In this chapter we shall approach the problem of meaning from the point of view of sense relations. We shall begin with some familiar, traditional categories and then introduce some new ones. Finally, we shall consider how such relations can be handled within a ‘structural’ framework.

4.1 Synonymy

SYNONYMY is used to mean ‘sameness of meaning’. It is obvious that for the dictionary-maker many sets of words have the same meaning; they are synonymous, or are synonyms of one another. This makes it possible for them to define gala as festivity or mavis as thrush, though there is little use in this method if neither word is known to the reader, e.g. if hoatzin is defined as stink-bird; or neve as firn. Of course, dictionaries seldom rely solely on synonymy, but add descriptive details to enlighten the reader.

It has often been suggested that English is particularly rich in synonyms for the historical reason that its vocabulary has come from two different sources, from Anglo-Saxon on the one hand and from French, Latin and Greek on the other. Since English is considered to be a Germanic language from a historical point of view, with Anglo-Saxon as an earlier stage of its development, the ‘Anglo-Saxon’ words are often considered to be ‘native’ while those from French, Latin or Greek are ‘foreign’, ‘borrowed’ from these languages. But the terms ‘native’ and ‘foreign’ are misleading. For whatever their origins, most of the words are an essential and wholly natural part of the English language; moreover, even some of the ‘native’ words may well have been ‘borrowed’ from some other
language at some time in the more remote past. Unfortunately, there are often moves to remove the 'foreign' element from languages. Frenchmen deplore 'Franglais' (the English words that are now common in colloquial French), while the Welsh spend time and scholarship to find substitutes for the 'English' words in the language, though they are quite happy to retain the 'Latin' words that entered an earlier form of the language at the time of the Roman Empire.

Nevertheless, it is true that there are pairs of 'native' and 'foreign' words. Thus we have brotherly and fraternal, buy and purchase, world and universe, and many others. The 'native' words are often shorter and less learned; four-letter words (in the quite literal sense) are mostly from Anglo-Saxon. There are examples too of triples, one 'native', one from French, one directly from Latin – kingly, royal, regal (though with this set it is the word of French origin, royal, that is today in more common usage).

It can, however, be maintained that there are no real synonyms, that no two words have exactly the same meaning. Indeed it would seem unlikely that two words with exactly the same meaning would both survive in a language. If we look at possible synonyms there are at least five ways in which they can be seen to differ.

First, some sets of synonyms belong to different dialects of the language. For instance, the term fall is used in the United States and in some western counties of Britain where others would use autumn. The works of dialectologists are full of examples like these. They are especially interested in the words to do with farming; depending where you live you will say cowshed, cowhouse or byre, haystack, hayrick or haymow. Even the domestic tap is either a faucet or a spigot in most of the United States. But these groups of words are of no interest at all for semantics. Their status is no different from the translation-equivalents of, say, English and French. It is simply a matter of people speaking different forms of the language having different vocabulary items.

Secondly, there is a similar situation, but a more problematic
one, with the words that are used in different ‘styles’ or
‘registers’. A nasty smell might be, in the appropriate setting, an obnoxious effluvium or an ’orrible stink. The former is, of
course, jocularly very ‘posh’, and the latter colloquial. Similar
trios (though not with quite the same stylistic characteristics,
but differing rather in degrees of formality) are gentleman, man and chap, pass away, die and pop off. These are more
difficult to deal with because there is a far less clear distinction
between the styles than between the geographically defined
dialects. We do not normally pass from one dialect to another,
but we can within a single conversation change our style, and
in particular, can change the vocabulary items to achieve
different effects. The problem is, then, whether a change of
style should be treated as a change from one ‘language’ to
another or as a change within a single language. If the former,
then stylistic synonyms are of no more interest than the
dialectal synonyms or equivalent words in English or French.
If the latter, we have to say that stylistic differences can be
semantic. There is some plausibility in the view that, if we
switch from style to style to achieve effect, this is a semantic
feature. But there is a major objection to this. In changing style
we may change not only the vocabulary, but also the grammar
and the phonology, and it is difficult to incorporate stylistic
differences as part of a phonological or grammatical system.
It is simpler to handle them in terms of different but related
‘languages’, like the dialects. If this is applied to stylistic
synonyms we shall not include them within semantics, but
leave style as a matter for a separate investigation.

Thirdly, as we saw in 2.4, some words may be said to differ
only in their emotive or evaluative meanings. The remainder of
their meaning, their ‘cognitive’ meaning, remains the same.
Examples were statesman/politician, hide/conceal; a further
trio is thrifty, economical, stingy, and there is the related
problem of the meaning of words such as fascist and liberal.
Such words are often discussed in detail in books on semantics.
They are, of course, interesting in the way in which they are
used for persuading or influencing others, for propaganda, etc.
Nevertheless, it is a mistake to attempt to separate such emotive or evaluative meaning from the ‘basic’ ‘cognitive’ meaning of words for three reasons. First, as I have already argued, it is not easy to establish precisely what cognitive meaning is, and certainly not reasonable to attempt to define such meaning in terms of reference to physical properties. In particular we should notice that in this sense many verbs and adjectives will have little or no cognitive meaning. Secondly, there are words in English that are used purely for evaluative purposes, most obviously the adjectives good and bad, but it is not normally assumed that they have no cognitive meaning. Such words are of interest to moral philosophers, but should not, I believe, have any special place in linguistics. Thirdly, we make all kinds of judgments and do not merely judge in terms of ‘good’ and ‘bad’. We judge size and use the appropriate terms — giant/dwarf, mountain/hill, etc., and we make other kinds of judgments in our choice of words. The meaning of words is not simply a matter of ‘objective’ facts; a great deal of it is ‘subjective’ and we cannot clearly distinguish between the two.

Fourthly, some words are collocationsally restricted (see 5.2), i.e. they occur only in conjunction with other words. Thus rancid occurs with bacon or butter, added with eggs or brains. This does not seem to be a matter of their meaning, but of the company they keep. It could, perhaps, be argued that these are true synonyms — differing only that they occur in different environments. But, on the other hand, as we shall see shortly, some scholars have actually thought that the test of synonyms is whether they occur in identical environments!

Fifthly, it is obviously the case that many words are close in meaning, or that their meanings overlap. There is, that is to say, a loose sense of synonymy. This is the kind of synonymy that is exploited by the dictionary maker. For mature (adjective), for instance, possible synonyms are adult, ripe, perfect, due. For govern we may suggest direct, control, determine, require, while loose (adjective) will have an even larger set — inexact, free, relaxed, vague, lax, unbound, inattentive, slack, etc. If we look for the synonyms for each of these words them-
selves, we shall have a further set for each and shall, of course, get further and further away from the meaning of the original word. Dictionaries, unfortunately (except the very large ones), tell us little about the connections between words and their defining synonyms or between the synonyms themselves.

