Introductory Semantics and Pragmatics for Spanish Learners of English

Brian Mott

UBe

INTRODUCTORY SEMANTICS AND PRAGMATICS FOR SPANISH LEARNERS OF ENGLISH

Brian Mott

Publicacions i Edicions

UNIVERSITAT DE BARCELONA

CONTENTS

PREFACE

For several years, semantics formed part of my fifth-year translation course for students in the English Department of the University of Barcelona, and the subject was backed up by my textbook *A Course in Semantics and Translation for Spanish Learners of English*. However, in 1996, I was allowed to pilot a course in semantics separate from translation, which seemed to me appropriate in a department where there already existed courses in the other two major areas of linguistics, namely phonetics and phonology, and morphology and syntax. Having a course on semantics by itself has meant that I have been able to concentrate more fully on word and sentence meaning, and also outline the two major contributions to pragmatics: Austin's Speech Act Theory and Grice's Cooperative Principle. These, dealing as they do with the speaker's intended meaning and the vital role played by context in the interpretation of utterances, are directly relevant to the translator's task and ought to form part of his or her background knowledge.

Chapter 1 of this book provides a general introduction to linguistics, so that students can relate semantics and pragmatics to the other branches of the discipline. It is normal for universities to compartmentalize the various aspects of language and teach courses on them as independent units. However, it is important for the student of language to realize how closely the different levels of this field interact, and that they are in reality inseparable.

Chapter two underlines the ambiguity of the term "word" and its inadequacy in precise linguistic description, where the form "lexeme" often proves to be more helpful, while the remaining chapters deal mostly with word and sentence meaning. There is a brief chapter on semantic roles (chapter 9), even though this field has received less attention from linguists as compared to other areas. As the meaning of words changes more quickly than their phonology or grammar, I have devoted considerable space to semantic change (chapter 10). Translators are all too often mesmerized by similarity of form between cognates, which can lead to poor translation. Similarity of form between words often beguiles us into expecting identity or near-identity of meaning, no matter how many times we have been warned about "false friends". Cognates frequently have

diverse histories in their respective languages, and may accrue totally different connotations.

Apart from the references to a number of different languages in chapter 10, throughout this book in general there is a wealth of exemplification from languages other than English, Spanish and Catalan, since my policy in teaching has always been to expose students to a range of linguistic varieties in order to show them the universality of many language phenomena.

It is my wish that this textbook will contribute to making semantics and pragmatics essential background reading to translation studies in university departments, rather than just a mere option.

Brian Mott
Universitat de Barcelona
December 2008

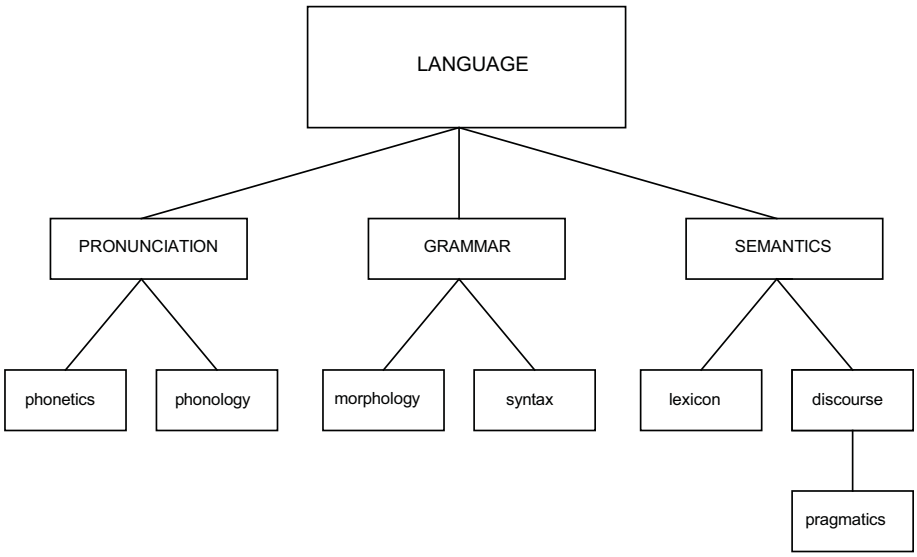
ACKNOWLEDGEMENTS

Apart from the author, there are many people who contribute in one way or another to the creation of a book during the long period of gestation. My thanks go, first and foremost, to Sheila Waldeck, former head of the "Departament de Traducció i Interpretació" of the "Facultat de Ciències Humanes, Traducció i Documentació" at the University of Vic, for reading the manuscript version of this text, offering suggestions for amendments and checking the exercises. I am also grateful to her for a further revision of the book for the 2009 reprint. I also wish to thank Roser Estapà for her constant support and unfailing help with questions on Spanish and Catalan, and Peter Harvey for taking the trouble to send me numerous interesting articles on language from newspapers and magazines. My friend David Pennie of the Brynmore Jones Library of the University of Hull always gave a swift response to my various bibliographical enquiries. Apart from these people, I must also record my gratitude to Enrique Góngora for the information on the Spanish of Peru in section 5.2, Sylvie Wuattier for the French cacophemisms in 10.4.5, Éva Toth for glossing "the longest word in Hungarian" in chapter 2, Jesús Puyuelo for suggesting amendments to some of the exercises, Ron Puppo of the University of Vic for several last-minute corrections, and my colleague Joan Carles Mora, with whom I share the teaching of the subject *English Phonetics and Phonology* at the University of Barcelona, for patiently enduring my constant interruptions and questions about Spanish and Catalan (and English!!).

