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An Introductory Survey

R. H. Robins

FOURTH EDITION



First published 1964 by Longman Group Limited Second edition 1971 Third edition 1980 Fourth edition 1989 Third impression 1993

Published 2013 by Routledge 2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN 711 Third Avenue, New York, NY 10017, USA

Routledge is an imprint of the Taylor & Francis Group, an informa business

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ISBN 13: 978-0-582-29144-7 (pbk)

British Library Cataloguing in Publication Data
Robins, R. H. (Robert Henry), 1921–
General linguistics: an introductory survey.

– 4th ed. – (Longman linguistics library).

1. Linguistics
I. Title
410

Library of Congress Cataloging in Publication Data
Robins, R. H. (Robert Henry)
General linguistics.
(Longman linguistics library)
Bibliography:
Includes index.
1. Linguistics.
P121.R6
1989
410
88-5619

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Preface to first edition

An apology is perhaps desirable for the appearance of a book purporting to survey the whole range of general linguistic studies. In a period of increasing specialization, experts in several branches of linguistics are likely to find that, in their opinion, their own speciality is treated scantily, superficially, and with distortion in emphasis and selection. Indeed, it has been said that it is now no longer proper or practicable for an introduction to general linguistics to be attempted by one author, as his own competence in the different branches now recognized must be very unequal.

If this were true, it would be a great pity. The various approaches to language accepted as falling within linguistics are so accepted by virtue of some unifying theme or contribution to an integrated body of knowledge. Students are surely entitled to read, and teachers should be able to write, textbooks which take into account recent developments in the subject, as far as they may be made available to beginners, and attempt to show these in relation to its continuing course and progress as part of a set of studies sharing in common more than a mere title.

My intention in writing this book has been to produce an introduction to linguistics as an academic subject, that will be comprehensible and useful to the student entering on the study of linguistics at a university in work for a first degree or a post-graduate degree or diploma, and at the same time will serve to present the subject in outline to the intelligent general reader as one that is both important and interesting in its own right.

Where controversy still surrounds aspects of the subject encountered in the early stages of a student's acquaintance with it, I have not tried to hide this or to suggest that there is one road to salvation alone worthy of serious attention. Nothing is more pathetic than the dogmatic rejection of all approaches but one to language (or anything else) by a person who has not troubled himself even to consider the arguments in favour of others.

The writer of an introductory textbook has a further consideration to bear in mind. No branch of a living and developing subject stands still. In linguistics, outlooks, theories, and procedures are constantly being revised, and new methods appearing. Such changes, in so far as they represent or promise progress, are to be welcomed, but they inevitably alter in some degree the state of the subject during the unavoidable lapse of time between the writing of the book and its publication; and further changes must be expected in the future. Some experienced readers and teachers may well feel, as a result, that certain matters are given greater emphasis than they now merit as the expense of newer and more significant topics and viewpoints.

In a book such as this, there is little or nothing original, except perhaps the choice of topics and their arrangement; nor should there be. I shall be well satisfied if, after reading it, people are both enabled and encouraged to go further into the subject, undertake further reading, and perhaps to specialize in one branch of linguistics or another, after achieving an adequate understanding and picture of the subject as a whole.

In writing an introductory account of linguistics, one is made very conscious of the debt owed to one's predecessors and contemporaries. Anyone engaged in linguistics in Great Britain lies greatly in debt to the late Professors J. R. Firth and Daniel Jones, who between them did more than any others to establish the subject in this country and to determine the course of its development. To Professor Firth, my own teacher during the eight years between my joining him at the School of Oriental and African Studies in the University of London and his retirement from the Chair of General Linguistics in that university, I owe the main directions of my work in the study of language, both in teaching and research. Equally, no one engaged in general linguistics anywhere in the world can forget or treat lightly the enormous debt owed to American scholarship in this field. Without such international figures as Sapir and Bloomfield it is doubtful if linguistics would have made anything like the progress it has made, or achieved the academic recognition it enjoys the world over. Any serious student of the subject must become quickly aware of the great part American scholars in linguistics have played and are now playing in all its branches. On the continent of Europe, de Saussure, Trubetzkoy, Meillet, and Hjelmslev, to mention only four names, have been responsible for contributions to linguistic theory and method that are now indispensable components of present-day linguistic scholarship. I hope that in the form this book has taken I have discharged in some measure my debt to my predecessors and contemporaries. If I have failed, the fault is mine, not theirs.

More specifically, I am indeed grateful to successive classes of students whom I have taught in the past fifteen years. Much of what I have written here has arisen in the preparation, delivery, and revision of lecture notes and tutorial material. Some points were first brought clearly to my attention by the work of students themselves. To Professor C. E. Bazell, Professor of General Linguistics in the University of London, and to my other colleagues in the university, past and present. I owe the stimulus of constant discussion, argument, and collaboration. Professor N. C. Scott, Professor F. R. Palmer, and Dr. now Professor, J. Lyons were kind enough to read through a draft of this book. Each made many helpful and important suggestions, not least in trying to save me from a number of inclarities, inaccuracies, and downright absurdities. I hope I have made proper use of their comments: where I have not, and for all errors and imperfections remaining, I am, of course, wholly responsible. To all those who. wittingly or unwittingly, have helped and encouraged me in the production of this book, I offer my sincere thanks.

University of London 1964

RHR

Preface to second edition

That a new edition of a textbook should be in demand some six years after its first publication is, naturally enough, gratifying to the author. But it is no less apparent that, in a subject developing as rapidly and vigorously as linguistics is today, more radical alterations are required than the mere correction of errors and the clarification of points hitherto left in obscurity, if the book is to continue in usefulness.

As regards unresolved controversies and competing views on the theoretical understanding and the analysis of language, on which readers were warned in the preface to the first edition, the passing of years has not diminished this characteristic of current linguistics, although older disputes now arouse less heat as the newer ones attract more attention.

I have made an attempt in the sections at the end of Chapter 7 to indicate the main lines on which linguistic theory and linguistic practice seem to be moving in Europe and America today. No one should regard these sections as substitutes for the further reading indicated in the relevant notes, if one wants to gain a real understanding of current developments; but I hope that what I have written will serve as an entry and a guide to the main contemporary 'growth points' in the subject.

On the other hand I have left the account of phonemic phonology and descriptive grammar of the 'Bloomfieldian' period much as it was, because, although these have been under attack from a number of directions, a good deal of what is taken for granted in the way of technical terminology and linguistic concepts was brought into being by linguists working in this tradition (itself by no means dead), and the rigour that was displayed by much of the best in this tradition can serve as an

inspiration and an example to those who may, nonetheless, prefer alternative approaches. Moreover, all those scholars who are responsible for valuable progress in contemporary developments were themselves first masters of 'Bloomfieldian' linguistics and started from a full understanding of what was aimed at and achieved in this stage of linguistics. I remain convinced that the careful study of the linguistics of the 1940s and 1950s is still the proper foundation for scholarly comprehension of the subject today.