It would be useful if we had some way of testing synonymy. One way, perhaps, is substitution – substituting one word for another. It has been suggested that true or total synonyms are mutually interchangeable in all their environments. But it is almost certainly the case that there are no total synonyms in this sense; indeed this would seem to be a corollary of the belief that no two words have exactly the same meaning. What we shall find, of course, is that some words are interchangeable in certain environments only, e.g. that deep or profound may be used with sympathy but only deep with water, that a road may be broad or wide but an accent only broad. But this will give us little measure of synonymy or of similarity of meaning; it will merely indicate the collocational possibilities, and these do not seem necessarily to be always closely related to nearness of meaning.

Another possibility is to investigate the ‘opposites’ (to be discussed in 4.5). Thus superficial is to be contrasted with both deep and profound, but shallow is, for the most part, in contrast only with deep. Perhaps the fact that two words appear to have the same antonyms is a reason for treating them as synonyms, but the examples we have just discussed show that we shall again arrive at the words that are interchangeable in certain environments, for it is precisely in the context in which deep and profound are interchangeable that they have the antonym superficial.

Finally, I must consider the term for ‘connotation’, for synonyms are often said to differ only in their connotations. This is not, in my view, a very useful term. It often refers to emotive or evaluative meaning, which I have argued is not usefully distinguished from cognitive meaning. It is also used to refer to stylistic or even dialectal differences or even to the small differences that are found in near-synonyms. But there
is a further rather interesting use. It is sometimes suggested that words become associated with certain characteristics of the items to which they refer. Thus *woman* has the connotation ‘weak’ and *pig* the connotation ‘dirty’. Such connotations were the subject of Osgood’s investigations (1.5). Strictly, however, this is not a matter of the meaning of words or even of meaning in general. It rather indicates that people (or some people) believe that women are weak and pigs dirty. It is true that people will change names in order to avoid such connotations, and there is a natural process of change with taboo words such as those mentioned in 1.4. Because the word is associated with a socially distasteful subject, it becomes distasteful itself, and another word, a ‘euphemism’, takes its place. But the process is, of course, unending since it is essentially the object and not the word that is unpleasant. Words even become taboo when the distasteful object is referred to by the word in a different sense (whether it is homonymous or polysemous — see 4.2). Thus we are unwilling to talk of *intercourse* to mean social or commercial relationships, and it has been often pointed out that it is for similar reasons that in America the male domestic fowl is a *rooster*.

There are two phenomena that are sometimes handled under synonymy that have not yet been considered in this section. The first is context-dependent synonymy where two items appear to be synonymous in a particular context. Examples (taken from J. Lyons, though I am not presenting Lyons’ arguments) are *dog* and *bitch* in *My — has just had pups* and *buy* and *get* in *I’ll go to the shop and — some bread*. But this does not seem to be an argument for the synonymy of the words. On the contrary they are related in terms of hyponymy (see 4.4), one term being more specific than the other. The context, however, supplies the specific information that is lacking in one of the examples — having pups indicates that dog is female, going to the shop suggests that the bread is to be bought. But this is not part of the meaning. The dog might not be female (remarkable though it would be), and I might steal the bread. The fact that information can be gleaned from
the context does not affect the meaning of items. For consider the book and the red book. These could well be contextually synonymous (if we had already mentioned a red book – or, non-linguistically, if there was one, red, book before us). Yet we should not wish to say that these have the same meaning. The second kind of ‘synonymy’ is that between bull and male adult bovine animal. The test of interchangeability would rule these out completely as synonymous, for one would hardly say There is a male bovine animal in the field, even though in some sense the two items seem to have the same meaning. But this is not a ‘natural’ linguistic phenomenon; it is created by the linguist or lexicographer for the purposes of definition and paraphrase. It relates, moreover, more to componential analysis (4.7) than to synonymy.

4.2 Polysemy and homonymy
Sameness of meaning is not very easy to deal with but there seems nothing inherently difficult about difference of meaning. Not only do different words have different meanings; it is also the case that the same word may have a set of different meanings. This is polysemy; such a word is polysemic. Thus the dictionary will define the word flight in at least the following ways: ‘passing through the air’, ‘power of flying’, ‘air journey’, ‘unit of the Air Force’, ‘volley’, ‘digression’, ‘series of steps’. Yet there are problems even with this apparently simple concept.

First, we cannot clearly distinguish whether two meanings are the same or different and, therefore, determine exactly how many meanings a word has. For a meaning is not easily delimited and so distinguished from other meanings. Consider the verb eat. The dictionary will distinguish the ‘literal’ sense (see below) of taking food and the derived meanings of ‘use up’ and ‘corrode’ and we should, perhaps, treat these as three different meanings. But we can also distinguish between eating meat and eating soup, the former with a knife and fork and the latter with a spoon. Moreover, we can talk about drinking soup as well as eating it. In one of its senses, then, eat corres-
ponds to *drink*. The problem, however, is to decide whether this represents a distinct meaning of *eat*; for an alternative solution is that the meaning of *eat* merely overlaps that of *drink*, but that each covers a wide semantic 'area' (a great deal of which does not overlap). If we decide, however, that there are two meanings of *eat*, we may then ask whether eating jelly is the same thing as eating toffee (which involves chewing) or eating sweets (which involves sucking). Clearly we eat different types of food in different ways, and, if we are not careful, we shall decide that the verb *eat* has a different meaning with every type of food that we eat. The moral is that we ought not to look for all possible differences of meaning, but to look for sameness of meaning as far as we can, and that there is no clear criterion of either difference or sameness.

Secondly, we may ask whether we can make any general remarks about differences of meaning. Are regular types of difference found in the meaning of various words? One of the most familiar kinds of relationship between meanings is that of METAPHOR where a word appears to have both a 'literal' meaning and one or more 'transferred' meanings. The most striking set of examples is found with the words for parts of the body, *hand, foot, face, leg, tongue, eye*, etc., for we speak of the *hands* and *face* of a clock, the *foot* of a bed or of a mountain, the *leg* of a chair or table, the *tongue* of a shoe, the *eye* of a needle or a potato. Intuitively it is clear enough which is the literal sense, and our intuitions are supported by the fact that the whole set of words applies only to the body; only some of them can be transferred to the relevant object – the clock has no legs, the bed no hands, the chair no tongue, etc.

Metaphor is, however, fairly haphazard. It may seem obvious that *foot* is appropriate to mountains, or *eye* to needles, but a glance at other languages shows that it is not. In French the needle does not have an eye, and in many languages (e.g. the Ethiopian languages or some of those of North America) the mountain does not have a foot. Moreover, in English *eye* is used with a variety of other meanings, e.g. the centre of a hurricane or a spring of water, which are not so obviously related
semantically to the organ of sight, yet it is not used for the centre of a flower or an indentation, though these might seem intuitively to be reasonable candidates for the extension of the meaning.