1. THE LEVELS OF LANGUAGE

1.1. Introduction

Language is made up of several different interacting levels:

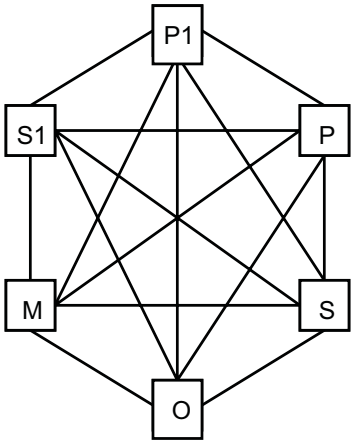


Although we can concentrate on any one of these levels largely to the exclusion of the others, as is often done in language teaching or for the purpose of linguistic analysis in order to see particular patterns of organization like combinations of vowels and consonants, verb paradigms or lexical fields more clearly, these different facets of the structure of language are in fact inextricably interrelated.

The sounds of speech are used to make up words, which are given a conventional meaning. Thus, in English the consonant + vowel + consonant combination of *b-oo-t* is used to mean 'kind of heavy footwear'. These grammatical units that we call words are in turn put together to create larger grammatical units called phrases, clauses and sentences: the three words *the last dance* constitute a phrase, *if he tries to escape* is a clause, and *She's the ugliest girl that I know* is a sentence. All these types of unit have a meaning, too, but their meaning is often not deducible from the individual words of which they are composed. For example, the sentence *He put his iron in the fire to heat it* has a meaning which can be worked out by adding together the meanings of the individual words; on the other hand, the expression *He has too many irons in the fire* cannot be analysed on the basis of its components, its meaning in Spanish being something like 'Tiene demasiados asuntos entre manos'.

The sentence is not the largest linguistic unit: beyond the sentence we have text, which is the concern of discourse. An important branch of discourse is pragmatics, which studies mainly conversational interaction, and in particular what a speaker actually means by the words s/he uses.

The fact that the different levels of language come into play simultaneously might be represented by the following model of language structure proposed by David Crystal (1987:82), which is rather like a space station, and shows that entering the system at any one level provides access to all the other levels:



M = Morphology

P = Phonetics

P1 = Phonology

S = Syntax

S1 = Semantics

O = Other levels

1.2. Differentiation of the levels of language

Phonetics is more concerned with the physiological aspects of speech than phonology. It deals with the articulation of sounds, their transmission from speaker to hearer, and audition or perception of these sounds by the hearer. It is an independent science which studies human speech in general without necessarily referring to any one language in particular. For this reason, unlike phonology, it is not considered to be part of linguistics.

Phonology is a branch of linguistics that studies the linguistic use of sounds: the way different languages organize sounds to convey differences of meaning. Therefore, one of its main concerns is identifying **phonemes** in particular languages. For example, as *seat* and *sheet* are different words in English, the initial segments, represented by <s> and <sh> respectively, are contrastive sounds or phonemes in this language. Similarly, if we change the vowel of *piss* to the longer one of *piece*, we create a different word, as these vowel sounds are also different phonemes in English. On the other hand, if we make the vowel of the Spanish word *pis* longer, no such change in meaning occurs – we simply sound a little strange. This is because Spanish does not have a phonemic contrast between short and long vowels as English does.

Apart from identifying the sounds of individual languages and classifying them according to the way they are articulated (vowels, consonants, nasal consonants, etc.), phonology is also interested in investigating which sounds are most commonly used in the world's languages, and whether the existence of one sound implies the existence of any other(s). This branch of the discipline is called **Natural Phonology**, and it has been found, for example, that nearly all languages have at least one nasal consonant phoneme and, if they have only one, it is [n]. If a language has two nasal consonants, they are [n] and [m] and, if [m] is found as a phoneme in a given language, [n] will also exist as a phoneme in that language. Therefore, the existence of the phoneme /m/ implies the existence of the phoneme /n/, but the reverse is not true. Among the commonest sounds in the world's languages are [p]s and [b]s.

Morphology is the study of word structure. Words are composed of **morphemes**, which are the smallest units of grammar, its building blocks, if you like. A word may consist of only one morpheme, like *manage*, or two or more, like *manage-ed* and *un-manage-able*.

The field of morphology is divided into **Inflectional Morphology**, which is the study of the inflections that we add to verbs, nouns and adjectives to show tense, number, case, gender, etc., depending on the language in question, and **Derivational** Morphology, the study of how new words are formed from existing ones, for example, how we form an adjective from a noun. Therefore, inflections are units which do not change the word class of an item, but show grammatical

relationships, whereas derivation creates different words. English has relatively few inflections: *-(e)s* to mark the plural of nouns or third-person singular present tense of verbs, *-ing* to mark the gerund, *-(e)d* to mark the past tense and past participle of regular verbs, *'s (s')* to mark possession, and *-(e)r* and *-(e)st* to mark the comparative and superlative forms of adjectives, respectively. On the other hand, it uses a large number of endings to create derived forms. The nouns *betterment*, *tenderness*, *adequacy* and *serenity*, for example, derive from their corresponding adjectives *better*, *tender*, *adequate* and *serene*, while *university* and *friendship* are based on the already existing nouns *universe* and *friend*. (For further details and examples, see ch. 2).