Several reviewers of earlier printings of this book were good enough to make detailed and helpful suggestions for improvements, and I have tried to take these into account and make use of them. Once again it is one of the pleasures of academic life to record the help unstintingly given by colleagues whom I have consulted, drawing on their specialist knowledge and on their experience in using this book, along with others, in tutorial work with students. In this respect I am particularly grateful to Dr Theodora Bynon, Professor M. A. K. Halliday, Dr N. V. Smith, and Mrs Natalie Waterson. The deficiencies that will no doubt become apparent are fewer and less glaring, thanks to their cooperation, and the reader as well as the author will be indebted to them.

University of London 1970

RHR

Preface to third edition

In preparing the third edition I have revised the content of this book to a considerable extent in the endeavour to bring it up to date as regards current developments in linguistic theory and practice, so far as these can be made readily available to beginners. In making these revisions I have again benefited from the helpful advice from my colleagues, and particularly from Dr D. C. Bennett, Dr Theodora Bynon, Dr R. J. Hayward, Dr N. V. Smith and Mrs Natalie Waterson, as well as from students and correspondents, who have drawn my attention to various omissions and infelicities in previous editions.

Although I have carried out some considerable reordering and reworking in the presentation of the elements of linguistics as I understand them, the basic balance of the book remains much as it was. That is to say, 'classical' phonemic phonology and 'structuralist' grammar of the Bloomfieldian era are still explained to the reader in some details as the proper groundwork on which to build an appreciation and understanding of contemporary theories and methods. Some readers may consider that too much space is given to 'structuralist' linguistics and that an introductory textbook is no longer the place for these topics. For such readers there are several excellent textbooks available, but in my opinion one can best evaluate the merits and the objectives of linguistic work today if one is familiar with the theoretical background within which many of the linguists who are now most influential themselves grew up, and if one has a firm grasp on the basic concepts with which any linguistic description and analysis must be concerned.

I have also tried to maintain a broad coverage of the different topics involved in any comprehensive account of general linguistics as an academic subject. For further details in these topics the reader must consult the specialist literature, to some of which attention is drawn in the bibliographies and notes that follow each chapter. But I consider it quite essential for the student of linguistics to acquire as soon as possible an awareness of just how extensive the study of human language must be and how many different paths of enquiry it opens before him, paths that he should at least recognize, even though he may not follow them all through, if he is to comprehend properly the richness of this field of knowledge upon which he is entering.

University of London 1979

RHR

Preface to fourth edition

In preparing this edition of my General Linguistics I have endeavoured to maintain the structure and the purpose of earlier editions while taking proper notice of recent and current developments in linguistics that have come to prominence since the third edition.

I remain in the conviction that readers of an introduction to a subject as rich and as rewarding as general linguistics, whether they be university students or interested members of the lay public, need and deserve a survey of the subject as a whole in its various branches and aspects, in so far as these can be made reasonably accessible in a single textbook. Perhaps this may now be a vain hope. If this is the case, I am sorry, since linguistics is, for all its diversity, a basic unity as the quest for an understanding of the structure, the history, and the working of human language.

Teachers are usually research workers in their own specializations, and naturally they are anxious to lead their students and their classes to the 'frontiers of knowledge' where they themselves are engaged. They are right in such an objective; exciting research leads to exciting teaching, and the best of our students should be acquainted early in their courses with the 'growth points' of their subject. But there is a danger here; one can only tackle with understanding current advances and specialties against a firm command of basic principles, concepts, and methods. Linguistics is not a science that 'destroys its past' (even if any science can be said to do this), and much of its subject matter has been well set out in books and articles published earlier in this century that have now achieved something of the status of classics in the discipline. While I hope I have drawn

attention in the chapter bibliographies to important current and contemporary literature for further reading by advanced students and intending specialists, I have not hesitated to retain references to earlier writings where these appear to me to present basic information accurately, adequately, and accessibly.

An attractive television advertisement for a brand of beer claims that it 'refreshes the parts that other beers cannot reach'. I would like to express the reverse hope that this book reaches those parts that are sometimes neglected or passed over too briefly by some other introductory textbooks. More seriously, I am wholly in sympathy with the thoughts of a reviewer of a recent such textbook (*Language* 58 (1982), 896): 'It is easy for linguists of different theoretical persuasions to overlook the extent of their common ground To teach a 'professionalist' introductory course without first ensuring that some of the thickets of misconception are cleared away is like teaching a course on immunology to a population that does not yet believe in the germ theory of disease'.

In planning and preparing this edition, as with previous editions. I am very conscious of the help that my colleagues have given me, whether in seminars when I was trying out my ideas, in casual conversations, or in direct consultations. In particular I must thank Dr Geoffrey Horrocks for reading drafts of chapters 5, 6, and 7 and making many helpful suggestions, as well as saving me from errors in areas about which he knows far more than I do. Dr Katrina Hayward was no less generous in reading a draft of chapter 8 and giving me the benefit of her expert knowledge in this field. To Professor Theodora Bynon, my successor as Head of the Department of Phonetics and Linguistics, I owe much for her constant encouragement to me to continue my academic work in the Department, and for her patience in responding to my repeated questions about what might be acceptable German, often at times when she was at her busiest as Head of Department. To all these friends and colleagues I offer my sincere thanks; this book is less imperfect for their help. Where obduracy, inattention, or incomprehension may have led me to neglect their proffered advice, sit venia soli mihi.

School of Oriental and African Studies, University of London 1988 R. H. Robins

System of reference

Bibliographies

The chapters are followed by bibliographical lists of books and articles relevant to the topics discussed in them. These are numbered serially, and referred to in the chapter notes by author's surname and number; numbers following the serial number refer to pages in the work concerned. Thus '34, 11' means 'page 11 of number 34'.

The bibliographies to each chapter are independent of each other, relevant works being listed in more than one, where necessary. To avoid excessive overlapping the bibliographies of Chapters 5 and 6 are combined into one, appearing at the end of Chapter 5. After Chapter 1 a general bibliography of elementary and introductory works on linguistics is given, with some brief comments.

None of the bibliographies is intended to be anything like exhaustive; they are designed simply to serve as a guide for further reading on the various aspects of general linguistics.

Notes

In the notes to each chapter reference is made to books and articles which carry further the discussion of points made in the preceding chapter, set out alternative views, provide additional information justifying statements already made (particularly on languages not widely studied), or appear in some other way to be relevant.

In this edition the notes are numbered serially through each chapter, and superscript number appear in the text; but the

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SYSTEM OF REFERENCE

intention is that the beginner and general reader should be able to get a picture of the subject as a whole without the need to look at the notes at all. They are directed more towards the student who knows something of the subject already and wants to check any data to which reference has been made or to follow up in more detail questions arising from what he has read.

Transcriptions and abbreviations

Linguistic material cited in this book in the examples is generally represented as follows:

English words and sentences are written in the normal orthography, followed by a reading transciption where necessary.

Words and sentences from most other languages that have a roman orthography are cited in this, followed, from Chapter 3 (Phonetics) onwards, by a reading transcription.

Languages without a recognized orthography and a few that have one but are little known, together with languages written in orthographies other than roman, are cited in reading transcriptions alone. The only exception to this is that Ancient (Classical) Greek words and sentences are given in the Greek script followed by the reading transcription.

Reading transcriptions are enclosed in slant lines / . . . /.

