language and its Place in General Education* (repr. Benares, Indological Book House, 1961), p. 32.

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reference (Past, Present or Future); it may identify an action from the viewpoint of one who performs it (Active) or one who experiences it (Passive); it will predicate the action of the speaker (1st Person), or of the person spoken to (2nd Person), and so on. These are the defining instances of what was called, and is still called, a **flectional** language. In Chinese, each word seemed invariable and each meaning seemed to have its own word. It was therefore identified as an **isolating** language. In Turkish, which we will look at in some detail in a later chapter, words may subsume several meanings but they are not fused into a whole. Its type was accordingly **agglutinating**. This typology is partly from the same source as the Darwinesque froth which we referred to in the last paragraph. But it is easy to skim off what was wrong and retain what was worthwhile.

In the twentieth century many structural linguists have attached far less importance to the word. One reason is that they could not devise an operational definition of it. As we will see in chapter 11, there is no single watertight criterion which will identify word boundaries in whatever language. Another reason is that part of morphology was assimilated to syntax. Take, for example, the word *trying*. It consists of a form *try-* followed by a form *-ing*: in phonetic transcription, [traɪ] + [ɪŋ].² Likewise *tried*, or [traɪd], consists of [traɪ] followed by [d]. Now take the sentence *They are trying hard*. It consists of the word *they* followed by three further words: *they* + *are* + *trying* + *hard*. At either level we might apply the terminology that Bloomfield used in his great work of the 1930s (BLOOMFIELD, ch. 10). In *They are trying hard*, the form *hard* is 'selected' and is 'ordered' after *trying*. That is the only possible order: one would not say, for example, *They are hard trying*. In *trying*, the form *-ing* is likewise selected and is ordered after *try-*. That is again the only possible order: there is no word *ingtry* or [ɪŋtraɪ]. If we limit ourselves to concepts of selection and order, it seems that both the word and the sentence can be analysed in the same way.

Bloomfield himself retained a division between morphology and syntax. But other and later structuralists were more radical. In Europe, Hjelmslev firmly rejected it. In the United States,

² Transcriptions of English (Southern British 'Received Pronunciation') will normally follow Gimson's revision of Daniel Jones's pronouncing dictionary (GIMSON).

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Harris's 'morphology' covered formal patterning at both levels, and the word, with other familiar units such as the syllable and the sentence, was demoted to vanishing point (HARRIS). According to a form of grammatical theory that had emerged by the beginning of the 1960s, the word was merely one term in a hierarchy of units. In *They are trying hard*, the words *are* and *trying* (two units at 'word level' in the overall grammatical hierarchy of English) would constitute a phrase *are trying* (one unit at 'phrase level'). At the same level, *they* and *hard* are both one-word phrases. Likewise, at a higher level, the three phrases *they*, *are trying* and *hard* form a clause (one unit at 'clause level'). That clause is, in turn, the only element of a one-word sentence. Now syntax traditionally deals with the last three rungs in this hierarchy (phrase, clause and sentence). Morphology traditionally deals with the word. But just as the phrase *are trying* has as its elements *are* and *trying*, so the word *trying* has as its elements *try-* and *-ing*. The word *hard* has no internal structure; neither has the phrase *hard*. If we put things in this way, the natural conclusion is that morphology has no claim to separate treatment, any more than, if we may coin some barbarisms, 'phrase-ology' or 'clause-ology'.

The late 1950s also saw the development of transformational grammar. In Chomsky's first book (CHOMSKY, *Structures*), Harris's influence was still very strong, and in its treatment of the word, as in some other matters, it is an apotheosis of his ideas. With Harris, Chomsky began by assuming that a word like *trying* was a sequence of two separate units (*try-* + *-ing*). In *They are trying hard*, these are part of a larger sequence which is superficially four words. But let us now compare *are trying* with, for example, *have tried*. In both we can replace *try-* with, for example, *cry* or *wail*: *are crying* or *have cried*, *are wailing* or *have wailed*. But in *are trying* we cannot simply replace *are* with *have*: there is no sentence *They have trying hard*. The *are* and the *-ing* go together, and are opposed as a whole to the *have* and the *-ed* of *have tried*. In the same way, the more complex *have been trying* may be analysed into the three interlocking members *try-*, *be* and *-ing*, *have* and *-en*. The reason, again, is that in standard English one cannot say [*They*] *have being trying* (replacing *-en* in the member *have* + *-en* with *-ing*), or *have be trying* (dropping *-en* altogether), or *been trying* (dropping *have* but holding everything

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else constant), and so on. *Have* and *-en*, *be* and *-ing* are pairs of dependent variables.