Derivational morphology tends to be much less predictable than inflectional morphology. Most verbs form the third-person singular present tense with the inflection *-(e)s*, like *hit-s*, *go-es*, but the opposite of *stable* is *un-stable*, and the opposite of *stability* is *in-stability*, with a different prefix. Moreover, *dangerous* is the adjective from *danger*, but there is no such form as **girlous* from *girl*, the existing adjective being *girlish*. Similarly, in Spanish you can say *estupidez*, but not **tontez*. Interlanguage comparison reveals the same unpredictability: English forms the adjective *sadistic* with the ending *-istic*, while Spanish uses *-ico* on its cognate *sádico*, for example. Compare also English *defect-ive* with Spanish *defectu-oso*.

If morphology is the study of the way morphemes combine to produce words, **syntax** studies the way words combine to form larger units like phrases, clauses and sentences. Speakers of a language apply their grammatical knowledge when they put words together, so native speakers of English know that in the sentence *The cat likes fish*, *like* must bear an *-s* because it is singular and present tense, or that *the* is only used in noun phrases like *the (big) man*, but not with prepositions or adverbs like *on*: **the on*. (This is not to say, however, that words cannot change category. Consider English *the poor*, the *ins and outs*; Spanish *no pongas peros*, *el amar*.) Speakers are also aware that the elements of utterances occur in a specific order. For example, the article precedes the noun in English: *the man*, not **man the*. Furthermore, change of order often means change of meaning. Thus, *jet black* (Spanish 'negro azabache') is not the same as *black jet* (Spanish 'reactor negro'), *the sign on the door* is not the same as *the door on the sign*, and Spanish people know that *una familia en la Mancha* is not the same as *una mancha en la familia*.

The term **lexicon** refers to the words of a language or language variety, especially the way they are organized in the mind. The form **lexis** also exists, but it tends to be used more as a general word for the vocabulary of a language. A unit of vocabulary is called a **lexical item** or a **lexeme**. Lexemes listed in the lexicon are called **lexical entries**, and these entries contain rules like *black* + *-ness* gives the noun *blackness*. The words in the mental lexicon are organized into an

indeterminate number of **lexical (semantic) fields**, such as COLOUR, ANIMALS, FOOD, COOKING, MEMORY, PERCEPTION, CLOTHING, SOCIAL ORGANIZATION, SCIENCE, etc., just like a thesaurus.

A lexeme may belong to more than one field. This is the case of English *boot*, which comes under CLOTHING, but also belongs in the category of SPORT. The absence of a lexeme at a specific point in the structure of a lexical field is called a **lexical gap**. For example, English has no separate lexemes for male and female cousin, a difference marked in Italian by the use of the masculine form *cugino* and the feminine *cugina*, in Spanish with *primo* and *prima*, and in Catalan with *cosí* and *cosina*. In comparing these languages, we can say that English has failed to **lexicalize** a certain contrast which the others have. On the other hand, in English there is **lexicalization** of the distinction between animal and meat in *pig* and *pork*, whereas in Spanish the lexeme *cerdo* covers both of these senses.

The lexical items in the lexicon are not listed in alphabetical order as in a dictionary, which is an artificial construct, but are linked to each other through sense relations like synonymy, antonymy and hyponymy. A word often reminds us of its synonyms (if it has any), conjures up its antonym, or recalls the words which it includes or is included in. Thus we immediately relate *hot* to *warm* and *cold*; when we think of *dog*, we are reminded of *animal*, of which it is a kind or hyponym, or *alsatian*, to which it is superordinate. Similarly, the word *animal* may prompt the item *zoo*, which, note, in our traditional dictionary is right at the other end of the alphabetical list of entries.

But languages do not manifest symmetrical patterns of superordinates and hyponyms owing to the gaps in their vocabularies that we referred to above. For example, Spanish has the superordinate term *hermanos* to refer to brothers and sisters, which English lacks (although *siblings* exists as a technical term and can be used metaphorically: *India and Pakistan are **sibling** nations*). Conversely, English has the superordinate *nut*, often contrasted with *berry*, which is soft, to refer to walnut, chestnut, hazel nut, brazil nut, cashew nut, almond, etc., which Spanish lacks because Spanish *nuez* actually corresponds to the specific term *walnut* in English. If you look up *nut* in an English-Spanish dictionary, the botanical equivalent given will be *nuez*, but these terms are not really synonymous within their respective language systems. Spanish has the expression *frutos secos*, which is roughly equivalent to English *nuts*, but *frutos secos* additionally covers dried grapes like currants, raisins and sultanas, which are not nuts. Moreover, consider how difficult it is to provide adequate translations for the Spanish superordinates *deportes blancos* and *arma blanca* in English. At first glance, *winter sports* looks like an acceptable translation for *deportes blancos*, but not all winter sports are played in the snow – curling, for example, is played on ice. As for *arma blanca*, the Oxford Spanish-English Dictionary (1994) only glosses the meaning as *any sharp*

instrument used as a weapon. On the other hand, English *white goods* does find an equivalent in Spanish as *la línea blanca*.

On the whole, it is not difficult to find equivalents among languages spoken in similar cultures (for example, Western European languages) for basic-level terms (see 3.5), like *cat*, *dog*, *car*, *house*, since such terms are required for identification of common, everyday objects. If we run over a dog in our car, we refer to it as *dog*; we do not usually say *I ran over an animal* (unless it was hard to see), or *I ran over a terrier* (unless we are in the habit of classifying our victims). But, as we have just seen, it is at the higher order level that gaps frequently appear. The subordinate level is also a potential area for lexical gaps. For example, English *house* shares many of the senses of Spanish *casa*, but how do you render English *bungalow* and *manse* in Spanish, or Spanish *barraca* and *alquería* in English?