There are some other kinds of ‘transference’ that are more ‘regular’. Thus many adjectives may be used either literally for the quality referred to or with the transferred meaning of being the source of the quality. Thus a person may be sad and a book may be sad, while a coat may be warm in the two senses (either that it is of a certain degree of temperature or that it keeps one warm). The language recognises the difference of meaning in that we cannot say John is as sad as the book he was reading. This is similar to the traditional grammarian’s concept of zeugma (She was wearing a white dress and a smile on her face), for in each case one word co-occurs with two other words and these two each require the first to have a different meaning, and this the language does not allow. Similarly, many nouns have a concrete and an abstract sense. Thus we may compare The score of the symphony is on the table and The score of the symphony is difficult to follow. Notice once again that we cannot say The score is on the table and difficult to follow. Similar contrasts hold for thesis, book, bible, etc.

Thirdly, there is the problem that if one form has several meanings, it is not always clear whether we shall say that this is an example of polysemy (that there is one word with several meanings) or of homonymy (that there are several words with the same shape). For instance we noted earlier that the dictionary treats flight as a single (polysemic) word. But it recognises no less than five words (i.e. five homonyms) for mail – ‘armour’, ‘post’, ‘payment’, ‘halfpenny’ and ‘spot’. The dictionary has to decide whether a particular item is to be handled in terms of polysemy or homonymy, because a polysemic item will be treated as a single entry, while a homonymous one will have a separate entry for each of the homonyms. This does not mean, of course, that we can decide between polysemy and homonymy by merely consulting the dictionary,
for the decisions by the dictionary maker often seem to be quite arbitrary.

There is some complication in the fact that we do not make the same distinctions in writing and speech. Thus lead (metal) and lead (dog’s lead) are spelt in the same way, but pronounced differently, while site and sight, rite and right are spelt differently but pronounced in the same way. For the former the term **homography** may be used, for the latter **homophony**. Curiously there are some homonyms and homophones that are also (very nearly) antonyms, e.g. cleft ‘part asunder’ and cleft ‘unite’ and raise and raze.

The problem, however, is to decide when we have polysemy and when we have homonymy. Given that we have a written form with two meanings, are we to say that it is one word with different meanings (polysemy) or two different words with the same shape (homonymy)?

In general the dictionaries base their decision upon etymology. If it is known that identical forms have different origins they are treated as homonymous and given separate entries; if it is known that they have one origin, even if they have different meanings, they are treated as polysemic and given a single entry in the dictionary. This is, however, far from satisfactory, for the history of a language does not always reflect accurately its present state. For instance, we should not usually relate pupil (＝student) with the pupil of the eye, or the sole of a shoe with the fish sole. Yet historically they are from the same origin, and as such are examples of polysemy. Yet in the language of today they are pairs of unrelated words, i.e. homonyms. On the other side we find, as we have seen, that we speak of the hands and face of a clock, the foot of a bed, the tongue of a shoe, as well as using the same terms for parts of the body, and similarly have the word ear used of the ear of corn. These would all seem to be examples of metaphor and, so, of polysemy. Yet the etymologists tell us that the ear of corn is in no way related (historically) to the ear of the body. Historically, then, they are homonyms. But most people today would regard them as the same word with different meanings,
i.e. as examples of polysemy. There are other examples — corn (= grain) and corn on the foot, meal (= repast) and meal (= flour), each of which has a different etymology. But are they different words for us today? I do not, of course, claim that we can always distinguish polysemy and homonymy in our present day language. I only wish to show that history can be misleading.

Curiously, a difference of spelling does not always indicate a difference of origin. Thus even what are today homophones may be derived from the same original form. Examples are metal and mettle, flour and flower. These pose real problems for the semanticist. For if he relies on his historical knowledge, they are the same word, merely examples of polysemy, even though they are spelt differently. Yet this is odd. Can we consider words that are spelt differently to be the ‘same’ word? Yet we find that difference of spelling does not guarantee difference of origin. Does the dictionary maker then treat these as different words because they are spelt differently, or as the same word because they have a single origin? In practice he usually (but not always) allows the spelling difference to decide, because he needs to keep words in their alphabetical position.

A second way of attempting to establish polysemy rather than homonymy is to look for a central meaning or a core of meaning. This is possible where we have examples of metaphor or of the ‘transferred’ meanings we noted for sad and score. But in general it is very difficult to decide whether there is any central or core meaning. It is obvious enough why key is used not only for key of the door, but also for a translation or a keystone (one ‘unlocks’, the other ‘locks’), but it is by no means easy to see why it is used for the keys of a piano and, therefore, not at all clear that this is an example of polysemy. Nor is there any obvious relation between air ‘atmosphere’ and the meanings of ‘manner’ and ‘tune’. With verbs the problem is often even greater. Charge is used of electricity, of charging expenses, of a cavalry attack and of an accusation. These are quite far apart in their meanings. Can we discover a central or core meaning?
If we look at what has happened in history we see why the problem has arisen. Words change their meaning in quite surprising ways. Thus *arrive* is derived from Latin *ripa* ‘a shore’, and originally meant ‘reach shore’, while *rival* comes from Latin *rivus* ‘a stream’, rivals originally being people who shared the same stream. With such changes it is not surprising that meanings of *charge* should have so diverged — its earlier meaning is ‘load’, and it is related to *car* and even, in a less direct fashion, to *cargo*.

Where a word is polysemy it will, naturally, have a variety of synonyms each corresponding to one of its meanings. It will often also have a set of antonyms. Thus *fair* may be used with (1) *hair*, (2) *skin*, (3) *weather*, (4) *sky*, (5) *judgment*, (6) *tackle*. The obvious antonyms would seem to be (1) *dark*, (2) *dark*, (3) *foul*, (4) *cloudy*, (5) *unfair*, (6) *foul*. (It is also used with *work* or *performance*, but there it is a middle term, ‘neither good nor bad’ and has, thus, no antonym.) It can be seen that *fair* with *hair* and *fair* with *skin* have the same antonym (*dark*), and so do *fair* with *weather* and *fair* with *tackle* (*foul*). We might be tempted to say that where the antonym is the same we have polysemy, and that difference of antonym implies homonymy. But this will suggest that *fair* with *weather* is more like *fair* with *tackle* than *fair* with *sky*. Intuitively, *sky* is more closely related to *weather* and *tackle* to *judgment*, but the antonyms do not provide evidence for this.

