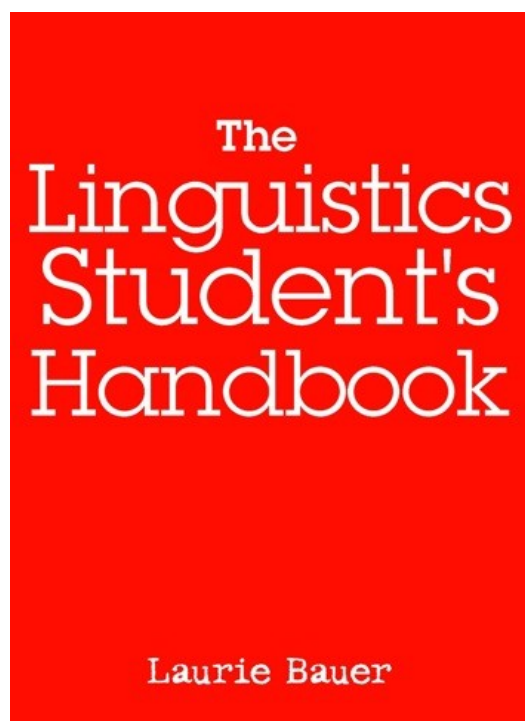


# READING 2

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## Linguistics

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A typical dictionary definition of linguistics is something like ‘the science of language’. Unfortunately, such a definition is not always helpful, for a number of reasons:

- Such a definition does not make clear in what respects linguistics is scientific, or what is meant by *science* in this context.
- Such a definition masks the fact that it is, for some linguists, controversial to term their subject a science.
- Such a definition fails to distinguish linguistics from related fields such as philology.
- The word ‘science’ may carry with some misleading connotations.

A rather looser definition, such as ‘linguistics is the study of all the phenomena involved with language: its structure, its use and the implications of these’, might be more helpful, even if it seems vaguer.

### **What does linguistics cover?**

Linguistics deals with human language. This includes deaf sign-languages, but usually excludes what is often termed **BODY-LANGUAGE** (a term which itself covers a number of different aspects of the conscious and unconscious ways in which physiological actions and reactions display emotions and attitudes). Human language is just one way in which people communicate with each other, or gather information about the world around them. The wider study of informative signs is called **SEMIOTICS**, and many linguists have made contributions to this wider field.

One obvious way of studying language is to consider what its elements are, how they are combined to make larger bits, and how these bits help us to convey messages. The first part of this, discovering what the elements are, is sometimes rather dismissively termed TAXONOMIC or classificatory linguistics. But given how much argument there is about what the categories involved in linguistic description are, this is clearly an important part of linguistics, and is certainly a prerequisite for any deeper study of language.

The study of the elements of language and their function is usually split up into a number of different subfields.

1. PHONETICS deals with the sounds of spoken language: how they are made, how they are classified, how they are combined with each other and how they interact with each other when they are combined, how they are perceived. It is sometimes suggested that phonetics is not really a part of linguistics proper, but a sub-part of physics, physiology, psychology or engineering (as in attempts to mimic human speech using computers). Accordingly, the label LINGUISTIC PHONETICS is sometimes used to specify that part of phonetics which is directly relevant for the study of human language.
2. PHONOLOGY also deals with speech sounds, but at a rather more abstract level. While phonetics deals with individual speech sounds, phonology deals with the systems which incorporate the sounds. It also considers the structures the sounds can enter into (for example, syllables and intonational phrases), and the generalisations that can be made about sound structures in individual languages or across languages.
3. MORPHOLOGY deals with the internal structure of words – not with their structure in terms of the sounds that make them up, but their structure where form and meaning seem inextricably entwined. So the word *cover* is morphologically simple, and its only structure is phonological, while *lover* contains the smaller element *love* and some extra meaning which is related to the final <r> in the spelling. Another way of talking about this is to say that morphology deals with words and their meaningful parts.
4. SYNTAX is currently often seen as the core of any language, although such a prioritising of syntax is relatively new. Syntax is concerned with the ways in which words can be organised into sentences and the ways in which sentences are understood. Why do apparently parallel sentences such as *Pat is easy to please* and *Pat is eager to please* have such different interpretations (think about who gets pleased in each case)?
5. SEMANTICS deals with the meaning of language. This is divided into two parts, LEXICAL SEMANTICS, which is concerned with the relationships