Discourse is the study of larger patterns of meaning, i.e. stretches of speech or writing longer than the sentence, such as stories, conversations, jokes and letters. Two key terms in **discourse analysis**, the study of discourse, are **cohesion** and **coherence**, which were introduced with their special linguistic meanings by the British linguist Michael Halliday (see in particular *Cohesion in English*, 1976). Cohesion focuses on the grammatical devices that are used for connecting text like conjunctions (*and*, *but*, *before*), pronouns (*he*, *she*, *this*), and sentence adverbs and connectors (*incidentally*, *however*); coherence pays attention to less explicit aspects of **inter-sentence connectivity** in text, and refers to the extent to which and the way in which a piece of discourse makes sense. To take an example, consider the following portion of text: *We were told he was always punctual. Curiously enough, he did not even turn up*. The connecting device *curiously enough* joins the two statements in a rather special way: it warns us that the second assertion should seem surprising in the light of the first one.

But there are less explicit ways in which parts of text are linked. A link is very often provided or assumed by the hearer in a conversational exchange from his or her knowledge of the world. Consider the following:

A: Who's driving?
B: I've been drinking.

Given the context, and although the fact is not stated explicitly, A will assume that B means that s/he is too drunk to drive. Here we are into the realm of **pragmatics**, an increasingly important branch of discourse which deals with the non-linguistic aspects of meaning that derive from the context of situation rather than from the linguistic system. Basically, pragmatics deals with the speaker's intended meaning but, more broadly speaking, it covers the choices made in social interaction and the study of meaning as conveyed and manipulated by all participants in an act of communication. Further details will be given in chapter 8.

It should be apparent that the speaker's or writer's intention constitutes a sizeable part of the meaning of any utterance. A great deal of meaning is underspecified in language and is thrown up by the context alone. In fact, communication can go seriously wrong through a message being misconstrued, as I found out when playing with the *tuna* in Saragossa many years ago. As we were singing *Clavelitos* in a bar, one of our number shouted *¡Fuera!* and I walked out of the premises, only to find that I was on my own, my friends still inside playing the last few bars of the song. But it is not just non-native speakers of a language and children who misinterpret by taking things at their face value. Adult native speakers do so frequently, too. The story is told of the workman who was about to take a bedroom door off its hinges to oil it and asked the lady of the house to take her clothes off (i.e. off the back of the door).

Such comic possibilities are, of course, exploited deliberately in jokes, like the one about the Spaniard who goes to a photo shop to have a film developed. When the shop assistant asks, "10 por 15?", the reply is "150". Or how about the one in which Spanish schoolchildren are asked, "¿Quién escribió *Don Quijote*?", and they answer, "¡Yo, no; yo, no!"

The simplest formulation of meaning would be to say that it equals semantics + pragmatics, but the distinction between these two areas is still controversial. Perhaps semantics can be defined as those aspects of meaning that are unchanging across different occasions of utterance, and pragmatics is the more varying, protean part of meaning. The semantic value of *It's hot* is 'The temperature is high', but its pragmatic force could be something like 'Why don't you open the window?', or 'How about turning the fire off?', or 'My tea is too hot to drink straight away', etc. Wherever the dividing line between semantics and pragmatics may lie, such examples show that much of meaning is left unexpressed in language. More will be said about this in chapter 8.

1.3. The interaction of the levels of language

We have just looked at each of the levels of language individually, so it is now time to offer a few illustrations of how they interact.

In 1.1. it was pointed out that sounds are used to make up words. To be more precise, we could say first of all that there is a direct link between phonology and grammar (morphology and syntax). For example, if we add an [s] to the verb *kick*, we form the third person singular present tense; if we add [t] (-ed), it becomes past tense. Likewise, changing the vowel of *sing* so that it becomes *sang* or *sung* produces other parts of the verb.

Morphemes may have more than one pronunciation so, although the final segment of *kicks* is [s], in the case of *digs* it is [z]; the final sound of *kicked* is [t], but that of *loved* is [d]. Similarly, the Latin negative prefix IN- is realized with [n] in *indelible*, [m] in *impossible*, and [r] in *irrelevant*. The pronunciation of the suffix

-ate in *graduate* [ˈgrædjueɪt] with a diphthong identifies the word as a verb but, if schwa is used, *graduate* [ˈgrædjuət] is a noun or adjective. In the same way, the position of the stress, which also influences the pronunciation, in the word *conduct* tells us whether the word is a noun ([ˈkɒndʌkt]) or a verb ([kn̩ˈdʌkt]).

Examples of how phonology interacts with syntax are to be found when words are put together to form phrases and higher units. Thus *don't* [dəʊnt] is pronounced with final [-nt] in isolation or in careful speech, but this pronunciation may alter in connected speech: *Don't be silly* [dəʊm biː sɪli]; *don't you think it's time?* [dəʊntʃə θɪŋk ɪts taɪm].