Finally, there may sometimes be formal reasons for recognising polysemy. Ullmann quotes the French word *poli* which means polished either in the literal or the transferred sense. These would seem to be a clear example of homonymy, and historically they have a single origin. But in the literal sense the word is linked with *dépolir* (‘take polish off’) and *polissage* (‘polishing’), while in the other sense it goes with *impoli* (‘un-polished’ or ‘impolite’) and *politesse* (‘politeness’). This seems to suggest that there are two different words that belong to two different related sets.

Notice, finally, that multiplicity of meaning is not confined to the words of the dictionary. It is also found with
grammatical elements – the English past tense has two different meanings (3.4). So do some prefixes; in- usually means ‘not’, but this is not so in inflammable. (This word has led, through misunderstanding resulting from the ambiguity of the prefix, to some unfortunate accidents, and on the advice of Whorf it has become the practice in the USA to use the invented word flammable instead.) There is similar ambiguity in syntax. Familiar examples are The old men and women and Visiting relatives can be a nuisance. Both can be analysed differently in syntax with accompanying difference of meaning. Multiplicity of meaning is a very general characteristic of language.

4.3 Incompatibility

So far we have discussed the fact that different words may have the same meaning and that the same words may have different meanings. It is obvious that different words may have different meanings. Simple difference of meaning is itself not of great interest, but only where the differences are in some way related.

I shall begin with a brief discussion of what is known on the field theory of semantics. This derives very largely from de Saussure’s notion of value. He pointed out that a knight on a chess board is a knight not because of any inherent quality (shape, size, etc.), but because of what it can do in relation to the other pieces on the board. He stressed this relational aspect of language, saying that there were ‘only differences and no positive terms’. For instance, he argued that sheep in English has a different value from mouton in French because English has also the word mutton. Similarly plural in Sanskrit has a different value from plural in French (or English), because in Sanskrit it belongs to the three-term system singular, dual, plural, while in French it belongs to a two-term system of singular and plural only. He further argued that if we consider synonyms such as dread, fear, be afraid, we can say that if one of these did not exist its ‘content’ would go to one of the others; in other words, the field of ‘fearing’ is divided among
three verbs (or more, of course, in actual fact), but if one were absent it would be divided between two only.

The most famous example of field theory is that of J. Trier who compared the field of the 'intellectual' aspect of the German of around 1200 with that of around 1300. (For a detailed discussion the reader should refer to Ullmann's *Semantics*.) In the earlier period the field was divided into *kunst* and *list*, the former referring to courtly qualities and the second to non-courtly skills. The term *wisheit* was used to cover the whole. In the later period, however, the field was divided into three – *wisheit* 'religious experience', *kunst* 'knowledge' and *wizzen* 'art' (one new term, one term lost and *wisheit* now only one part, not the whole).