between words, and SENTENCE SEMANTICS, which is concerned with the way in which the meanings of sentences can be built up from the meanings of their constituent words. Sentence semantics often makes use of the tools and notions developed by philosophers; for example, logical notation and notions of implication and denotation.

6. PRAGMATICS deals with the way the meaning of an utterance may be influenced by its speakers or hearers interpret it in context. For example, if someone asked you *Could you close the window?*, you would be thought to be uncooperative if you simply answered *Yes*. Yet if someone asked *When you first went to France, could you speak French?* *Yes* would be considered a perfectly helpful response, but doing something like talking back to them in French would not be considered useful. Pragmatics also deals with matters such as what the difference is between a set of isolated sentences and a text, how a word like *this* is interpreted in context, and how a conversation is managed so that the participants feel comfortable with the interaction.
7. LEXICOLOGY deals with the established words of a language and the fixed expressions whose meanings cannot be derived from their components: idioms, clichés, proverbs, etc. Lexicology is sometimes dealt with as part of semantics, since in both cases word-like objects are studied.

In principle, any one of these levels of linguistic analysis can be studied in a number of different ways.

- They can be studied as facets of a particular language, or they can be studied across languages, looking for generalisations which apply ideally to all languages, but more often to a large section of languages. The latter type of study is usually called the study of LANGUAGE UNIVERSALS, or LANGUAGE TYPOLOGY if the focus is on particular patterns of recurrence of features across languages.
- They can be studied as they exist at some particular time in history (e.g. the study of the morphology of fifteenth-century French, the study of the syntax of American English in 2006, the phonetics of the languages of the Indian subcontinent in the eighteenth century) or they can be studied looking at the way the patterns change and develop over time. The first approach is called the SYNCHRONIC approach, the second the DIACHRONIC or historical approach (see section 7).
- They can be studied with the aim of giving a description of the system of a particular language or set of languages, or they can be studied with the aim of developing a theory of how languages are most efficiently described or how languages are produced by speakers. The first of

these approaches is usually called **DESCRIPTIVE LINGUISTICS**, the second is often called **THEORETICAL LINGUISTICS**.

- They can be treated as isolated systems, at though all speakers talk in the same way as each other at all times, or they can be treated as systems with built-in variability, variability which can be exploited by the language user to mark in-group versus out-group, or to show power relations, or to show things as diverse as different styles and personality traits of the speaker. The latter types are dealt with as part of **SOCIOLINGUISTICS**, including matters such as **DIALECTOLOGY**.
- We can study these topics as they present in the adult human, or we can study the way they develop in children, in which case we will study **LANGUAGE ACQUISITION**. Perhaps more generally, we can view the development of any of these in the individual human, that is we can take the **ONTOGENETIC** point of view, or we can consider the way each has developed for the species, taking the **PHYLOGENETIC** point of view.
- Finally, most of these facets of linguistics can be studied as formal systems (how elements of different classes interact with each other, and how the system must be arranged to provide the outputs that we find in everyday language use). Alternatively, they can be studied in terms of how the use to which language is put in communication and the cognitive functions of the human mind shape the way in which language works (iconicity, the notion that language form follows from meaning to a certain extent, is thus a relevant principle in such studies). This is the difference between **FORMAL** and **FUNCTIONAL** approaches to language.

In principle, each of these choices is independent, giving a huge range of possible approaches to the subject matter of linguistics.