As we have already seen, phonology is closely linked to semantics because interchange of phonemes produces different words like *seat* and *sheet* (see 1.2). Semantics is related to morphology because morphemes are our minimal meaningful units in grammar, and also to syntax because change of word order will generally imply some kind of change in meaning, which may be drastic, as in *nothing doing* (Spanish *¡ni hablar!)* and *doing nothing* (Spanish *no haciendo nada*). But there are even more subtle examples of interaction: syntax may make a difference to the pragmatic meaning of an utterance. If I say *Me and Geoff will do it instead* of the prescribed *Geoff and I will do it*, the difference is not merely one of register, i.e. *Me and Geoff...* is not just more informal than *Geoff and I...*: it expresses greater solidarity than the more formal expression, which in turn is more distant. Geoff is more likely to agree to cooperate if I use the first formulation than if I use the second because the first is friendlier and therefore more encouraging.

Having studied various examples of how the different levels of language interact, let us now look at possible ways in which speakers generate messages and hearers interpret them.

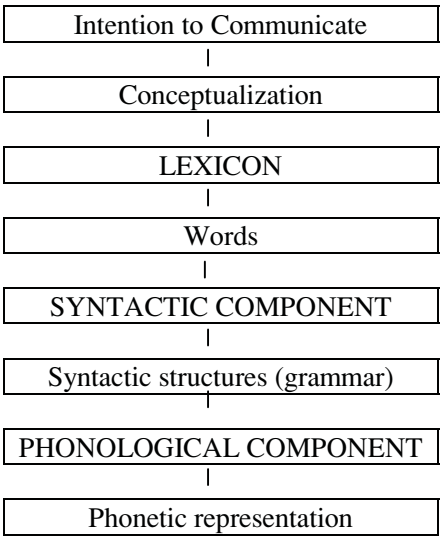
1.4. Generation and interpretation of language

Exactly how the brain produces language and processes discourse is still very much an unknown quantity open to conjecture, despite the fact that recent years have seen the introduction of sophisticated brain scanners (the CAT scanner and the PET scanner) that can study the activity of the brain while subjects are performing certain language tasks like reading, speaking and listening.

What we do know is that different areas of the brain deal with particular facets of the use of language, although the precise location of these areas of linguistic activity is still a matter for debate. In most human beings, language is located in the left hemisphere of the brain, a fact which came to light in the nineteenth century through the findings of the French surgeon Paul Broca and the German neurologist Carl Wernicke, who were engaged in investigating **aphasia**, partial or total loss of the ability to communicate or understand speech caused by brain damage, and subsequently came to give their names to certain areas of the brain where linguistic processing is presumed to go on.

Broca's area is near the temple and controls the production of speech, in particular grammatical processes like affixing and phonetic phenomena like intonation. **Wernicke's area**, on the other hand, is located behind and above the left ear and deals mainly with the comprehension of speech. However, it also plays a role in speech production in combination with Broca's area because, via a bundle of fibres called the **arcuate fasciculus**, it sends this other area of the brain the vocabulary which will be duly converted to the correct grammatical form.

Naturally, the execution of an utterance is a highly complex process involving elaborate neurological planning, but the following is a plausible simplified model of the probable way a speaker translates concepts into language:



Basically, what the diagram attempts to explain is that the human brain contains a mental dictionary, i.e. a lexicon of words and the concepts that they stand for, and a set of rules or grammar which combines the words to relate the concepts to one another. Any act of communication begins with the intention to convey a message, a gathering together of the concepts to be expressed, and a search for the words with which to translate those concepts into speech.

The words are accessed in the lexicon and then grammatical rules, like addition of *-s* to form the plural in English, will be applied by the syntactic component. Languages like Spanish which have gender for nouns will assign this category in the lexicon, as it is largely unpredictable. There is no logical reason why Spanish *drama* and *mesa*, both of which end in *-a*, should be masculine and feminine, respectively; these genders cannot be applied by grammatical rule (i.e. nouns ending in *-a* are feminine) and are a property of the individual nouns

themselves. Irregular forms, like the English irregular plurals *children*, *mice* and *geese*, are also stored in the lexicon with roots and stems, so the lexicon is a repository of arbitrary information, from which units which cannot be constructed by rule are taken wholesale to be inserted into the higher patterns of linguistic structure. As all idiosyncratic properties of words must be listed in the lexicon, then lexical entries for verbs will have to specify the kind of complements that a verb is allowed, depending on whether the verb is intransitive, transitive or ditransitive, can be followed by a clause, etc. Note that adjectives do not possess gender, adjectival agreement being the result of the application of grammatical rules, so the gender of adjectives is not assigned in the lexicon.

From these examples, it can be seen that the distinction between the lexicon and grammar is not clear-cut, and that the amount and type of information stored in the lexicon will vary from one language to another. There is still some discussion as to whether words are stored in the lexicon as wholes (**Full Listing Hypothesis**) or whether it is their component morphs which are stored separately and then assembled, but it seems more likely that a word like *undecidedly* is built up from the components *un+decide+ed+ly*, simply from the point of view of economy. Otherwise, think how many times a negative prefix like *un-* would have to be listed if it were listed separately with every word to which it was attached. The storage space for the English lexicon is reduced immensely if *un-* meaning 'not, negative, opposite' is listed only once; the same is true of *-ly* meaning 'adverb'. The problem of storage space would be even more acute in an agglutinating language like Turkish, in which words very often consist of roots plus elements meaning 'plural, possessive, preposition', etc. Thus, items like the following would each have their own entry (see Katamba, 1994: 231 for further details):

ev	'house'
evler	'houses'
evlerimiz	'our houses'
evlerimizde	'in our houses'

Note that to accommodate these four items alone in the lexicon, *ev* would have to appear four times, *ler* three, and *im* twice.

