Questions

1 Suggest at least three properties of language which are rare or absent in animal communication.
2 What is meant by **creativity**?
3 What is meant by **structure dependence**?
4 Work out how many ways the words *surprisingly*, *eggs*, *eat*, *elephants*, *large*, *will*, *sometimes* can be arranged to produce well-formed English sentences.
5 Suggest some reasons why people talk.

03 The study of language

This chapter sketches the main directions linguistics has taken in the past two centuries, and makes some predictions about future trends.

The discipline of linguistics can be likened to a pathway which is being cut through the dark and mysterious forest of language. Different parts of the forest have been explored at different times, so we can depict the path as a winding one.

As Figure 3.1 shows, there have been three major directions in linguistics in the past two centuries. Let us discuss each of these in more detail.

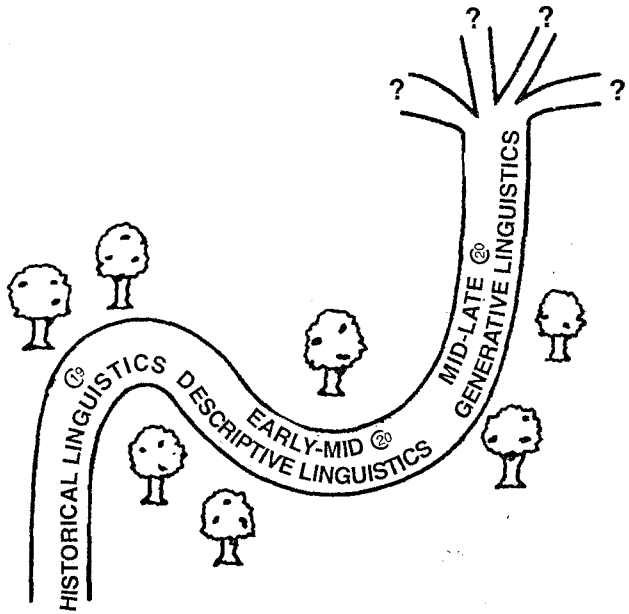

figure 3.1

Nineteenth century: historical linguistics

Before the 19th century, language in the western world was of interest mainly to philosophers. It is significant that the Greek philosophers Plato and Aristotle made major contributions to the study of language. Plato, for example, is said to have been the first person to distinguish between nouns and verbs.

1786 is the year which many people regard as the birthdate of linguistics. In that year, an Englishman, Sir William Jones, read a paper to the Royal Asiatic Society in Calcutta pointing out that Sanskrit (the old Indian language), Greek, Latin, Celtic and Germanic all had striking structural similarities. So impressive were these likenesses that these languages must spring from one common source, he concluded. Although Jones has the credit of making this discovery, it was an idea that was occurring independently to several scholars at the same time.

Sir William Jones' discovery fired the imagination of scholars. For the next hundred years, all other linguistic work was eclipsed by the general preoccupation with writing comparative grammars, grammars which first compared the different linguistic forms found in the various members of the Indo-European language family, and second, attempted to set up a hypothetical ancestor, Proto-Indo-European, from which all these languages were descended. (Figure 3.2 below excludes Hittite and Tocharian, which were not recognized as Indo-European languages until the 20th century.)

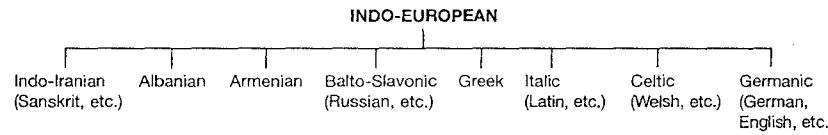

figure 3.2

The 19th-century concern with reconstructing Proto-Indo-European, and making hypotheses about the way it split into the various modern languages, was encouraged by the general intellectual climate of the times. In the mid-19th century, Darwin published his famous *Origin of Species*, putting forward the theory of evolution. It seemed natural to attempt to chart the evolution of language alongside the evolution of species.

This emphasis on language change eventually led to a major theoretical advance. In the last quarter of the century, a group of scholars centred around Leipzig, and nicknamed the 'Young Grammarians', claimed that language change is 'regular'. They argued that if, in any word of a given dialect, one sound changes into another, the change will also affect all other occurrences of the same sound in similar phonetic surroundings. For example, in Old English the word *chin* was pronounced 'kin' (spelt *cinn*). This change from a *k*-sound to *ch* affected all other *k*-sounds which occurred at the beginning of a word before *e* or *i*. So we also get *chicken*, *child*, *chide*, *chip*, *chill*, *cheese*, *cheek*, *chest*, *chew* and so on – all of which originally had a *k*-sound at the beginning. Although, today, the claims made by the Young Grammarians have been modified to some extent (as will be discussed in Chapter 13), it was an important step forward for

linguists to realize that language changes were not just optional tendencies, but definite and clearly stateable 'laws' (as the Young Grammarians perhaps misleadingly called them).

The influence of the 19th-century scholars was strong. Even today, one still meets members of the general public who expect the cataloguing of linguistic changes and the reconstruction of Proto-Indo-European to be the central concern of modern linguistics.