The reading transcription for English is the same as the one used by D. Jones in his Outline of English Phonetics and his English Pronouncing Dictionary (London, 1948). In other living languages the transcriptions are broad transcriptions, on phonemic lines. They are not necessarily strictly phonemic transcriptions; in some of the languages cited, an agreed phonemic analysis covering all the relevant features has still to be achieved, particularly in such features as stress. Sometimes deviations in the direction of narrower transcription are made if it is felt that a reader without a knowledge of the language will be helped to realize something of the sound of the words more readily thereby (thus in the German examples the glottal stop [?] occurring initially in words like arm /?arm/ poor, and medially in some compound words, though not usually reckoned a separate phoneme, is tran-

scribed). The terms broad transcription and narrow transcription are explained in 4.2.

The transcription of Ancient Greek is a transliteration, since in dealing with a dead language the phonetic information required as the basis of an adequate transcription is not ordinarily available; this transliteration follows the method set out by A. Martinet, 'A project of transliteration of Classical Greek', Word 9 (1953), 152-61, except that v is transcribed with v not v. The transcription of Latin is the same as the traditional spelling except that all long vowels are marked as long, and this is done with the length sign:, not the macron. It is to be noted that Latin v = [k] throughout. The transcription of modern German is based on W. Victor's Deutsches Aussprachewörterbuch, Leipzig, 1912.

It is hoped that these conventions will assist the reader unfamiliar with any of the languages from which examples are taken, without inconveniencing or annoying those already enjoying some acquaintance with them.

Transcriptions narrower than the reading transcriptions are printed, where necessary, between square brackets [...].

Abbrevations

BSOAS	Bulletin of the School of Oriental and African Studies
IJAL	International Journal of American Linguistics
JAOS	Journal of the American Oriental Society
Lang	Language
Sociol rev	Sociological Review
TCLC	Travaux du cercle linguistique de Copenhague
TCLP	Travaux du cercle linguistique de Prague
TPS	Transactions of the Philological Society



Chapter 1

General linguistics: the scope of the subject

1.1 General linguistics as the study of language

1.1.1 Language and languages

General linguistics may be defined as the science of language. As with other branches of knowledge and scientific study, such a definition involves the subject in certain relations with other disciplines and sciences outside itself, and in subdivision into different branches of the subject comprised within it. At the outset something must be said under both these headings, but it should be made clear that in these, as in several other important topics which must be examined even in an introductory account, the opinions of scholars differ in considerable respects.

It must be realized that a subject like general linguistics, in common with most other subjects of systematic study, is not static. Viewpoints, including some of quite fundamental importance, may change or receive different degrees of emphasis in the course of years. No book can honestly pretend to deal with the subject in a way that will both be accepted in all respects by every recognized scholar in the field and remain unaltered for all time. In this book, some account is taken of major unresolved controversies, and the reader must be prepared for others to arise.

In the first place it is desirable to consider the difference between general linguistics as the science or scientific study of language and the study of individual languages. This latter study is, indeed, more familiar to the majority of people, and has played a major part in all stages of education in many parts of the world for some time; the study of linguistics, on the other hand, is, at least in its present form, a relative newcomer in the field of scholarship, though in the present century and particularly in the past three decades it has shown marked growth in the numbers of its students and teachers in the universities of Great Britain, continental Europe, the United States, the USSR, and several of the newly developing countries of the rest of the world.

General linguistics is concerned with human language as a universal and recognizable part of human behaviour and of the human faculties, perhaps one of the most essential to human life as we know it, and one of the most far-reaching of human capabilities in relation to the whole span of mankind's achievements. In so far as all languages share some features in common. whether in pronunciations, grammatical organization, or expressive power, one may speak of human language as an abstract set of characteristics, perhaps reflecting part of the biologically inherited structure of the human mind or brain. This is often referred to under such headings as universal grammar, linguistic universals, and universals of language. The extent to which such universal features are to be recognized or assumed as underlying all the known languages of the world is in part a matter of debate (7.2.3-4 pp 289, 292-4). Human language in this sense is certainly the province of the linguist, but it must be repeated that the only evidence we have for its recognition and study comes from the individual actual languages of the world and from their speakers and writers, past and present. There are at least three thousand different languages in the world, leaving aside dialect divisions within languages (2.2), many of them still uncounted and unstudied. The general linguist, in the sense of the specialist or the student concerned with general linguistics, is not as such involved with any one or more of them to a greater extent than with any others. 1 As an impracticable ideal he would know something about every language; that is, of course, impossible, and in practice most linguists concentrate on a limited number of languages including their own native languages, the number of languages studied, and the depth of knowledge acquired of each. varying by personal factors from one linguist to another. Thus it has been pointed out that the linguist as here defined and as understood in the context of general linguistics must be distinguished from the sense of the word linguist as often used by the public, to refer to someone who necessarily has a practical knowledge and command of a number of foreign languages.² It is, of course, desirable that the linguist should know quite a lot about some languages, and the more languages (especially those representing types different from his own and from each other) with which he has some acquaintance, the better he is equipped for his subject.

Language in all its forms and manifestations, that is all the

languages of the world and all the different uses to which in the various circumstances of mankind they are put, constitutes the field of the linguist. He seeks a scientific understanding of the place of language in human life, and of the ways in which it is organized to fulfil the needs it serves and the functions it performs. Several of the subjects he has within his purview and several of the questions to which he seeks answers correspond to long-established divisions of the study of foreign languages and of the institutionalized study of one's own language. Pronunciation (phonetics) and grammar are familiar enough, and some study of meaning and of the way in which meanings are discoverable and statable is presupposed in the compilation and use of any dictionary or vocabulary book. It is, in fact, partly as a result both of the search for improvements in the techniques of such indispensable aids to the study of foreign languages, and of questions arising on the theoretical basis of their production, that people have been led to the investigation of the properties and characteristics of language as such. Part of the justification of general linguistics lies in its undertaking the examination of the theory lying behind the practice of the language teacher and the language learner. The practical teaching of languages will, for obvious reasons, be largely confined to languages possessing a world-renowned literature or serving considerable numbers of speakers either as a first (native) language or as an acquired second language for the purposes of trade, education, etc (such as English in large areas of the British Commonwealth and elsewhere, Spanish and Portuguese in Central and South America, Russian over much of the Asiatic area of the Soviet Union, and Latin in mediæval Europe). But it is an article of faith for the linguist that any language, no matter what the level of civilization reached by its speakers, how many speakers make use of it, or what area of the world they occupy, is a valuable and worthy object of study, able to teach him something more about language in general and the theoretical and practical considerations involved in the study of language.

It is well to reflect on the great diversity of the languages of the world. Some of the ways in which different languages may be compared are discussed in Chapter 8; here one may notice that language, and linguistics, the science of language, embrace equally living languages, that is languages still used today as means of communication, and dead languages, that is languages like Ancient Greek or Old English (Anglo-Saxon) now no more spoken but known from written records (manuscripts, printed texts, or inscriptions). Among the living languages the linguist

finds his material both in the languages of worldwide use and with long literary traditions as the vehicles of civilization, and languages devoid of writing, unknown outside their own community, except to the linguist, and (as is the position of many North and South American and native Australian tongues) spoken perhaps by less than a hundred speakers and so in peril of extinction before the spread of some extensively used language.