Evidence for the fact that irregular forms reside in the lexicon at the bottom of word structure trees is provided by the fact that compounds can be formed out of irregular plurals but not out of regular plurals (Pinker, 1994: 146). For example, we say *mice-infested* and *rat-infested*, but not **rats-infested*. We cannot say **rats-infested* because regular plurals are constructed by grammatical rules which apply after words, including compounds, have been assembled.

Apart from producing subject-verb concord like *The* ***boy is*** *eating*, *The* ***boys are*** *eating,* the syntactic component makes questions and determines the correct output for word and phrase order.

The phonological component ensures that the correct phonological form is retrieved for each word and for the utterance as a whole, a process that will lead to phonetic adjustments when articulation finally takes place. Thus, when *in-* is added to *put* to form *input*, the [n] may be adjusted to [m]; when *-s* is added to *pig* to form the plural *pigs*, it will be realized as [z], and when *last* is followed by *night*, the [t] of *last* will usually be dropped. The speaker's phonetic or articulatory plan for an utterance will also involve deciding how such features as pitch, loudness and stress should be distributed, and where resyllabification will take place (*eat+it* > *ea.tit*).

The model of language production that I have just explained puts semantics first, followed by grammar and pronunciation. However, it is not the only model. The model put forward by Chomsky in *The Sound Pattern of English* (SPE) placed grammar (morphology and syntax) first, with the lexicon considered to be just an appendix to the grammar, followed by phonology.

If language production proceeds in the way outlined above, one might suppose that language comprehension simply involves a reversal of this process. But the facts are considerably more complicated than this. The crucial problem in making sense of a message is that the hearer is faced with two tasks which s/he has to cope with simultaneously. One task is decoding the speech signal; the other is attaching meanings to what is heard. Comprehension takes place at a fantastic rate, so that lexical, syntactic and interpretative knowledge all interact with the phonetic input, and hearers begin to reconstruct the message even before they have heard a complete word, phrase or sentence. We all know how easy it often is to complete other people's sentences for them (A: *I drank so much coffee before I went to bed...* B: *...that you couldn't sleep*.), and we only have to hear the initial syllable *re-* [re-] in the context *play a ...* during a music programme to guess that the unfinished word, if a noun, is *record*. One thing that is certain is that the recognition of words is a fundamental and indispensable stage in language comprehension.

Until recently, that is before acceptance of the interactive model of processing outlined in the preceding paragraph, it was asked whether we identify the smallest units of the input, i.e. sounds, first, and then work upwards (**bottom-up processing**), or whether we start from the top, from the highest units of language, i.e. phrases, clauses and sentences and the whole context, and work down (**top-down processing)?**

Evidence for at least partial top-down processing came from a number of experiments. To begin with, fewer identification errors occur if words are in context. This suggests that subjects are using knowledge of syntactic structures in addition to the acoustic input signal. This is true even in noise situations. Subjects also do better if sentences are meaningful, which supports the idea that they are not responding to the input simply word by word and, if a segment is missed, e.g. replaced by a cough, the omission is not essential information as long as the context is provided. For example, when talking about food, *?eal* is likely to be *meal*.

Moreover, most words (except names) derive part of their meaning from the context in which they are used, and grammatical words, like *and* and *but*, only have a meaning in context. But the trouble with top-down processing is that it does not allow for simultaneous clues from lower level processes. In the case of reading, at least, we undoubtedly do often decode symbols into the words that they form. Unfortunately, it is possible to read without actually understanding the meaning of the words so, although top-down processing has come in for some serious criticism as a unilateral model of language comprehension, it is obvious that contextual factors play a significant role in interpretation. The problem with the bottom-up model is that it presupposes the completion of lower level processes before the beginning of higher level ones, and it seems reasonable to assume that interpretation does not proceed in linear fashion from sound segment or written symbol to word to phrase to sentence to paragraph to text. On the contrary, the hearer or reader will be jumping ahead and making assumptions about the content of the message that is being relayed even before it has finished.

Misinterpretation of messages may occur through factors like structural ambiguity, garden-path sentences and misanalysis of word boundaries. The sentence *He bought some new trousers and shirts* is at least potentially ambiguous if we consider that *new* might refer only to the noun immediately following it or to both nouns, although an intelligent guess will tell us that the latter reading is the usual one. Again, interpretation may be hindered by a sentence like *The man rushed to hospital was not detained*, which leads us down the garden path until we realize that *rushed* is not a past tense but a past participle used in an elliptical construction standing for *who was rushed*. And failure to identify word boundaries may lead to an initial analysis of a sequence like *aniceman* as *an ice man* (in rapid speech where phonetic cues that help to establish word boundaries are overridden) instead of *a nice man* where a pleasant male human being is referred to. Misplaced word boundaries, in fact, are a great source of humour, as we know from the many jokes of the Catalan comedian Eugenio like the following:

A: ¿Qué es de Pilar?
B: Arrancarse los pelos uno a uno.

A: ¿Qué es de su vida?
B: Lo mismo que de bajada.