Early- to mid-20th century: descriptive linguistics

In the 20th century, the emphasis shifted from language change to language description. Instead of looking at how a selection of items changed in a number of different languages, linguists began to concentrate on describing single languages at one particular point in time.

If any one person can be held responsible for this change of emphasis, it was the Swiss scholar Ferdinand de Saussure (1857–1913), who is sometimes labelled 'the father of modern linguistics'. Amazingly, he died without having written any major work on general linguistics. But his students collected together his lecture notes after his death and published them under the title *Course in General Linguistics* (1915), which exerted a major influence on the course of linguistics, particularly in Europe.

De Saussure's crucial contribution was his explicit and reiterated statement that all language items are essentially interlinked. This was an aspect of language which had not been stressed before. Nobody had seriously examined the relationship of each element to all the others. As noted earlier, it was de Saussure who first suggested that language was like a game of chess, a system in which each item is defined by its relationship to all the others. His insistence that language is a carefully built **structure** of interwoven elements initiated the era of **structural linguistics**.

The term 'structural linguistics' is sometimes misunderstood. It does not necessarily refer to a separate branch or school of linguistics. *All* linguistics since de Saussure is structural, as 'structural' in this broad sense merely means the recognition that language is a patterned system composed of interdependent elements, rather than a collection of unconnected individual items.

Misunderstandings sometimes arise because the label 'structuralist' is often attached to the descriptive linguists who worked in the USA between 1930 and 1960. Let us now turn to these.

In America, linguistics began as an offshoot of anthropology. Around the beginning of the 20th century, anthropologists were eager to record the culture of the fast-dying American-Indian tribes, and the American-Indian languages were one aspect of this. Although often interesting, the work of those early scholars was, for the most part, haphazard and lacking cohesion. There were no firm guidelines for linguists to follow when they attempted to describe exotic languages. This state of affairs changed with the publication in 1933 of Leonard Bloomfield's comprehensive work entitled simply *Language*, which attempted to lay down rigorous procedures for the description of any language.

Bloomfield considered that linguistics should deal objectively and systematically with observable data. So he was more interested in the way items were arranged than in meaning. The study of meaning was not amenable to rigorous methods of analysis and was therefore, he concluded, 'the weak point in language study, and will remain so until human knowledge advances very far beyond its present state'.

Bloomfield had immense influence – far more than the European linguists working during this period – and the so-called 'Bloomfieldian era' lasted for more than 20 years. During this time, large numbers of linguists concentrated on writing descriptive grammars of unwritten languages. This involved first finding native speakers of the language concerned and collecting sets of utterances from them. Second, it involved analyzing the corpus of collected utterances by studying the phonological and syntactic patterns of the language concerned, as far as possible without recourse to meaning. Items were (in theory) identified and classified solely on the basis of their distribution within the corpus.

In the course of writing such grammars, a number of problems arose which could not be solved by the methods proposed by Bloomfield. So an enormous amount of attention was paid to the refinement of analytical techniques. For many, the ultimate goal of linguistics was the perfection of **discovery procedures** – a set of principles which would enable a linguist to 'discover' (or perhaps more accurately, 'uncover') in a foolproof way the linguistic units of an unwritten language. Because of their overriding interest in the internal patterns or 'structure' of the

language, such linguists are sometimes labelled 'structuralists'.

The Bloomfieldians laid down a valuable background of linguistic methodology for future generations. But linguistics also became very narrow. Trivial problems of analysis became major controversial issues, and no one who was not a linguist could understand the issues involved. By around 1950 linguistics had lost touch with other disciplines and become an abstruse subject of little interest to anyone outside it. It was ready for a revolution.

Mid- to late-20th century: generative linguistics and the search for universals

In 1957, linguistics took a new turning. Noam Chomsky, then aged 29, a teacher at the Massachusetts Institute of Technology, published a book called *Syntactic Structures*. Although containing fewer than 120 pages, this little book started a revolution in linguistics. Chomsky is, arguably, the most influential linguist of the century. Certainly, he is the linguist whose reputation has spread furthest outside linguistics. He has, in the opinion of many, transformed linguistics from a relatively obscure discipline of interest mainly to PhD students and future missionaries into a major social science of direct relevance to psychologists, sociologists, anthropologists, philosophers and others.

Chomsky has shifted attention away from detailed descriptions of actual utterances, and started asking questions about the nature of the system which produces the output.

According to Chomsky, Bloomfieldian linguistics was both far too ambitious and far too limited in scope. It was too ambitious in that it was unrealistic to expect to be able to lay down foolproof rules for extracting a perfect description of a language from a mass of data. It was too limited because it concentrated on describing sets of utterances which happened to have been spoken.

A grammar, he claimed, should be more than a description of old utterances. It should also take into account possible future utterances. In short, the traditional viewpoint that the main task of linguists is simply to describe a corpus of actual utterances cannot account for the characteristic of productivity, or **creativity**, as Chomsky preferred to call it. This, as we noted in Chapter 2, is the ability of human beings to produce and comprehend an indefinite number of novel utterances.