Trier's example compared a language at two different periods. We can also compare two languages to see the way in which they divide up a particular field. An often quoted example is that of colour terms. The Danish linguist, L. Hjelmslev, argued that we could compare the colour system of English and literary Welsh in the diagram:

```
    gwyrdd
   /     /
green   blue    grey
   /     /        /
   glas    llwydd
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There are many other similar examples. E. A. Nida discusses in terms of 'class', the words in a Mexican language for noise; there are six 'noise' words referring to children yelling, people talking loudly, people arguing (or turkeys gobbling), people talking angrily, increasing noise and funeral noise. Similarly he noted in Mayan three words for searching, (a) to select good from bad, (b) search in a disorderly way, (c) search in an
orderly way, and in Shilluk (Africa) three 'break' words, one for breaking sticks, etc., one for string, one for eggs. We can add to this list a number of familiar classes, the metals iron, copper, etc., the mammals lion, tiger, or types of motor car and so on.

In all these examples we have a list of words referring to items of a particular class dividing up a semantic 'field'. But in almost all cases a relevant point is that the words are incompatible. We cannot say This is a red hat and of the same object This is a green hat. Nor shall we allow a creature to be described both as a lion and as an elephant. Sentences with incompatible terms will thus contradict each other. Sometimes incompatibility is a reflection of a clear (and, perhaps, even scientific) definition in the world of experience. Lions and elephants are distinct species and copper and iron different metals. But this is not wholly relevant. What is relevant is that the terms themselves are incompatible, even if there may be no clear distinction in the world. Consider, for example, the colour terms red and orange. There is no clear dividing line in the spectrum between these two classes (and if a scientist decides to make a strict cut-off point in terms of wavelength, that is not relevant to ordinary language), yet we would never agree that a particular object was red and at the same time orange (I am not, of course, concerned with a combination of the two colours). We might even describe it as red one day and orange the next, yet we would still never admit that it was both red and orange. Red and orange are incompatible terms.

It may be the case that in some areas there is overlap. This may be true of the lists quoted from Nida but, in general, terms in systems of this kind acquire their 'value', as de Saussure said, from their contrastive relations with the others, and are incompatible.

The basic characteristic of the items in these classes is their incompatibility. Moreover, they are 'unordered'; that is to say there is no natural way, as far as their meaning is concerned, of arranging them in any kind of order - and if we wanted to list them we should, therefore, probably do so in alphabetic
order. Admittedly, the scientist will have a framework for the classification of metals or mammals, but that is a different matter; there is no way in which, in terms of an obvious meaning characteristic, we can arrange elephant, giraffe, rhinoceros. But there are some groups of words that seem to have some 'order'. The days of the week and the months of the year form sets of incompatible items since we cannot say This month is November and it is also March. But they also have sequential relations such that Sunday comes immediately before Monday – Sunday is the day before Monday, etc. Similarly, measurements such as inch, foot, yard can be put in order, starting from the smallest one. The numbers one, two, three, etc., are another obvious example. Nida quotes a rather different counting system from a Brazilian language in which the terms are (roughly translated) 'none', 'one or two', 'three or four', 'many'. But we must be careful here. In mathematics we have sequences other than one, two, three . . . ; we have also two, four, six, eight . . . , one, four, nine, sixteen (squares) . . . , and addicts of IQ tests will know that dozens of others can be invented. Not all of this can be a matter of semantics, but where do we draw the line?

We can sometimes provide a much more sophisticated 'scientific analysis of some of these fields than the language itself seems to provide. The colour terms, for instance, are strictly, no more than an unordered set of incompatible terms. Yet Hjelmslev placed them in an order by setting them along the dimension of wavelength. This is not reflected in the language. We have no adjective to say that Red is more — than orange and Orange is more — than yellow, etc. The ordering is not then reflected in English as is that of the days of the week or the months of the year. But if we are to look for the physical characteristics of colour, Hjelmslev's account says too little rather than too much. Colour is not to be accounted for in terms of a single dimension. It involves three variables. The most obvious is that of hue, which can be measured in wavelengths and is seen in the spectrum or the rainbow. Another is luminosity or brightness and a third saturation, the degree of
freedom from white. Thus *pink* differs from *red* mainly in that it has low saturation (it has a lot of white in it). We probably think of colour mainly as hue, but this may not be true of all societies. It has often been noted that Homer referred to the sea as ‘wine-coloured’, which is very odd if we think of its hue, but completely understandable if we think of its luminosity and saturation, which are very similar to those of a deep red wine.

It does not appear, however, that there is always a close relation between these physical features and the colour system of a particular language. Thus in a language of the Philippines, Hanunōo, described by H. C. Conklin, there are four basic colour terms that may be roughly translated ‘black’, ‘white’, ‘red’ and ‘green’. But the distinctions between them are of three kinds. First, light and dark essentially distinguishes ‘black’ and ‘white’ (all light tints being ‘white’, but violet, blue, dark green, being ‘black’). Secondly, the distinction between ‘red’ and ‘green’ is largely in terms of the fact that all living plants are green, even slimy but light brown bamboo shoots. Thirdly, a distinction is made in terms of deep indelible colours ‘black’ and ‘red’ versus the weaker ‘white’ and ‘green’. It is clear that the colour system is not solely based upon the physical features of colour, but is partly determined by the cultural needs, the need, for instance, to distinguish living and dead bamboo, one ‘green’ the other ‘red’.

Even in English colour words are not always used in ways that correspond to their scientific definition. The use of *green* has some similarity to that found in Hanunōo, since dried peas are green in colour, but would not be referred to as *green peas*, while *green* is often used of unripe fruit – it may seem odd, but I should be understood, if I referred to some greengages as being ‘still green’ and therefore inedible. Similarly (see 5.3), *white* is brown when relating to coffee, yellow when referring to wine and *pink* as applied to people. Nor should we say, I think, that the huntsmen are colour-blind when they refer to the bright red jackets as *pink*. Modern Welsh, more surprisingly, has colour terms corresponding to those of English
(not the older system described by Hjelmslev), yet uses the word
*glas* to refer to grass and other growing things, though *glas*
otherwise translates English *blue*.

Considerations like these should make us wary of arranging
colour words along scientific dimensions or of comparing the
words of one language with those of another in terms of such
dimensions. Their incompatibility is clear enough, but it is
far less clear that they have any natural order.

### 4.4 Hyponymy

In the last section we discussed classes or sets of incompatible
items. But there are also words that refer to the class itself.
This involves us in the notion of INCLUSION in the sense that
*tulip* and *rose* are included in *flower*, and *lion* and *elephant*
in *mammal* (or perhaps *animal* – see below). Similarly *scarlet*
is included in *red*. Inclusion is thus a matter of class membership.

Lyons’ term for the relation is HYponomy. The ‘upper’
term is the SUPERORDINATE and the ‘lower’ term the HYponym.
In the previous section we were concerned with members of a
class with, that is to say, co-hyponyms. Yet oddly there is not
always a superordinate term. Lyons’ own work led him to
observe that in Classical Greek there is a superordinate term
to cover a variety of professions and crafts, ‘carpenter’, ‘doctor’,
*flute player*, ‘helmsman’, ‘shoemaker’, etc., but none in
English. The nearest possible term is *craftsman*, but that would
not include *doctor, flute player* or *helmsman*. Similarly, and
rather strangely, there is no superordinate term for all colour
words, *red, blue, green, white*, etc.; the term *coloured* usually
excludes *black* and *white* (and *grey* too), or else (used to refer
to race), means ‘non-white’.

The same term may appear in several places in the hierarchy.
This is, of course, possible only if it is polysemic; in one of
its meanings it may actually be superordinate to itself in
another meaning (though we should usually avoid using both