In the written language, we may be led down the garden path by bad punctuation. Commas need not be overused in Modern English texts, but there are many cases of annoying omission or misplacement. Compare:

Soon after three, people appeared. (three = three o'clock)
Soon after, three people appeared. (after = afterwards)

My son, David, has left home. (David = my only son)
My son David has left home. (David = not my other son[s])

A pretty, smart young lady. (pretty = attractive)
A pretty smart young lady. (pretty = very, quite, rather)

In the final analysis, real cases of ambiguity are few and far between as the context normally affords ample clues as to meaning, so the aforementioned examples do not usually pose a serious threat to communication.

1.5. The main branches of linguistics

In the brief outline of the levels of language given above, we dealt with the facets of language that constitute its core and are present in all branches of linguistics. In this section we will give a short summary of each of those branches.

1.5.1. Anthropological linguistics

Anthropological linguistics or linguistic anthropology is concerned with the relationship between language and culture, in particular how languages provide clues to the cultures within which they are used. The discipline is associated with names like Franz Boas and Edward Sapir in America in the late nineteenth and early twentieth centuries, and with Bronislaw Malinowski and J. R. Firth, who did comparable work in Britain soon after.

Despite the advent of sociolinguistics and psycholinguistics, anthropological linguistics still holds its own. Attention has been devoted to kinship systems, colour terms, metaphor, the classification of plants and animals (folk taxonomies), perception of space and time, etc. A core topic in the early twentieth century was the **Sapir-Whorf Hypothesis** or **Linguistic Relativity Hypothesis**, which claimed that language, to some extent, moulds our perception of reality. To take a highly simplistic example, if a language only has colour terms to denote black and white or dark and light, then perhaps its speakers are unable to identify any other colours, like red and blue. Needless to say, the hypothesis was controversial right from the start and it seems impossible to lend support to a strong version of the theory (see also 6.4).

1.5.2. Applied linguistics

Applied linguistics is principally the application of linguistic theory to the practical field of language teaching and second-language acquisition, but a broader, more inclusive definition would have to mention the relevance of the subject to

other fields, such as language disorders, forensic speech analysis, translation and interpreting, and style.

1.5.3. Computational linguistics

Computational linguistics is a branch of linguistics in which computer science is brought to bear on the problems of linguistics and phonetics. For example, computers are used to show the frequency of particular words in a written text (how often George Orwell uses the word *Fascism*, for example), to compose corpora (conglomerations of machine-readable texts used to study the usage of a particular word or syntactic construction), to do machine translation (automatic production of a translation with a computer), or for speech synthesis (generation of artificial speech).

1.5.4. Historical linguistics

Historical linguistics began in 1786, about a hundred years before Darwin put forward his theory of evolution, when Sir Wiliam Jones claimed before the Royal Asiatic Society in Calcutta that Latin, Greek and Sanskrit were all related and shared a common origin with Gothic and Celtic, thus establishing the existence of the Indo-European family of languages and putting **comparative linguistics**, the study of sets of forms in cognate languages to decide whether they have the same origin, on a firm footing. Historical or diachronic linguistics deals with language over time, in particular its causes and repercussions on the systems of individual languages. While the nineteenth century was more concerned with sound change and its regularity and reconstructing early forms of words in unrecorded ancestral languages by the comparative method, in the twentieth century attention became focussed also on syntactic and semantic change. Modern historical linguistics has drawn a great deal on sociolinguistics ever since William Labov showed that there was a crucial link between variation and language change: competing synchronic variants may be favoured or disfavoured for sociolinguistic reasons, and thus either survive or be eliminated through the operation of social pressures.

1.5.5. Psycholinguistics

Psycholinguistics is about language and mind. Basically, it deals with the processes of producing and comprehending language, as outlined under 1.4, but the most highly developed branch of the subject is probably **child language acquisition**. Another important sub-branch of the field is **neurolinguistcs**, which deals with the role of the brain in the neurological planning of articulation,

sequencing and speech production. Of fundamental interest here are conditions like aphasia, which results from damage to the brain.

1.5.6. Sociolinguistics

Sociolinguistics, which came to the fore in the early 1960s largely as a result of the work of William Labov in the USA and Peter Trudgill in Britain, concerns the relationship between language and society, in particular the connection between language and variables such as social class, age, sex, and the difference between the language of different regions (dialects), of different occupational groups, e.g. teachers, lawyers, priests (sociolects), of different situations (registers), and even different individuals (idiolects). Sociolinguistics also touches upon language and national identity.

1.5.7. Stylistics

Stylistics is the study of different styles of language and their use in different contexts of situation. One of its aims, therefore is the study of registers, like those of formal and informal language, slang, jargon, the language of science religion, etc. It attempts to account for the linguistic choices made by individuals and groups, i.e. how they adjust their language in the face of different situations. For example, a man may say "Hello, darling" to his wife, but not to his lady boss unless he is having an affair with her. This type of stylistics, which is closely related to sociolinguistics, is often referred to as **general stylistics**. There is also **literary stylistics**, which studies the aesthetics of literature.

1.6. The properties of human language

Human language manifests a number of features that distinguish it from animal language and make it unique:

1. Duality of patterning
2. Displacement
3. Open-endedness
4. Stimulus freedom

Duality of patterning refers to the fact that by combining a very small set of meaningless speech sounds, we can produce a very large number of meaningful items. For example, just by taking the sounds [p], [t], [k] and [æ], we can produce the words *pat*, *pack*, *tap*, *tapped*, *tack*, *tacked*, *at*, *cat* and *cap*. Or by taking the words *red* and *brick*, we can produce not just one phrase but two: *red brick* and

brick red (a kind of red). This is what is meant by linguists when they say that human language makes infinite use of finite resources. The fact was noted by the German philosopher Leibnitz in the eighteenth century, a little later by the Prussian scholar and statesman Wilhelm von Humboldt, and Chomsky founded Transformational Grammar on this very same insight.