1.1.2 Descriptive, historical, and comparative linguistics

General linguistics includes a number of related subjects involved in the study of language as understood in the preceding paragraphs, and each may be considered from the point of view both of linguistic theory and of its actual operations or procedures. The most important and immediate subdivisions of the subject are descriptive linguistics, historical linguistics, and comparative linguistics.

Descriptive linguistics, as its title suggests, is concerned with the description and analysis of the ways in which a language operates and is used by a given set of speakers at a given time. This time may be the present, and in the case of languages as yet unwritten or only recently given written form it will inevitably be the present, as there is no other way of knowing any earlier stages of them, though there are methods by which certain facts about such earlier stages may be inferred (8.1). The time may equally well be the past, where adequate written records are available, as in the case of the so-called dead languages like Hittite and (except in a few special circumstances) Latin, and in the case of earlier stages of languages now spoken in their current forms (eg Old French and Old English). What is more important is that the descriptive study of a language, and of any part of a language, present or past, is concerned with that language at the period involved and not, as a descriptive study, with what may have preceded it or may follow it. However, the many variant forms of pronunciation, grammar, and lexical content that the descriptive linguist records and describes in a language at a given time may mark the sources of subsequent historical changes ultimately having far-reaching effects (p 339).

Descriptive linguistics depends all the time on the minute and careful observation and recording of the ways in which each language is constructed and used, in phonetics, grammar, and the expression of meanings. It has been a weakness of many earlier and some modern grammars of less known languages rather unimaginatively to try to portray them in terms taken

directly from existing grammars of familiar and prestigious languages such as English and Latin.

Descriptive linguistics is often regarded as the major part of general linguistics. Be that as it may, it is certainly the fundamental aspect of the study of language, as it underlies and is presupposed (or ought to be presupposed) by the other two subdivisions, historical linguistics and comparative linguistics.

Historical linguistics is the study of the developments in languages in the course of time, of the ways in which languages change from period to period, and of the causes and results of such changes, both outside the languages and within them. This sort of study, whether undertaken in general terms or concentrated on a particular language area (eg English from Old English to the present day), must properly be based on at least partial descriptions of two or more stages of the continuous language series being treated.

The terms *synchronic* and *diachronic* are in general use to distinguish respectively linguistic statements describing a stage of a language as a self-contained means of communication, at a given time, during which it is arbitrarily assumed that no changes are taking place, and statements relating to the changes that take place in languages during the passage of years.³

Historical linguistics might from one point of view be regarded as a special case of comparative linguistics, the third subdivision of general linguistics. In **comparative linguistics** one is concerned with comparing from one or more points of view (and the possibilities of this are very wide) two or more different languages, and, more generally, with the theory and techniques applicable to such comparisons. In historical linguistics the comparison is limited to languages which may be regarded as successive stages of the speech of a continuing speech community differing from one period to another as the result of the cumulative effects of gradual changes, for the most part imperceptible within a single generation.

As will be seen in more detail in Chapter 8, comparative linguistics is principally divided into comparison made with a view to inferring historical relationships among particular languages, and comparison based on resemblances of features between different languages without any historical considerations being involved.

In Europe and America historical linguistics and historically orientated comparative linguistics played a dominant role in linguistic studies during the nineteenth century, for reasons of academic history (8.1.1), rather antedating general linguistics in recognition as university subjects. These studies are familiar

under the title of 'comparative philology' in English, and in some universities what are in fact general linguistic studies were until recently carried on and administered under this name.

1.1.3 The term 'philology'

In connection with the study of language the term *philology* is in frequent use. In some ways this is unfortunate, as the word and its equivalents in some European languages (French *philologie*, German *Philologie*) are understood and used in rather different senses.⁴

In British usage philology is generally equivalent to comparative philology, an older and still quite common term for what linguists technically refer to as comparative and historical linguistics (8.1.1). In German, however, *Philologie* refers more to the scholarly study of literary texts, especially those of the ancient Greco-Roman world, and more generally to the study of culture and civilization through literary documents, comparative philology in the British sense being designated Vergleichende Sprachwissenschaft. This meaning of Philologie is matched by similar uses of comparable words in other European languages, and in general with the use of philology in American learned circles. It may be held that in this usage the word is a convenient term to employ with reference to the links between linguistics considered as a science and the aesthetic and humanistic study of literature, and to the field wherein the historian of different aspects of a culture draws on the findings of the linguist in the decipherment of texts and inscriptions and in establishment of reliable versions of manuscripts and other documents as materials that provide him with part of his evidence. The relations of linguistics with philology in this last sense are very close and allow of considerable overlapping.

1.2 Linguistics as a science

1.2.1 Implications of the term 'science'

The term *science* has been used in the definition of general linguistics. It may be understood in two ways. In the widest terms it refers to the fact that the study of language in general and of languages in particular, as described in outline above, is considered worthy of scholarly attention and that a systematic body of facts and theory is built up around it. In more specific and particular terms it indicates the attitude taken by the linguist today towards his subject, and in this perhaps it marks a definite characteristic of twentieth-century linguistics.

In saying that linguistics is a science in the stricter sense, one is saying that it deals with a specific body of material, namely spoken and written language, and that it proceeds by operations that can be publicly communicated and described, and justified by reference to statable principles and to a theory capable of formulation. Its purpose in this proceeding is the analysis of the material and the making of general statements that summarize, and as far as possible relate to rules and regularities, the infinite variety of phenomena (utterances in speech or writing) that fall within its scope. In its operations and statements it is guided by three canons of science:

- [i] Exhaustiveness, the adequate treatment of all the relevant material;
- [ii] Consistency, the absence of contradiction between different parts of the total statement; and, within the limits imposed by the two preceding principles,
- [iii] Economy, whereby, other things being equal, a shorter statement or analysis employing fewer terms is to be preferred to one that is longer or more involved. This is sometimes referred to as the 'capturing of generalizations'.

One can make the position of linguistics within the sciences more precise. It is an empirically based science, in that its subject-matter is observable with the senses, speech as heard, the movements of the vocal organs as seen directly or with the aid of instruments (3.1, 3.2), the sensations of speaking as perceived by speakers, and writing as seen and read. No linguist would disown empiricism in linguistics, but there is today lively discussion on the degree of empiricism that should be embodied in a linguistic theory (cp 7.1). Linguistics is also one of the social sciences, in that the phenomena forming its subject-matter are part of the behaviour of men and women in society, in interaction with their fellows. This last statement is not invalidated by the existence of purely secondary uses of language by persons alone and out of earshot of others, in monologue ('talking to oneself'), ejaculations of joy, terror, or annoyance, addressing animals, and the like; the essence of language and the vast majority of its uses involve two or more persons in social intercourse.

Linguistic science and the scientific study of language occupy a very special place among the sciences, in that the linguist is simultaneously the observer of language and of languages and the producer and evaluator of at least one language, his own mother tongue. This means that the linguist is free to adopt either the position of the 'external' observer of data, supplied by himself or by others in speech or writing, or the position of an 'internal' analyst of what is involved in being a speaker-hearer, in 'knowing a language'.