This analysis is natural on semantic grounds also. In *are trying*, the *are* and *-ing* together mark what may be called the 'Present Progressive' Tense, as opposed, for example, to the Simple or Non-Progressive Present in *They try hard*. Likewise, the *have* and *-ed* of *have tried* mark what is normally called the 'Present Perfect', and in *have been trying* we have a combination of the Auxiliaries, with associated *-en* and *-ing*, that marks both 'Perfect' and 'Progressive' together. At an abstract level it is these concepts of Tense ('Present', 'Progressive', 'Perfect') that the analyst is above all concerned with. But at the same time the Verbal element *try-* or *tri(e)-* (*trying* and *tried* shorn of their endings) may be linked on its own with the separate word *hard*. *Hard* is an Adverb that sits easily with *try-*, whereas others (e.g. *mellifluously* or *away*) sit with difficulty at best; this fact is independent of the remainder of the Verb phrase, *They have tried away* being as awkward as *They are trying away*, but *They have gone away*, by contrast, being as natural as *They are going away*. The rest of the phrase may even be absent in certain Non-Finite constructions (*[We have made them] try hard*), co-ordinate structures (*[They'll try, and] try hard*), and so on. One cannot find a converse case in which *try-* is dropped from the phrase instead (*are -ing hard* or *are hard-ing*). Now *try-* and *hard* must, of course, be recognised as independent variables. But in a weaker sense they still go together against *are* and *-ing*.

We thus arrive at an analysis which cuts clean across the conventional boundaries between words. The construction is no longer *were + trying + hard* (two-word Verbal phrase and Adverb *hard*), but rather [*are -ing*] + [*try- hard*] or – we might be tempted to say – '*try hard*' in the Present Progressive. A few years later, Chomsky introduced a theory of grammar in which 'deep' syntax was distinguished from 'surface' syntax. It was only in the surface structure of this sentence that *trying* would be established as a unit. In deep structures this and many other words would be dismembered. Their parts were independently linked to whatever other elements they might be judged to go with, whether these were whole phrases, or words on their own, or the disjecta membra of other words.

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But that was not all. For if a large part of morphology was by then assimilated into syntax, the same school arbitrarily assigned the rest of it to phonology. In Chomsky's account, a grammar or **generative grammar** was a series of rules relating meanings of sentences to the phonetic forms of sentences. These rules were of several sorts: for example, there were rules which described deep structures and other rules which related deep structures to surface structures. The term 'phonology' was then applied to a further series of rules, which in turn related surface structures to phonetic forms. One partial surface structure is, for example, *try- + -ing*. From that the rules of phonology, or specifically **generative phonology**, would derive a phonetic form which, if it is to represent my own speech, might begin with a rounded affricate, followed, after the [ɹ] glide, by a long monophthong. The details of all this are water under the bridge. What is important is that, by definition, Chomsky's scheme of grammar had no place for morphology. A part of grammar that had traditionally had its own rules and its own structures was eaten up completely by transformational syntax on the one hand and generative phonology on the other.

So far as structuralist theories were concerned, morphology was at an all-time low when I wrote the first edition of this book. But since then its standing has been restored. This is due, in part, to the disintegration of the classical Chomskyan scheme; by the end of the 1970s, it was clear that one could not cram everything about a language into a series of unidirectional rules relating successive levels of structure. But another factor is the renewed interest in historical linguistics. In its heyday, structuralist theory had been either primarily or exclusively synchronic. It was assumed, firstly, that a given state of a language is best studied in abstraction from its history. That step was, in itself, spectacularly fruitful. But a second assumption, for which authority could also be found in Saussure, was that changes from one state to another are individual, isolated events. Therefore a theorist might proceed without accounting for them. We may distinguish two structuralist attitudes towards diachrony. For some scholars, it belonged to another discipline: in HARRIS, p. 5, 'descriptive linguistics' explicitly excludes it. For others, a synchronic theory might help to explain changes: one thinks immediately of the

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work of Martinet on diachronic phonology.³ But it did not have to do so. A theory of language was not rejected merely because the insights of historical philologists contradicted it.