Chomsky pointed out that anyone who knows a language must have internalized a set of rules which specify the sequences permitted in their language. In his opinion, a linguist's task is to discover these rules, which constitute the grammar of the language in question. Chomsky therefore used the word 'grammar' interchangeably to mean, on the one hand, a person's internalized rules, and on the other hand, a linguist's guess as to these rules. This is perhaps confusing, as the actual rules in a person's mind are unlikely to be the same as a linguist's hypothesis, even though there will probably be some overlap.

A grammar which consists of a set of statements or **rules** which specify which sequences of a language are possible, and which impossible, is a **generative** grammar. Chomsky, therefore, initiated the era of generative linguistics. In his words, a grammar will be 'a device which generates all the grammatical sequences of a language and none of the ungrammatical ones'. Such a grammar is perfectly **explicit**, in that nothing is left to the imagination. The rules must be precisely formulated in such a way that anyone would be able to separate the well-formed sentences from the ill-formed ones, even if they did not know a word of the language concerned. The particular type of generative grammar proposed by Chomsky was a so-called **transformational** one. The basic characteristics of **transformational-generative grammar** (TGG) are outlined in Chapters 16–18.

Chomsky not only initiated the era of generative grammars. He also redirected attention towards **language universals**. He pointed out that as all humans are rather similar, their internalized language mechanisms are likely to have important common properties. He argued that linguists should concentrate on finding elements and constructions that are *available* to all languages, whether or not they actually occur. Above all, they should seek to specify the universal bounds or **constraints** within which human language operates.

The constraints on human language are, he suggested, inherited ones. Human beings may be pre-programmed with a basic knowledge of what languages are like, and how they work. Chomsky has given the label **Universal Grammar** (UG) to this inherited core. He regards it as a major task of linguistics to explore its make-up.

Chomsky's recent work, his so called **Minimalist Program**, has become more and more abstract. Increasingly, he has turned to specifying broad general principles, the bare bones of human language, taking less interest in the nitty gritty details of individual tongues. He likens himself to a scientist who is content not just to watch apples dropping to the ground, but is trying to understand the principle of gravity. In this, he is following a current trend among scientists, many of whom are engaged in a 'quest for a Theory of Everything, summing up the entire universe in an equation you can wear on your T-shirt', as one mathematician expressed it.

But what happens now? Chomsky was *the* major linguistic influence for the second half of the 20th century. He still has many devoted followers. But he also has critics. They argue that Chomsky overemphasizes constraints, the bounds within which human language operates. Firm boundaries have proved quite elusive. Repeatedly, some constraint is proposed, followed rapidly by the discovery of a language which breaks it. Nor has he yet propounded a full linguistic 'Theory of Everything'.

So will the next generation continue to follow his footsteps, or is anyone breaking fresh ground?

21st century: future trends

Chomsky's influence is a permanent one. An explosion of interest in language among non-linguists has been a valuable by-product of his work. He has directed attention towards the language potential of human beings, rather than the detailed description of linguistic minutiae. As a result, huge numbers of psychologists, neurologists, anthropologists, sociologists, philosophers and others, have begun to take a greater interest in language and linguistics. Collaboration with them has led to the spiralling development of what were once 'fringe areas', such as psycholinguistics and sociolinguistics, but are now major – and still expanding – fields in their own right.

Yet alongside these developments, a quest for a less rigid framework is gathering in intensity. Of the various competitors, **optimality theory** may be leading, even though it is still in its infancy.

Optimality theory is a new major theory which suggests that there are no fixed bounds on language. Instead, Universal Grammar contains a set of violable constraints. Each language varies in its ranking of these constraints. Differences between the rankings give rise to different patterns, resulting in variation between languages.

Of course, languages mostly do not vary wildly – they cluster around statistical norms. Linguistic statisticians, and also typologists, are beginning to estimate the degree to which a construction is 'natural' both within individual languages, and within human language as a whole. Hopefully, in the next century, we will have a much firmer grasp of linguistic 'norms', and how far they can be stretched. This hunt is now aided by **corpus linguistics**, the study and use of computerized databases for linguistic research.

But alongside high level linguistic theory, day-to-day concerns about language are also being explored. Traditionally, linguists have pooh-poohed those who worry about the state of language, dismissing them as 'linguachondriacs', language hypochondriacs. Linguists maintain, as previously, that such concern is unnecessary. But they have started to pay increasing attention to attitudes towards language. They have begun to explore why pessimists hold such unfounded, gloomy beliefs, and why members of the general public are so ready to listen to them (Chapter 15). Such concerns get widely aired in debates about education, so need to be addressed.

This chapter, then, has sketched – in outline – the main directions taken by linguists in the last 200 years, and has given some pointers to future directions. The next chapter will consider how linguists today set about studying language.

Questions

1 Why were 19th-century linguists so interested in historical linguistics?
2 Why is de Saussure an important figure in linguistics?
3 What are **discovery procedures**?
4 What is a **generative** grammar, and how does it differ from a **descriptive** grammar?
5 Explain the word **explicit** when used in connection with grammars.