terms in the same context). Thus *animal* may be used (i) in con-
trast with *vegetable* to include birds, fishes, insects as well as
mammals, (ii) in the sense of ‘mammals’ to contrast with birds,
fishes and insects, to include both humans and beasts, (iii) in the sense of ‘beast’ to contrast with human. Thus it occurs three times in the hierarchical classification of nature. A diagram illustrates the point clearly:

![Diagram of hierarchical classification]

There is a similar situation with the word dog. The word sheep is used for all creatures of a certain species; it is the superordinate term of ewe, lamb, ram, etc. There are similar terms pig for sow, boar, piglet and horse for stallion, mare, colt, etc. But the superordinate term for dogs is dog, though dog is also the hyponym as distinct from bitch. Again a diagram will help:

![Diagram of dog hierarchy]

We can, of course, avoid the ambiguity of dog by using the term male; thus male dog would be hyponym to contrast with bitch. We can also form hyponymous sets where no single-word hyponyms exist in English in a similar way, e.g. giraffe, male giraffe, female giraffe, baby giraffe. The terms cattle and poultry are a little odd in that, though they are superordinate, they are used only for plural reference (though, of course, we need the superordinate term quite commonly for the plural). Thus, though we may say Those are cattle to include Those are cows, Those are bulls, we have no single term to put in the
frame *That is a* —. The most likely term here would be *cow.* (I personally would find it difficult to say *That is a cow* of a bull, but would not be unhappy with the definition of a bull as a *male cow.* ) With *poultry* the situation seems to vary according to interest and dialect. The terms *cock* (or *cockerel* and, in America, *rooster*), *hen* and *chick* are available, but many people use *hen* or *chicken* as the superordinate term, though would not, I suspect, ever wish to refer to the male bird as a *hen.* In my own ‘native’ dialect there is no problem — the superordinate term is *fowl.*

As we might expect, hyponymy relations vary from language to language. We have seen one example — that Greek has a superordinate term to include a variety of occupations. Another example is that in German ‘potato’ *Kartoffel* is not included among ‘vegetables’ *Gemüse.*

Hyponymy involves the logical relationship of entailment. This is a more precise characterisation of the relation of ‘follows from’ that was mentioned in the discussion of Bierwisch’s examples in 2.3. To say that one sentence entails another is to say that if the first sentence is true, the second is (on logical grounds) also true. To say *This is a tulip* entails *This is a flower,* and *This is scarlet* entails *This is red.* Similarly *There are two boys* entails *There are two children.* In all such examples a sentence containing the hyponym entails a sentence containing the superordinate term. But if we have reference to ‘all’ the items (whether or not the term all actually occurs), the reverse is the case. Thus *All flowers are lovely* entails *All tulips are lovely* and *Children are a nuisance* entails *Boys are a nuisance,* but not vice-versa.

4.5 Antonymy
The term antonymy is used for ‘oppositeness of meaning’; words that are opposite are antonyms. Antonymy is often thought of as opposite of synonymy, but the status of the two are very different. For languages have no real need of true synonyms, and, as we have seen, it is doubtful whether any true synonyms exist. But antonymy is a regular and very
natural feature of language and can be defined fairly precisely. Yet, surprisingly, it is a subject that has often been neglected in books on semantics and it is not even usually given a place in dictionaries. However, there are different kinds of ‘oppositeness’ and we must clearly distinguish them.

To begin with, English abounds in pairs of words such as wide/narrow, old/young, big/small, etc. These, all of them adjectives, have in common the fact that they may be seen in terms of degrees of the quality involved. Thus a road may be wide or very wide and one road may be wider than another. We have, that is to say, gradation of width, age, size, etc., all indicated by such adjectives as these.

Sapir argued that we should handle all these words in terms of GRADABILITY. The comparative forms of the adjectives (those ending in -er or occurring with more) are EXPLICITLY graded, since to say that one road is wider than another, one boy is older than another or one book is bigger than another is to place them in a graded scale for comparison. Sapir went on to argue that although these comparative forms are preceded linguistically by the simple forms (i.e. formed from them by adding -er or more), they precede them logically in that wide, old and big can only be understood in terms of being wider, older, bigger than something – some norm or other. They are thus, said Sapir, IMPLICITLY graded antonyms.

Not only are these adjectives gradable, but they are graded against different norms according to the items being discussed. For instance, if I say that not many people were present, this might mean five or six if we were talking about an intimate party, but perhaps as many as twenty thousand if we were talking about the attendance at an important football match at Wembley. The norm is set by the object being described. A stripe on a dress may be wide if it is only two inches wide, but a road would have to be many yards wide before it could be so described. This accounts for the apparent paradoxes of a small elephant being bigger than a big mouse for small means ‘small as elephants go’ and big ‘big as mice go’.

For most antonyms a set of relationships hold between the
comparative forms such that all of the following are mutually implied:

A is wider than B
B is narrower than A
A is less narrow than B
B is less wide than A

These are related both in terms of simple reversal with switch of antonyms, and the ‘more’ and ‘less’ relationship (again involving switch of antonyms). Not surprisingly, since antonyms are gradable, there are often intermediate terms. Thus we have not just hot/cold, but hot/warm/cool/cold, with the intermediate warm and cool forming a pair of antonyms themselves.

A further point is that in each pair one of the terms is the ‘marked’ term and the other ‘unmarked’ in that only one is used simply to ask about or describe the degree of the gradable quality. We say How high is it? How wide is it? It is three feet high. It is four yards wide, with no implication that it is either high or wide. But the other term of the pair is not so used – it is the ‘marked term’. Thus How low is it? How narrow is it? imply that the object in question actually is low or narrow and we would not say (except jocularly) It is three feet low or It is four yards narrow. Notice also that the same member of the pair is used to form the nouns, height and width, which are equally neutral as compared with lowness and narrowness. In the English examples it is the ‘larger’ term that appears to be unmarked, but this does not appear to be a universal feature. Where English talks of a ‘thickness gauge’ Japanese talks of a ‘thinness gauge’.

We may, perhaps, also include here pairs of the type male/female, married/single, alive/dead. These Lyons treats in term of COMPLEMENTARITY, the items being complementary to each other. Strictly these belong to the set of incompatible terms that were discussed in 4.3, but with one specific characteristic – that they are members of two-term sets instead of the multiple-term sets that we discussed there. But they are in some ways similar to our gradable antonyms. Both exhibit
Incompatibility. To say that something is wide is to say that it is not narrow. To say that someone is married is to say that he is not single. But there is one striking difference between the two types. With the pairs we have introduced it is also the case that to say something is not the one is to say that it is the other. If Peter is not married, he is single, and vice versa. This results, of course, from the fact that there are only two possibilities (it would not be the same with the multiple sets). With the gradable antonyms, in contrast, although there are only two terms, it is not the case that to say something is not (for instance) wide is to say that it is narrow, or that to say it is not narrow is to say that it is wide. The possibility of being neither wide nor narrow is left open.

An interesting point, however, is that there is no absolute distinction between these two types. We can treat male/female, married/single, alive/dead as gradable antonyms on occasions. Someone can be very male or more married and certainly more dead than alive. More obviously, some gradable antonyms have some characteristics of the dichotomous pairs: (i) There are some pairs of adjectives, e.g. honest/dishonest, obedient/disobedient, open/shut that are gradable in terms of more and less, yet in which the denial of one is usually taken to assert the other. Thus though we may say Bill is more honest than John, Bill isn’t honest implies that Bill is dishonest and Bill isn’t dishonest implies that Bill is honest. These are, that is to say, explicitly gradable, but they are not usually treated as implicitly gradable.