By the beginning of the 1980s this spurious wall between linguistic theory and philology was in ruins. But it was then very difficult to pretend that morphology was not there. To a historian, a morphological change is clearly different from, in particular, a sound change. The latter is phonetically natural and it often has a purely phonetic cause. It will also tend to operate regardless of grammatical categories. But a morphological change is typically motivated by analogy, for which parallels in grammar are the mainspring. By contrast, its phonetic character is irrelevant. Let us take two simple illustrations which will underline these differences. Firstly, in my speech and that of many other speakers of British Received Pronunciation, the triphthong [aɪə], as in *fire*, is monophthongised. Phonetically this is very natural, a more complex articulation being averaged to a simpler. At the same time, it does not respect the grammatical class or structure of the words involved. Thus it applies to Nouns and Verbs (*tyre* and *tire*), to the Comparative form of an Adjective (*higher*), to Nouns derived from Verbs (*buyer*). In both respects it is a typical sound change. Secondly, in some dialects of English a Past Tense *dove* has replaced *dived*: the formal relationship between Past and Present was apparently remodelled on the analogy of *drove* and *drive* or *throve* and *thrive*. Conversely, a child can easily say *drived* instead of *drove*. In explaining such alterations, one does not ask whether the phonetic change (of [aɪvd] to [əʊv] or [əʊv] to [aɪvd]) is inherently plausible. What matters are its morphological conditions. To a historian of languages these differences are fundamental. But they are precisely those which, in a synchronic context, the generative phonologists forgot or ignored. It is not surprising that when their notions were applied to diachrony the experiment rapidly went the way of all follies.

Our understanding of syntactic changes is far less secure. But one motivating principle is that, if two elements stand in a close semantic relationship, they will also tend to be adjacent in sentences. For example, the category of Prepositions in European

³ A. Martinet, *Economie des changements phonétiques* (Berne, Francke, 1955).

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languages has developed from what may prehistorically have been an independent class of Adverbs. These came into closer relationship with Nouns or Noun Phrases and, as part of the same process, they became fixed in a position before Nouns or Noun Phrases. However, this principle does not apply to alleged syntactic elements within words. For example, there is no pressure in English for the *-ing* of *are trying* to move nearer to *are*. In discussing this phrase, I have tried to give a fair account of the original Chomskyan argument. But in historical linguistics it is misleading to think of the word as no more than a superficial unit. In the history of English the verb 'to be', as a whole, has developed into an Auxiliary which stands in a grammatical relationship to, among others, the *-ing* forms of verbs, also as wholes.

Diachronic morphology will not be treated systematically, since it is covered in another book in this series (BYNON). But it is one very good reason for taking the field as a whole more seriously than many structuralists, Chomskyan and pre-Chomskyan, once took it.

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So far I have merely hinted at the subject-matter of morphology; and, to some readers, it may seem that I have allowed these introductory paragraphs to run ahead of the argument. Let us therefore get back to basics. If we wish to begin with a definition, we can say that **morphology** is, briefly, the branch of grammar that deals with the internal structure of words. But although the word is a unit which is familiar in our culture, the notion that it has an internal structure is not. To put the definition in context, we will have to begin by looking more generally at different levels of linguistic patterning.

One of the most important properties of human language is the one that we shall describe as that of **double articulation**. Another common way of referring to it is to say that language has a **dual** structure, or that as a form of communication it has the property of **duality**. Any simple example in speech or writing will make

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this characteristic clear. If we take the first sentence of W. B. Yeats's 'Sailing to Byzantium':⁴

That is no country for old men

we can say, first of all, that it consists of seven words, *that, is, no* and so on. These combine to form phrases: *old men* is one phrase, and according to most writers would itself be part of a larger phrase *no country for old men*. Such phrases and clauses are articulated according to definite rules. If we put the final Noun into the Singular:

That is no country for old man

the result can be understood and could conceivably be poetry, by some standards. But strictly the Singular phrase (*old man*) ought to have an Article. The sentence could be intuitively corrected – say to the form:

That is no country for an old man

– and that would be more in accordance with English syntax. It is the job of the linguist to discover and elucidate these rules, distinguishing them from patterns of style etc. and testing their adequacy against the actual facts of usage.

This is the first level of organisation – the **first** or **primary articulation** of language – in which words or similar elements are related to each other in syntactic patterns. It is this that is referred to as the level of syntax or of grammar – the term 'grammar' being used here in the most restricted of its senses in linguistics. But the words *that, is* and so on have another internal organisation of their own. *That* consists of four separate letters, *t, h, a* and *t*; when spoken, [ðæt], it can be analysed into a consonant, vowel and further consonant which are assigned to the phonemes symbolised by 'ð', 'æ' and 't'. Likewise *is* [ɪz] may be analysed into two letters or two phonemes, and so on for the remainder. The units which are basic to the primary articulation of language are thus distinguished and identified by combinations of smaller units, letters or phonemes. Moreover, these combinations are in turn subject to rule. A native English word cannot begin, for example, with the consonants *cv* [kv], although it could begin

⁴ From *The Tower* (1928); in *Collected Poems*, 2nd edn (London, Macmillan, 1950), p. 217.