Many people are less interested in the precise workings of, say, phonology than they are in solving problems which language produces for humans. This study of language problems can be called **APPLIED LINGUISTICS**, though a word of warning about this label is required. Although there are people who use the term *applied linguistics* this broadly, for others it almost exclusively means dealing with the problems of language learning and teaching. Language learning (as opposed to language acquisition by infants) and teaching is clearly something which intimately involves language, but often it seems to deal with matters of educational psychology and pedagogical practice which are independent of the particular skill being taught. Other applications of linguistics may seem more centrally relevant. These include:

- **ARTIFICIAL INTELLIGENCE**: Turing (1950) suggested that a machine should be termed intelligent when humans could interact with it

without realising they were not interacting with another human. Among many other problems, this involves the machine being able to produce something akin to human language.

- **FORENSIC LINGUISTICS:** this deals with the use of language in legal contexts, including matters such as the linguistic techniques of cross-examination, the identification of speakers from tape-recordings, and the identification of authorship of disputed documents.
- **LANGUAGE POLICY:** some large organisations and nations have language policies to provide guidelines on how to deal with multilingualism within the organisation.
- **LEXICOGRAPHY:** the creation of dictionaries; although some people claim that this is not specifically to do with linguistics, it is a linguistic study in that it creates vocabulary lists for individual languages, including lists of things like idioms, and in translating dictionaries provides equivalents in another language.
- **MACHINE TRANSLATION:** the use of computers to translate a written text from one language to another.
- **SPEECH AND LANGUAGE THERAPY:** speech and language therapists deal with people who, for some reason, have not acquired their first language in such a way that they can speak it clearly, or with the re-education of speakers who have lost language skills, e.g. as the result of a stroke. The linguistic aspects of this are sometimes called **CLINICAL LINGUISTICS**.
- **SPEECH RECOGNITION:** the use of computers to decode spoken language in some way; this may include computers which can write texts from dictation, phone systems which can make airline bookings for you without the presence of any human, or computers which can accept commands in the form of human language. More specifically, **VOICE RECOGNITION** can be used for security purposes so that only recognised individuals can access particular areas.
- **SPEECH SYNTHESIS:** the use of computers to produce sound waves which can be interpreted as speech.
- **TEACHING:** it is clear that second- and foreign-language teaching involve, among other things, linguistic skills, but so does much mother-language teaching, including imparting the ability to read and to write. At more advanced levels, teaching students to write clearly and effectively may involve some linguistic analysis.

Another way of looking at what linguistics covers is by taking the list of topics given at the head of this section as being some kind of core, and then thinking of all the types of ‘hyphenated’ linguistics that are found.

- **AREAL LINGUISTICS** deals with the features of linguistic structure that tend to characterise a particular geographical area, such as the use of retroflex consonants in unrelated languages of the Indian subcontinent.
- **COMPARATIVE LINGUISTICS** deals with the reconstruction of earlier stages of a language by comparing the languages which have derived from that earlier stage.
- **COMPUTATIONAL LINGUISTICS** deals with the replication of linguistic behaviour by computers, and the use of computers in the analysis of linguistic behaviour. This may include **CORPUS LINGUISTICS**, the use of large bodies of representative text as a tool for language description.
- **EDUCATIONAL LINGUISTICS** investigates how children deal with the language required to cope with the educational system.
- **ETHNOLINGUISTICS** deals with the study of language in its cultural context. It can also be called **ANTHROPOLOGICAL LINGUISTICS**.
- **MATHEMATICAL LINGUISTICS** deals with the mathematical properties of languages or the grammars used to describe those languages.
- **NEUROLINGUISTICS** deals with the way in which linguistic structures and processes are dealt with in the brain.
- **PSYCHOLINGUISTICS** deals with the way in which the mind deals with language, including matters such as how language is stored in the mind, how language is understood and produced in real time, how children acquire their first language, and so on.
- **SOCIOLINGUISTICS** deals with the way in which societies exploit the linguistic choices open to them, and the ways in which language reflects social factors, including social context.