(ii) Some pairs of antonyms are, in Sapir’s terms, not ‘symmetrically reversible’. That is to say the more and less relationship cannot be applied to them. An example is the pair brilliant and stupid, since more brilliant does not equal less stupid or more stupid, less brilliant. The terms, though gradable, also have an absolute value at one of the ‘ends’ of the scale.

4.6 Relational opposites
A quite different kind of ‘opposite’ is found with pairs of words which exhibit the reversal of a relationship between items (or
ARGUMENTS – see 6.3). Examples are buy/sell, husband/wife. If A sells to B, B buys from A; if A is B’s husband, B is A’s wife. Lyons suggests the term CONVERSENESS for these, but I am more concerned to point out their essentially relational characteristics, and would thus prefer RELATIONAL OPPOSITION.

There are several verbs that are pairs in this way – buy/sell, lend/borrow, rent/let, own/belong to, give/receive. There are also nouns – husband/wife, fiancé/fiancée, parent/child, debtor/creditor, and, possibly, teacher/pupil. A number of terms referring to spatial position also belong here – above/below, in front of/behind, north of/south of, etc. In grammar, too, active and passive exhibit relational opposition, for if A hits B, B is hit by A.

Relations are often characterised by logicians in terms of SYMMETRY, TRANSITIVITY and REFLEXIVITY. A relation is symmetric if it holds for the arguments (the related items) in both directions. If we have arguments a and b and a relation R, then a R b entails b R a. Obvious examples in English are be married to and cousin, for if John is married to Mary, Mary is married to John and if Bill is Fred’s cousin, Fred is Bill’s cousin. A relation is transitive if a R b and b R c entail a R c. Thus many of the spatial terms are transitive – if John is in front of Harry and Harry is in front of Bill, John is also in front of Bill. The same is true for behind, above, below, north of, south of and inside. This does not, of course, hold for opposite, which is symmetrical (if A is opposite B, B is opposite A), but not transitive. (It must be noted that transitive and transivity are used in a completely different sense in grammar – see 7.5.) A relation is reflexive if it relates an argument to itself, i.e. a R a. It can be exemplified by equal or resemble (Four equals four, John resembles himself). (These words are symmetrical and transitive too.) Reflexivity is, however, of little interest to us here, and will not be further discussed.

Kinship terms are especially interesting in a discussion of relational opposites for two reasons. In the first place many of them indicate not only the relationship, but the sex of the person concerned. Thus father is male parent, daughter the female
child and so on. This blocks reversibility. For to say that John is Sam’s father does not entail that Sam is John’s son — Sam could be his daughter. We therefore have pairs indicating the same relationship but a different sex — father/mother, son/daughter, uncle/aunt, nephew/niece. There are also pairs of words that would be symmetrical were it not for their indication of sex. An example are brother and sister. It does not follow that if John is Sam’s brother, Sam is John’s brother (she might be his sister). Only a small number of terms in English do not indicate sex — cousin (which is symmetrical) and parent and child (together with grandparent and grandchild) which are not. Rare terms are available, though they are most used only by anthropologists in order to avoid sex reference — spouse for husband/wife and sibling for brother/sister (both are symmetrical). But there are no similar terms for uncle/aunt, nephew/niece. Secondly, whether a term is symmetrical or not is a matter of the language. Thus be married to is symmetrical in English, because like spouse it does not indicate sex. But in many languages a different term is used for husband and wife, quite often the active form of the verb for the husband and the passive term for the wife — John ‘marries’ Mary but Mary ‘is married’ to John. (In English marry and be married to are used for either partner, and so are both symmetrical, though they have different meanings.) Similarly, many languages have no symmetrical term cousin; the sex has to be indicated in these languages, or the precise relationship of the parents. There may be other complications too. The brother and sister relationship in some languages is bound up not only with the sex, but also the age of the child; thus if two girls are sisters, one is the ‘elder sister’, one the ‘younger sister’ of the other.

There are some other terms that are not strictly related as relational opposites, but nevertheless differ in spatial direction in some way. A most interesting pair (discussed by C. J. Fillmore) is come and go. Come is restricted in a way that go is not, in that it indicates direction towards the speaker or hearer. It is used, first, for simple direction towards speaker or hearer
as in *Come to me* and *I'll come to you*. But, secondly, it is also used for direction towards speaker or hearer at the time of the relevant event, either in the past or the future (as well as the present) – *He came to me in London, I'll come to see you in Paris (when you get there)*. Thirdly, it is used to refer to direction to a place at which the speaker or hearer is habitually found, even if he is not there at the relevant time, e.g. *Come to my office (though I shan't be there), I came to your house (but you were out)*. In this third case *go* is also possible, *Go to my office, I went to your house*. Moreover, if the reference is to motion away from the position of the relevant person, *go* would be much more normal. I could hardly say *Come to my office immediately*, if the person I am addressing is with me in some place other than my office, since the motion is then clearly away from me. Similarly we should not normally say *He left you at his house and came to yours* for again the motion is away from the relevant person. If there is no indication at all of the position of either hearer or speaker, *go* will be used. *Come* and *go* are not the only pair of verbs with these characteristics. *Bring* and *take* function in exactly the same way, with the additional meaning of *'carry'*.

There are other pairs of words that seem to be related in similar ways. Thus *ask* expects *reply* and *offer, accept*. These are not examples of relational opposites, but of a temporal relationship. Moreover the relationship between the members of each pair is not the same. *Ask* and *offer* may ‘expect’ *reply* and *accept*, but the ‘expectation’ may be disappointed – there may be no reply or acceptance (though, for *offer*, there is also the term *refuse*). But *reply* and *accept* also ‘presuppose’ that there has been an act of asking or giving (see 8.4); this is a natural result of the temporal relationship.

Finally, it is worth noting that the ‘true’ gradable antonyms can be treated basically in terms of relational opposites. For we saw that *wide* can be seen as wider than the norm and that if *a* is wider than *b*, *b* is narrower than *a*. The comparative forms *wider* and *narrower* (the explicitly gradable forms) are thus relational opposites; they are, moreover, transitive (if *a* is
wider than b and b is wider than c, a is wider than c), but not symmetrical or reflexive. Notice, however, that as wide as, as narrow as, etc., are symmetrical, transitive and reflexive.

4.7 Components

In the previous section of this chapter we have considered various semantic relationships, without generally trying to relate them (though we have just seen a connection between antonymy and relational opposites). A very different approach, it might seem at first sight, is analysis in terms of COMPONENTS – the total meaning of a word being seen in terms of a number of distinct elements or components of meaning. The notion of component does not introduce a further kind of relation; rather it purports to offer a theoretical framework for handling all the relations we have been discussing.

The idea that semantics could be handled in terms of components has been argued with the investigation of kinship terms. It was noted that in Spanish, for instance, the sex of the people involved is clearly marked – ending -o for male, -a for female as in:

\[
\begin{align*}
\text{tio} & \quad \text{uncle} & \quad \text{tia} & \quad \text{aunt} \\
\text{hijo} & \quad \text{son} & \quad \text{hija} & \quad \text{daughter} \\
\text{abuelo} & \quad \text{grandfather} & \quad \text{abuela} & \quad \text{grandmother} \\
\text{hermano} & \quad \text{brother} & \quad \text{hermana} & \quad \text{sister}
\end{align*}
\]

English has no markers of sex, of course, though the ending -ess occurs in baroness, tigress, lioness, duchess, etc. But if we are concerned with semantics that is not particularly relevant. There is no reason why we should not attempt to classify the English kinship terms with reference to categories such as sex, even if the language does not mark these terms in the form of the words.

Sex therefore provides one set of components for kinship terms; generation differences and degrees of relationship provide two others. Thus for generation differences we need at least five generations which may be labelled \( g_1, g_2, g_3, g_4, g_5 \). Then \textit{grandfather} is \( g_1 \), \textit{father}, \textit{uncle}, etc., \( g_2 \), \textit{brother}, \textit{cousin}, \( g_3 \), \textit{son},