From the 'externalist' point of view the linguist treats his material as any other scientist does, observing, classifying, seeking underlying regularities, constructing hypotheses to be tested against further data in order to validate descriptions already made. This has been the basis of the grammars of foreign languages with which we are familiar, even though in many cases the writers have not explicitly stated their position. Linguistics in this sense is on a par with other sciences, such as physics, botany, or chemistry, where the scientist is necessarily viewing his material from the outside. All the phenomena with which he is dealing are potentially accessible to any and every other observer on the same basis as they are to him.

From the 'internalist' viewpoint the scientist is observing himself and asking what is involved, not just in what he says and writes, but in his brain, whereby he can produce and understand a limitless number of sentences of his own language. It is sensible to ask what is meant by 'He speaks Japanese, or English, or Swahili' when the person is not in fact speaking any of these languages at a particular time. In this interpretation 'A linguistic description of a natural language [ie somebody's mother tongue] is an attempt to reveal the nature of a fluent speaker's mastery of that language.'5 The linguist as speaker-hearer of the language he is studying or the language which he knows well has access, not only to material that he can produce for himself without waiting until it turns up in other people's utterances, but also to essentially personal reactions and judgments on such matters as acceptability, what is well formed or correct (in contradistinction to mistakes, slips of the tongue, or the efforts of a non-native speaker), elegance, clarity and ambiguity, equivalence in meaning, implications and presuppositions (1.4.3), and so on. Such data are of course equally available to other speakers of the language, but in each person's case they are private phenomena not directly or publicly observable like the linguistic data referred to in the preceding paragraph.

To a limited extent linguists share their double orientation with the other sciences of human kind, such as general psychology, but in linguistics it is probably carried further than in any other descriptive science.

Linguists have tended to favour one standpoint over the other at different times, or even at the same time among contemporaries. In this century the contrast has been most markedly associated with the followers of Bloomfield, insisting on a strictly 'external' viewpoint, and the followers of Chomsky, concerned above all with the nature of linguistic knowledge, 'competence' in a language such as one's own, and treating linguistics as a branch of cognitive psychology.⁶ Both groups claim that they have the interests of linguistics as a science at heart; and wherever one's personal preferences or specific abilities may lie, it is in the interest of linguistic studies as a whole that language should be studied, investigated, and analysed from both viewpoints. This subject will be considered further in Chapter 7.

There is one inference that might be made from the assertion that linguistics is a science, and it must be disclaimed at once. This is that because linguistics is a science, it is necessarily not one of the humanities or a humane discipline, and that in consequence linguistics is in some way hostile to the study of literature and the linguistic study of language inhibits its literary enjoyment and the pleasures that come of literary appreciation. The relations of linguistic studies and literary studies will be examined more closely in a subsequent chapter (9.5); but is should be made clear at once that nothing in linguistic science is such as to interfere with the analysis and appreciation of literary values in what is read or written. Indeed the reverse may be true, and if a linguist finds himself insensitive to the music of poetry, the appeal of oratory, or the flow of an unfolding story, he has only himself, and not his subject, to blame.

In the present educational situation disquiet has been expressed about the gulf that has widened between what are loosely called the arts and sciences, with the implied suggestion that scholars, and indeed the educated public in general, must either be 'literate', somewhat despising the sciences as pedestrian and illiberal, or, as it has been termed, 'numerate', considering the humanities and what are traditionally regarded as the mainstays of a liberal education to be largely subjective, irrelevant, and marred by imprecision. In any much needed rapprochement between scientific studies and what are called humane studies. linguistics, along with some of the other disciplines devoted to the ways of mankind, may have an important part to play. Indeed among all branches of knowledge linguistics is in a special position. Science, like all other publicly shared knowledge, demands the use of language to talk about its particular subject, and is a refinement and elaboration of our general habit of talking about the world in which we live. Linguistics differs from other studies in that it both uses language and has language as its subject-matter. For this reason among others linguistics may well come to occupy a key place in the studies embodied in higher education.

1.2.2 Practical applications

From what has been said about linguistics as a science, it should be clear that it is self-justifying as an academic subject. Language and the means whereby the forms of language and the working of language may be analysed and described are themselves regarded as proper subjects of academic study, without any further consequences being involved. Nevertheless, certain consequential and important by-products do result from linguistic work. One may consider a few examples. The greater one's understanding of language in general, the better one may expect to be able to set about the task of teaching foreign languages, both in their general aspects and with an eye to the many specialized needs for the knowledge of second languages in limited ranges of activities that the modern world seems increasingly to require. This covers both the actual techniques of teaching and the production of textbooks; textbooks differ from pure descriptions of languages in that their aim is to impart particular skills in speaking and understanding and in reading and writing (or in both), in a given language on the part of speakers of some other language. Such books are normative rather than simply descriptive: they set a standard, by some means or other, of what is correct and serve to impart a knowledge of it and foster familiarity with it.

Linguistic studies are already being applied to the practical problems of automatic or machine translation and the exploitation of statistical techniques connected with the use of language. The communications engineer is helped by some knowledge of the basic composition of the language signals whose transmission and reception are his responsibility. An understanding of the power language can exert among people and of different ways in which this power may be exploited and directed has proved to be a potent weapon in the hands of those who with the aid of what have come to be called 'mass media' are engaged in moulding opinions, disseminating views, and exercising influence on their fellows, whether politically, commercially, or socially; the fact that such activities may often be regarded as undesirable and even disastrous is, of course, to be recognized; by-products are not necessarily always beneficial. In another sphere of activity linguistic knowledge is a powerful aid in the remedial treatments known as speech therapy, for patients whose speech mechanisms, through injury or defect, are damaged or imperfect. The applications of linguistics to other activities serving particular purposes in the world are collectively known as **applied linguistics** and are considered further in 9.4.

It is important to recognize the by-products that may come from linguistic studies; but linguists themselves need not engage in applied linguistics. Their subject is of sufficient interest and significance in the world to maintain itself in its own right, just as is botany without reference to horticulture, and as is entomology without reference to the control of insect-borne disease or crop pests. The linguist is justified in his work in so far as he is successful in making human beings more aware of one essential aspect of their humanity, and, in the words of a contemporary, in 'presenting the fundamental insights about language to which every well educated person should be exposed'. 7

1.3 The range of general linguistics

1.3.1 Levels of analysis

Language is immensely complicated. How complicated one discovers in the process of learning a foreign language; and the ability of all normal persons to acquire structural mastery and the basic vocabulary of their own language in childhood is one of the many wonders of human kind.⁸ The obvious complexity of language makes it unworkable for the linguist to try and describe it all at once. Language itself, speaking and writing, is a unitary activity; people speak and write, and understand what is spoken and written in their own language, without necessarily being aware of such things as grammar and pronunciation, but merely reacting unfavourably to the mistakes of a foreigner without being able to specify in what respects he has transgressed one or more recognized standards.