We can finish by pointing out that the history of linguistic thought is itself a fascinating area of study, since ideas about language are closely related to the philosophical fashions at different periods of history, and often reflect other things that were occurring in society at the time.

Even this overview is not complete. It indicates, though, just how broad a subject linguistics is.

### **Is linguistics a science?**

In the 1950s and 1960s there was a lot of money for scientific research, but very little for research in the humanities. There was thus more than just a political point to be made by terming linguistics a science. A great deal of linguistic research was funded through the American National Science Foundation, for example. Today things are not greatly different, and a great deal of linguistic research gets funded as applications of computer-related work. But calling

linguistics a science was not simply a political stance aimed at gaining prestige and funding for the subject. There are good reasons for calling linguistics a science.

Like the biological sciences, linguistics is concerned with observing and classifying naturally occurring phenomena. The phenomena to be classified are speech sounds, words, languages and ways of using language to interact rather than organs, mating behaviours and plant species, but the general principles of classification do not change.

Because language is manifested in human behaviour, it can be studied in the same way that other human behaviour is studied in psychology and medical science.

As in many sciences, the argument in linguistics runs from the observed data to the potentially explanatory theories to provide an account of the data. In physics you move from the observation of falling objects through to theories of gravity; in linguistics you move from the observation of particular kinds of linguistic behaviour through to theories on how linguistic behaviour is constrained.

Like many scientists, linguists construct hypotheses about the structure of language and then test those hypotheses by experimentation (the experimentation taking a number of different forms, of course).

These days most linguists would agree that linguistics is a science, and very few would wish to query such a suggestion. Those that do query the suggestion tend to view linguistics as a branch of philosophy, a metaphysics (see e.g. Lass 1976: 213–20). It is not clear how important any such distinction is. What we call *physics* today was once called *natural philosophy*, and philosophers construct hypotheses, carry out thought experiments and base their conclusions on arguing from what can be observed as well.

For the beginning linguist, saying that linguistics is a science can be interpreted as implying careful observation of the relevant real-world phenomena, classification of those phenomena, and the search for useful patterns in the phenomena observed and classified. For the more advanced linguist, saying that linguistics is a science is a matter of seeking explanations for the phenomena of language and building theories which will help explain why observed phenomena occur while phenomena which are not observed should not occur.

### **What is not linguistics?**

Are there aspects of the study of language which are not encompassed within linguistics? To a certain extent this is a matter of definition. It is perfectly possible to define linguistics very narrowly (usually to include only phonology, morphology, syntax and perhaps semantics) and to exclude all the rest by that act of definition. But while this is clearly the core of linguistic study in the sense



that any other facet of language that is studied will make reference to some of this material, this very narrow definition would not be widely accepted.

Perhaps the most general exclusion from linguistics is the study of the literary use of language in order to provide emotional effect. While linguists are frequently happy to study particular figures of speech such as metaphors or metonymy, they do not do this to relate it to the building up of an atmosphere or the development of characterisation. Such matters are left to literary scholars. So although linguistics and literature may both deal with language production as their basic material, there is often little if any overlap between the two fields.

Similarly, although linguists deal with matters of formality and informality in language use, and matters of what language is appropriate in what circumstances, there is an area of literary stylistics which seems to be beyond what most linguists see as being the proper domain of linguistics.

The difference between linguistics and philology is either a matter of history or a matter of method. What we would now call historical or diachronic linguistics was in the nineteenth and early twentieth centuries (and to a certain extent still) covered under the title of PHILOLOGY. Philology was usually based on the close reading of older texts (often, but not exclusively, literary texts). Linguists use such texts as evidence, but are more concerned with giving a systematic account of the language system: the focus is on the language description rather than on the texts from which the system is deduced.

## References

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