Displacement is an important design feature of language that makes it possible to talk about things other than the here and now, that is, to refer to objects, events and actions that are not immediately present in space and time. For example, we can talk about things that happened many years ago or things that are likely to happen in the future; we can refer to distant places, like the surface of the planet Venus; we can say what we did yesterday and what we are going to do tomorrow; we can discuss the big-bang theory of the origin of the universe, the birth of Jesus Christ, or the future of Afghanistan, and so on and so forth.

Displacement is generally absent from animal language, although there is the case of the common honey-bee, which is capable of informing other bees of the location of nectar. It passes on such information by flying back to the hive and performing a dance, the details of which encode data as to the precise location of the source of the substance. Note also that "Recent work with chimpanzees...has shown that they are capable of producing and interpreting signals that make reference to entities absent from the immediate environment" (Lyons, 1977, 1: 81).

Closely connected with duality of patterning is open-endedness, which alludes to the fact that we can constantly generate completely new utterances and say things that have never been said before. I can construct a sentence like *There was an enormous purple, nine-legged spider in the bath, as big as the wooden Imac on my kitchen desk.* Such a sentence is nonsense, but it is gramatically well-formed and has probably never been spoken or written by anyone else before. This state of affairs is very different to what we find in animal language, which consists of a very limited number of possible messages.

Finally, stimulus freedom is the ability to say anything you like in any situation. The sentence I constructed about the spider in the last paragraph is ample proof of this, but more to the point is the fact that in conversation our answers to questions or responses to preceding statements need not be direct, but can be highly evasive; in fact, we need not respond at all. Our answer to *You look tired* could be *You wouldn't be looking as fresh as a daisy yourself if you'd just walked across the Pyrenees*, implying that the observation was stupid. Or a human response to danger can be to save your own skin and not warn those around you of impending threats. This is quite the opposite to the code of behaviour in the animal kingdom, where danger is always signalled to the other members of the community. Thus a particular stimulus meets with the appropriate standard response. A small bird squawks at the sight of a falcon to warn other birds of imminent danger, while the hyena uses its well-known laugh as a call to the rest of the pack to join in the feast of the prey that has just been caught.

Further reading

Information on most of the above can be found in the standard dictionaries of linguistics listed in the bibliography. Particularly useful for quick reference are notably Finch, 2000, and Trask, 1999. For information on speech production and processing, see Katamba, 1994: ch. 11; and Nunan, 1995: ch. 3; Pinker, 1994: chs. 4 & 5. For an introduction to stylistics, see Turner, 1973. For a study of the basic colour terms in a wide range of languages, see Berlin & Kay, 1999 (1969). For an introduction to neurolinguists, see Obler & Gjerlow, 1999. For the properties of human language, see Lyons, 1977, 1: 70-85, and Trask, 1995: ch. 1. For animal and human communication, see Burling, 1992: ch. 16.

Exercises

Exercise 1. Try to answer the following questions without looking back at the text:

1. Which of the two is strictly speaking not a branch of linguistics, phonetics or phonology?
2. As *seen* and *seem* are different words in English, the sounds [n] and [m] are ....
3. What are the two types of morphology?
4. Morphology is the study of the structure of ....
5. What is a lexeme?
6. Give another word for *mental dictionary*.
7. The absence of a lexeme at a specific point in a lexical field is called a ... .
8. If a language lacks a word for a particular object, we say that it has failed to ... that particular concept.
9. In English, *car* is a ... of *vehicle*, and *vehicle* is a ... of *car*.
10. Which term refers to the extent to which a piece of discourse makes sense, *cohesion* or *coherence*?
11. Choose the correct answer: Pragmatics deals with (a) whether a hearer understands a message or not (b) the speaker's intended meaning (c) intersentence connectivity (d) the semantic value of utterances.
12. Choose the correct answer: The last consonant in the English word *kick**s*** is pronounced (a) [s] (b) [z] (c) [ɪz] (d) [ɪs]
13. Phonology is closely related to ... because substition of sounds can create new words.
14. In most human beings, language is located in the ... hemisphere of the brain.
15. Loss of the ability to communicate and understand speech is called ....

16. Broca's area of the brain controls ....
17. Wernicke's area of the brain deals mainly with ....
18. Broca's area and Wernicke's area are joined by a bundle of fibres called the ... .
19. The **Full-listing Hypothesis** claims that ....
20. Chomsky's model of speech production placed ... before phonology.
21. Processing speech by starting with the larger units, like sentences, is called ... ... processing.
22. The Linguistic Relativity Hypothesis is also known as the ... ... Hypothesis.
23. The application of linguistic theory to teaching is called ... linguistics.
24. Choose the correct answer: Historical linguistics began (a) at the end of the seventeenth century (b) at the end of the eighteenth century (b) at the beginning of the nineteenth century (d) at the end of the nineteenth century.
25. William Labov showed that there is a crucial link between ... and language change.
26. What is the purpose of comparative linguistics within historical linguistics?
27. Sociolinguistics is about the relationship between ... and ....
28. Generation of artificial speech by a machine is called ... .
29. The fact that several sounds can very often be used to make more than one word is referred to as ... ...
30. The human ability to talk about the past and future and even hypothetical situations is referred to as ....