The linguist, in order the better to make scientific statements about language and languages, concentrates at any one time on different though interrelated aspects of his subject-matter, by attending to different types of features and by applying different types of criteria (asking himself different sorts of questions). These different and partial approaches have been called **levels of analysis** and the statements made about them **levels of linguistic statement**. Such relatively familiar terms as *phonetics* and *grammar* refer to two such levels. By extension the term **level of language** is used to designate those aspects of a language on which at any time the linguist is focusing his attention.

Just as the limits and comprehension of an academic subject may vary between one scholar or group of scholars and another, so do the different levels that it is considered profitable to recognize. Even those who agree on the overall range of topics proper to the linguist's purview may disagree on the number of levels with which to operate and the criteria to be applied to them. In an introduction such as this, no more than a general survey can be given.

One must recognize at the outset and as the basis of any division of linguistic analysis (or of language) into levels the two aspects, form and meaning. Speech is purposeful, and form and meaning are related at least in part as means and end. An understanding of language in human life requires both an understanding of the formal composition of utterances and of their relations with the rest of the world outside language.

1.3.2 Language and communication

Many definitions of the word *language* have been attempted and they are to be found in dictionaries and in some textbooks. One definition, first set down in 1942, has enjoyed a wide currency: 'A language is a system of arbitrary vocal symbols by means of which a social group cooperates'. This definition covers much that is important, but in a sense all definitions are, by themselves, inadequate, since, if they are to be more than trivial and uninformative, they must presuppose, as does the one just quoted, some general theory of language and of linguistic analysis.

More useful at this point in an elementary book on linguistics will be some notice of certain salient facts that must be taken into account in any seriously intended theory of language.

Language is, so far as we know now, species-specific to man. Every normal human being has acquired one language, his mother tongue, by late childhood, the basic lexicon, grammar, and pronunciation within the first ten years of life, apparently without effort and without the requirement of systematic instruction, in contrast to the actual teaching or conscious self-teaching necessarily involved in the attainment of literacy and the mastery of foreign languages at school. Much that passes among conscientious parents as 'teaching a child to speak' really amounts to the deliberate widening of his vocabulary along with his knowledge of the world.

The skills involved in speaking, being an acquisition taken for granted and largely unnoticed in the process, excite no comment and evoke no admiration; their absence in pathologically defective persons arouses sympathy. We praise people for particular and relatively rare abilities that depend on speech, for having a fine singing voice, for being a stirring preacher, an inspiring

orator, or a good story-teller, and for being able to recite wih clarity a patter-song of the type written by W. S. Gilbert, an unnatural exercise that taxes the powers of most otherwise fluent speakers of a language. But all these accomplishments represent additional abilities over and above the mastery of one's own first language.

Conversely, no other members of the animal kingdom have been shown to possess anything like a human language. Of course animals communicate, and socially organized animals cooperate by means of vocal and other forms of communication. Much study has rightly been devoted to animal communication. Interestingly, the animal communication system in some respects nearest to human language (though a very long way off!) is the so-called language of bees, whereby bees that have been foraging are able, by certain formalized movements often called 'dancing', to indicate to other bees still in the hive the direction, distance, and richness of a source of nectar, so that these others can make straight to it. This system shares with human language the ability to impart detailed information about matters not directly accessible to the senses of those receiving it; but we notice at once that the medium employed, the 'substance', as it is sometimes called, has nothing in common with the spoken medium in which all human language is primarily expressed.¹⁰

Naturally studies in animal communication have centred on our nearest kin among the mammals, the primates, and specific investigations have been made, for example, into the calls of gibbons in their natural habitat.¹¹ But the area best known and most exciting to the general public in this type of research has been the attempts to teach chimpanzees to communicate with humans by human methods. Of these chimpanzees, Washoe and Sarah, the subjects of prolonged training and study in America, are the most famous. Some references to the accessible literature on them are given in the notes. 12 Here it must suffice to point out that attempts to teach chimpanzees actually to speak have largely failed; the signs used are in the main visual, involving gestures and facial movements. With this medium, intercourse involving information, questions, and requests, together with responses directly linked to them, and the rudiments of syntactic structures, has made astonishing progress, far beyond the scope of the language of bees, for example. But, and this is an important reservation, bee language developed entirely within natural communities of bees; chimpanzees have learned their language only after prolonged association with human beings who have devoted themselves to teaching them and studying them.

Such studies tell us much about the latent and inherent potentialities of chimpanzees, but they do not affect the unique species-specificity of language in mankind.

Human language, unlike every other communication system known in the animal kingdom, is unrestricted in scope and infinite in extent. Against the severe restrictions placed on the topics about which bees and even trained chimpanzees can communicate, human beings can, in any language, talk about all the furniture of earth and heaven known to them and about all human experience. Languages are adaptable and modifiable according to the changing needs and conditions of speakers; this is immediately seen in the easy adaptation of the vocabulary of English and of other languages to the scientific and industrial developments, and the concomitant changes in people's lives, that took place in Europe and North America in the eighteenth, nineteenth, and twentieth centuries.

The immense power and range of language have been perceived in all societies, and the realization of them was, no doubt, partly responsible for the magical associations felt among some peoples to belong to certain words relating to things and events vital to their lives or fearful in their effects. Traces of such a magical outlook on language are to be seen today in some familiar attitudes (2.2.1).

For all this flexibility and power, human languages have developed through the millennia in which mankind has existed on earth as a separate species through the medium of speech. The earliest known writing systems do not date back more than about 4,000–5,000 years, a minute distance in the time-scale of human existence. The elementary physiology of speech will be treated in Chapter 3; here it need only be pointed out that all human language and everything in human life that depends on language rests ultimately on the distinguishable noises that humans are able to make out of the passage of air through the throat, nose, and mouth.

Human infants inherit a biologically determined ability to acquire and use a language, and this inheritance may account for the universal features found in all known languages and assumed in the rest; but we do not inherit any particular language. A child learns the language of those with whom he is brought up in infancy and early childhood, whether they be, as is usually the case, his actual parents or others. There is no biological preconditioning to acquire English rather than Malay or Italian rather than Swahili. ¹³

Human progress is greatly hastened by the use of language in

cultural transmission (one of its functions); the knowledge and experience acquired by one person can be passed on to another in language, so that in part he starts where the other leaves off. Most teaching, after all, depends in great part on the use of language, written and spoken. In this connection the importance of the invention of printing can hardly be exaggerated. At the present time the achievements of anyone in any part of the world can be made available (by translation if necessary) to anyone else able to read and capable of understanding what is involved. From these uses of language, spoken and written, the most developed animal communication system, though given the courtesy title of language, is worlds away.

One topic connected with the study of language that has always exercised a strong fascination over the general public is the question of the origin of language. There has been a good deal of speculation on this, usually taking the form of trying to infer out of what sort of communicative noise-making fully fledged languages in all their complexities gradually developed. Imitative exclamations in response to animal noises, onomatopoeia and more general sound mimicry of phenomena, exclamations of strong emotion, and calls for help have all been adduced. Linguists, however, tend to leave this sort of theorizing alone, not because of any lack of intrinsic interest, but because it lies far beyond the reaches of legitimate scientific inference, since we can have no direct knowledge of any language before the invention of writing. In relation to the origin of language, every known language is very recent.

Two frequently used analogies for attempted inference on the origin of language are the acquisition of speech by children and the structures and characteristics of so-called 'primitive' languages. Both are invalid for this purpose. Children acquire their native language in an environment in which language is already established and in constant and obvious use all around them for the satisfaction of needs, some manifestly shared by themselves. Their situation is entirely different from that of mankind as a whole in the circumstances assumed to obtain while language itself was taking shape.

The second argument, based on the alleged nature of 'primitive' languages, rests on a common, though deplorable, misconception of these languages. Linguistically, there are no primitive languages. There are languages of peoples whose cultures as described by anthropologists may be called primitive, *ie* involving a low level of competence in the exploitation of natural resources and the like. *Primitive*, however, is not a proper qualification of

language. Investigations of the languages of the world do not bear out the assumption that structurally the languages of people at different levels of cultural development are inherently different. Their vocabularies, of course, at any time reflect fairly closely the state of the material and more abstract culture of the speakers; but languages are capable of infinite adjustment to the circumstances of cultural development, and their phonetic and grammatical organization may remain constant during such changes. It is a palpable fact of informed observation in the linguistic study of the languages of culturally primitive peoples that phonetically and grammatically their languages are no less (and no more) systematic and orderly than the languages of Western Europe and of the major world civilizations. Nor are the processes of change, that affect all parts of languages, any less active or any slower in operation in these languages than in others; indeed, the converse may be the case, as it has been held that the establishment of writing systems and standards of correctness tend, if anything, to retard linguistic changes in certain situations. Every language has aeons of changes, irretrievably lost to knowledge, lying behind it. To argue from the language of primitive people to the nature of a primitive stage in the evolution of language is valueless.

Attempts at gathering useful and reliable information on the origin of language from the inspection of existing languages, and the falsely grounded search for the 'oldest' language among them, efforts which go back to antiquity, have rather discredited the whole question among linguists. The foundation rule excluding papers on the origin of language from meetings of the Société Linguistique de Paris is well known. But though the quest for man's original language (formerly called lingua Adamica) and for the reconstruction of the ways in which actual lexical and grammatical forms emerged from hominids' prelinguistic noises are seen not to be accessible to scientific study, some linguists and anthropologists have recently looked at the subject from a rather different point of view. They have been considering not what the earliest manifestations of language were like, but how speaking hominids, homo loquens as they have termed the species, would be immeasurably advantaged in the struggle for survival by the possession and use of such a faculty.

Apart from its unconstrained range in communication, setting it apart from all other known types of animal communication, already referred to, speech requires little expenditure of energy; it is independent of light and darkness and of mutual visibility, requiring only that those involved remain within earshot; it does

not interfere with locomotion, food gathering, tool using, fighting, and other manual activities, as do gesturing and pointing. It can generally be combined with eating and drinking: the discouraging of children today from talking with their mouths full of food is more a matter of aesthetics and good manners than avoidance of the occasional choking fits that may arise. In the cooperative warning of sources of danger, their description and the concerting of means to avoid or counteract them, in collaborative efforts in finding, gathering, and storing food, locating shelter and so on, the development of language must be counted as by far the most important evolutionary development in the human species. And once man's survival and preeminence had been assured through language, it was language that made possible our living in larger stable and more viable communities, followed ultimately by the emergence of language-based intellectual, moral, and legal systems of rational thought, literature, song, and drama, such as are the glories of civilized life.14

Languages fall into the class of symbol systems, symbols being a special class of signs. The science of sign and symbol systems, sometimes called semiotics, lies outside the range of an outline introduction to general linguistics, but a brief clarification of the terms is desirable. Signs in general are events or things that in some way direct attention to, or are indicative of, other events or things. They may be related naturally or causally, as when shivering is taken as a sign of fever, or as when earthquakes are, or were, said to be signs of the subterranean writhing of the imprisoned god Loki; or they may be related conventionally and so used, and they are then called symbols, as, for example, the 'conventional signs' for churches, railways, etc on maps, road signs, and the colours of traffic lights.

Among symbol systems language occupies a special place, for at least two reasons. Firstly, it is almost wholly based on pure or arbitrary convention; whereas signs on maps and the like tend to represent in a stylized way the things to which they refer, the words of a language relate to items of experience or to bits of the world in this way only in the proportionately very small part of vocabulary called onomatopoeic. The connection between the sounds of words like *cuckoo*, *hoopoe*, and such imitative words as *dingdong*, *bowwow*, *rattattat*, etc and the creatures making such noises or the noises themselves is obvious; and in a wider set of forms in languages a more general association of sound and type of thing or event is discoverable, as in many English words ending in *-ump*, such as *thump*, *clump*, *stump*, *dump*, which tend to have associations of heaviness, thickness, and dullness. It has

been found experimentally that made-up words, like maluma and oomboolu, and takete and kikeriki, are almost always treated alike by persons who hear them for the first time and are asked to assign them to one or the other or a pair of diagrams, one round in shape and the other spiky; the first pair are felt appropriate to the former shape, and the second pair to the latter. 16 More abstractly, there does seem to be an association in parts of the vocabulary of many languages between close front vowels, as in wee (/wi:/3.3.3), and nearness and smallness, and of open back vowels, as in far (/fa:/), with distance. Consider, for example, the popularity of the recent neologism mini, and such contrasts as this (here) and that (there), Hungarian ez and az, French ici, here, and là, there, and the re-creation of teeny after the first vowel in tiny had lost its close front quality to become the present-day diphthong (/taini/), as part of the Great Vowel Shift (8.1.2).

The onomatopoeic and 'sound-symbolic', or phonaesthetic, part of language is of great significance, but its extent in any vocabulary is quite small, and despite attempts by some to see the origin of language in such imitative cries, it must be realized that the vastly greater part of the vocabulary of all languages is purely arbitrary in its associations. Were this not so, vocabularies would be much more similar the world over than they are, just as the conventional picture signs of several historically unrelated pictographic systems show obvious resemblances.

It is this arbitrariness of greater part of language that gives it its almost limitless flexibility; unlike most other symbol systems language is double-structured.¹⁷ At the level of phonology articulated speech sounds are organized into distinctive units, such as phonemes, and these are grouped into syllables (4.3.1; 4.3.4). In turn, these units and syllables are used as the spoken manifestation of words and of words concatenated in sentences. It is at this second level of structuring that meaningful items of language and interpretable sentences come into being. The distinction between these two levels is discussed further in 5.1.1.

Secondly, what is conveyed by all other symbol systems can be explained in language, and these other systems can be interpreted in language, but the reverse is not the case. The instructions given by road and railway signals can be expressed in words, the propositions of logic can be translated into ordinary language, though with loss of brevity and precision, those of classical Aristotelian logic fairly directly, those of modern symbolic logic more indirectly. But in languages we deal with whole areas of human life and engage in modes of communication with which logical systems as such have no concern.

These considerations apply in the use of the word *language* in reference to such human activities as instrumental music or dancing. Certainly these are social and communicative activities, and they can both express and impart various emotional attitudes and in some cases they can mimetically convey the general impression of a situation, as, for example, the country scenes embodied in the successive movements of Beethoven's Pastoral Symphony. But such communication is not language, nor even surrogate language. These are different sorts of communicative art, to some extent conveying, like gestures, but often with intense aesthetic force, emotions and impressions comparable to those expressed in explicit detail by speech and writing. When, therefore, critics write of the 'grammar' (basic principles) of some non-verbal art or science, or of 'the immense tragedy of the first movement of Brahms's first symphony' (Sir Donald Tovey), we must remember that such words are being used metaphorically and understand them as such, however profound an artistic judgment may lie behind them.

1.3.3 Phonetics, phonology, grammar, semantics

That part of linguistics that deals with the material of speech itself is called **phonetics**. Chapter 3 is devoted to this, and here it need only be said that it is immediately concerned with the organs of speech and the movements of articulation, and, more widely, with the physics of sound transmission and the physiology of hearing, and ultimately with the neurological process involved in both speaking and hearing. The subsidiary and less extensive study of written language in its different forms is sometimes called graphics or graphonomy, or on the model of *phonetics*, graphetics; but as this material is less complex, and writing is a secondary manifestation of language compared with speaking (3.1.1), this has not been accorded such an important place in linguistic studies. ¹⁸

Within the scope of meaning are involved the relations between utterances, written and spoken, and the world at large. Meaning is an attribute not only of language but of all sign and symbol systems, and the study of meaning is called **semantics**, which, therefore, embraces a wider range than language alone. However, since language incorporates by far the most extensive symbol system in man's use as well as the central one, much of semantics and of semantic theory is concerned with language and languages.

In order to fulfil their symbolizing and communicative functions, languages must organize the available noises that can be produced by the vocal organs into recurrent bits and pieces

arranged in recurrent patterns. This formal patterning and arrangement in languages is studied at the levels of phonology and grammar. These two levels of linguistics are the subjects of separate chapters (4, 5 and 6); here it need only be said that phonology is concerned with the patterns and organization of languages in terms of the phonetic features and categories involved, and grammar is concerned with the patterns and arrangements of units established and organized on criteria other than those referable to phonetic features alone. It is for this reason that in the case of languages studied only in their written forms, such as Ancient Greek or Latin, a full grammatical statement and analysis of the written language, based on orthographic text, is possible, but any phonological analysis of such languages must necessarily be uncertain and incomplete, since it can be made only from such phonetic descriptions of the languages as can be deduced from the orthography itself or gathered from the contemporary accounts of ancient scholars and commentators. Further discussion of the relation between these two levels may be deferred until Chapter 5.

Both phonetics and semantics involve linguists with the findings and the researches of other sciences. In the case of phonetics the other sciences that are relevant are restricted in number: physiology is immediately involved as far as it concerns the structure and movements of the vocal organs, and in any specialized study of phonetics the physics of sound wave transmission, the physiology of the hearing process, and the neurology of the processes of both hearing and speaking are brought into relevance. In semantics, however, since the meanings of utterances may relate to the whole world of the actual and potential experience of the speakers, the appeal to sciences and disciplines outside linguistics, as well as to the whole range of unscientific acceptance called common sense, is, in theory, unlimited. But in view of the essentially social nature of language, the sciences principally concerned with persons in society, such as social anthropology, are especially involved. In both cases it must be pointed out that the statements made, the categories established, and the terms employed are still primarily linguistic in relevance, even though they must necessarily rely on the findings of other sciences. They are linguistic in that they are made specifically with linguistic ends in view, that is the study and analysis of language and languages, and they are not necessarily the sort of statements, categories, or terms, that the specialists in these other sciences would want to make. For example, an important distinction is made in phonetics between the front and the back

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of the tongue (3.2.2); physiologically and with reference to other activities, such as gustation and swallowing, this distinction may not be of fundamental importance.¹⁹

1.4 Semantics

1.4.1 Philosophical and linguistic interest in meaning

As has already been said, the study of meaning, semantics, brings in symbol using and symbol systems outside language; but the central place of language in human symbol systems makes language very much its primary concern. The problems arising from the study and analysis of meaning have been recognized and have received attention during the whole of man's intellectual history. Much of the work involved has been undertaken by philosophers, especially logicians (to whom linguistics in the West owed much of its original impulse, 9.6). The study of logic is closely connected with the study of language, however the relations between the two may be interpreted by successive generations of philosophers, since language is the vehicle of philosophical discourse and even the specially devised systems of modern symbolic logic are derived from and refer to particular types of sentence in natural languages. The logician is, however, primarily concerned with the inferential uses of language, the formal means by which statements or propositions may be reached or inferred as valid conclusions from preceding statements or propositions acting as premises. Much of Aristotelian logic is devoted to the different types of syllogisms, as sets of premises followed by conclusions are called, that may be used in valid chains of reasoning.

The concern of the linguist for the uses of language is much wider. Formalized logical inference and philosophical discourse in general are an important part of people's use of language in several civilizations; but they are by no means the only, or indeed anything like the most frequent, uses. The linguist's concern is with language in all its uses and manifestations as part of the processes of daily living and social interaction by members of groups, as well as in the specialized applications that form the provinces of philosophers and literary critics, and the approach to meaning on the part of the linguist must be based on this much wider range of language use and types of utterance.

Semantics can be recognized as a level of linguistic description and as a component of linguistics, but it is a much less tidily circumscribed field of study than are phonetics, phonology, and grammar, unless its range is so restricted as to exclude a great deal of what the plain man and the common reader would wish to include under the heading of *meaning*, with which semantics is concerned.

What one is really trying to do in semantics, or in making statements about meaning, is to explicate, to make explicit, the ways in which words, and sentences of various grammatical constructions, are used and understood by native or fluent speakers of a language. Sentences consist of words, but of words in specific grammatical relations within constructions, and words are used in speech (and in writing) as components of sentences. This applies equally to the so-called one-word sentences, in which a single word comprises a complete sentence (6.3.1). Nonetheless semantics can be considered from the point of view of word meaning and from that of sentence, or structural, meaning.

1.4.2 Word meaning

Word meanings are what are sought and what should be provided in comprehensive dictionaries of a language. For much of the history of semantic studies, and still to a considerable extent today, the investigation of word meaning has been based on the relationships of reference and denotation. Certainly meaning includes the relations between utterances and parts of utterances (eg words) and the world outside; and reference and denotation are among such relations. But for the purposes of linguistics it is desirable to deal with meaning by a more comprehensive treatment.

Sentences have meaning, are meaningful; and a child learns the meaning of many words by hearing them in other people's uttered sentences and practising such utterances himself subject to the correction of others and the test of being understood by those to whom he is talking. The process goes on all our lives, and we learn new words and extend and increase our knowledge of the words we already know, as we hear and see them in fresh utterances and used slightly differently from the ways which we are accustomed to. The meaning of a word, therefore, may be considered as the way it is used and understood as a part of different sentences; what the dictionary does is to try and summarize for each word the way or ways it is used in the sort of sentences in which it is found in the language.

The grammatical structure and certain phonological features such as intonation may themselves give an indication of part of its meaning (3.5.3, 3.5.4, 4.3.6, 6.6.3), as we can easily see when we consider the part played in English and in many other languages by word form, word order, and intonation in the