niece $g_4$, and grandson $g_5$. On such a system the ‘ego’ (the person for whom the relationships hold) is, obviously $g_3$. Of course we would need others to deal with great grandfather, etc. Degrees of relationship involve lineality – direct for grandfather, father, colineal for brother, uncle (but with different generation) and ablineal for cousin. Given these three sets of components all the English kinship terms can be handled. Aunt is thus female, $g_2$ and colineal, cousin male or female, $g_3$ and ablineal.

We can most easily recognise components where words can be set out in a diagrammatic form to represent some kind of ‘proportional’ relationship. In English (and the same is true of many other languages) there is a three-fold division with many words that refer to living creatures:

<table>
<thead>
<tr>
<th>man</th>
<th>woman</th>
<th>child</th>
</tr>
</thead>
<tbody>
<tr>
<td>bull</td>
<td>cow</td>
<td>calf</td>
</tr>
<tr>
<td>ram</td>
<td>ewe</td>
<td>lamb</td>
</tr>
<tr>
<td>boar</td>
<td>sow</td>
<td>piglet</td>
</tr>
</tbody>
</table>

Thus bull is to cow as ram is to ewe – or in mathematical terms bull : cow :: ram : ewe. In the light of relationships such as these we can abstract the components (male) and (female), (adult) and (non adult), plus (human), (bovine), (ovine) and (porcine). Strictly these examples do not distinguish (male) and (female) in full conjunction with (adult) and (non adult), since that would imply four possibilities and we only have three. But all four are to be found in:

man  woman  boy  girl

However, even with the other examples, it is more plausible to make both distinctions than to say that there are simply three possibilities – (male), (female) and (non adult).

Analysis of this kind (componential analysis) allows us to provide definition for all these words in terms of a few components. Thus boar is (porcine), (male), (adult) and so on. There are, as we saw earlier, gaps in the system – there are no terms to distinguish between the male, female and the young
with giraffes or rhinoceroses. Often the distinction is made by using a term taken from another set in conjunction with the generic one – bull elephant, cow elephant and elephant calf. Badgers are similarly boars and sows (though the young are presumably cubs); the male fox is a dog or dog-fox, but the female has a specific term vixen.

In many cases there is an appropriate word in the language to label the component. Male and female are obvious examples. But it would be a mistake to suppose that if we use such terms to define a common word that the resultant phrase is semantically identical with it. Thus boar is not the same as male adult pig (see 4.1); it is important to note that in the vocabulary of English we have words such as boar, whereas with giraffe we can only use the phrase adult male giraffe; the difference is relevant to the semantic structure of English.

Such labels are not, however, always readily available. We have noted the semantic relationship:

\[
\begin{align*}
\text{come} & \quad \text{go} \\
\text{bring} & \quad \text{take}
\end{align*}
\]

We noted that come is to go as bring is to take and we could therefore distinguish components X and Y and A and B such that come isXA and go XB, bring YA and take YB. But what could be the names of these components? It is difficult to provide an answer. Notice also from these examples that it is unlikely that components are universal features of language. We may, perhaps, assume that all societies distinguish between male and female and that thus (male) and (female) are universal components of language. Of course some languages may not make the distinction in the vocabulary, but it could then be said that the list of universal components was potential, i.e. available for all languages if not actually used. But the come, go, bring, take examples show that components are not related to simple physical features such as sex, and it becomes less plausible to assume that they are universal.

A particular characteristic of componential analysis is that
it attempts as far as possible to treat components in terms of ‘binary’ opposites, e.g. between (male) and (female), (animate) and (inanimate), (adult) and (non adult). In this it clearly gives emphasis to the relation of complementarity (4.5). Notationally there is an advantage in such binary terms in that we can choose one only as the label and distinguish this in terms of plusses and minuses. Thus (male) and (female) are written as (+ male) and (− male) and so on. We can, moreover, refer to the lack of a sex distinction as ‘plus or minus’ with the symbol (± male). But this works well only where there is a clear distinction; often there is indeterminacy, as with tar and porridge in relation to (solid)/(liquid).

In practice componential analysis has not been used simply in order to restate the relations discussed in earlier sections. Rather it has been used to bring out the logical relations that are associated with them. Thus by marking man as (+ male) and preg nant as (− male), we can rule out * pregnant man. Similarly by marking boy as (+ male) (− adult) (+ human) and child as (− adult) and (+ human), we can establish that There were two boys entails There were two children and Children are a nuisance entails Boys are a nuisance (though the rules of entailment are obviously fairly complex).

Yet componential analysis does not handle all semantic relations well. First, it is difficult to reduce the relational opposites to components. For the relation of parent/child cannot simply be handled by assigning components to each, unless those components are in some sense directional. We could, that is to say, treat these as having the same components, but in a different ‘direction’, but by introducing ‘direction’ into components we are, in effect, admitting that they are relational and not simply ‘atomic’ components of meaning. Secondly, the componential analysis cannot remove the hierarchical characteristic of hyponymy. For the distinction (+ male)/(− male) applies only to living (animate) things. Distinction in terms of these components, e.g. between ram and ewe, will hold only for items that are also marked as (+ animate). In a straight hierarchical diagram this is easily
shown, and is a natural consequence of the hierarchy. In a componential analysis it still has to be stated, for it is necessary to rule out not only *pregnant ram* but also *pregnant table*; the point here is that the component (female) is restricted to those items which also have (+animate). Componential analysis therefore has to state that, only if something is animate, may it be male or female with a formula such as +animate = male. Again it will be obvious that such rules (called ‘redundancy rules’) are simply a disguised way of stating the hierarchical nature of the semantic distinctions.

Componential analysis can thus handle all the relations we have discussed, simply because it can be made to do so, with the relevant modifications. But it is doubtful whether it makes them clearer; it seems rather to obscure their differences.

The componential approach to semantics is basic to Katz and Fodor’s ‘The structure of a semantic theory’. This work has been of such interest that it deserves some consideration here and, although Katz has explicitly modified his views, I shall use it as the basis of the discussion.

As we have already seen (2.3), they are concerned essentially with ambiguity, anomaly and paraphrase. The arguments are, however, very largely based upon ambiguity – upon showing that a sentence may have two readings. Thus *The bill is large* is ambiguous until it is disambiguated by . . . *but need not be paid.*

Turning to the structure of vocabulary, they point out that a dictionary would distinguish between four meanings of the word *bachelor* – (i) a man who has never married, (ii) a young knight serving under the banner of another, (iii) someone with a first degree, (iv) a young male unmated fur seal during the mating season. These four meanings can, moreover, be partly differentiated by what they call ‘markers’ which are shown in round brackets, e.g. (human) (animal) and (male), together with some specific characteristics which are called ‘distinguishingers’ and placed in square brackets, e.g. [first degree] in the case of the academic. The semantics of *bachelor* can thus be set out in a tree diagram:
An important question, however, is ‘How do we establish which precisely are the markers?’ The answer that is given is that they are those features that allow us to disambiguate a sentence. An illustration provided by the authors is The old bachelor finally died. This cannot refer to the fur seal, because such bachelors are by definition young. It follows from this that (young) must be a marker for the fur seal, and that it must now appear not among the distinguishers as in the diagram, but as a marker.

The theory has one major drawback. There is, in theory, no limit to the number of markers that can be established. For (as we saw earlier in 3.1) any piece of information can be used to disambiguate and can thus function as a marker. For instance, The bachelor wagged his flippers is hardly ambiguous – it must refer to the fur seal. The bachelor got his hair wet, on the other hand, cannot refer to the fur seal, though it might refer to any of the other three. If we use the disambiguation test we have, for the fur seal, the markers (having flippers) and (not having hair) – and the list is endless. Katz later dropped the distinction between marker and distinguisher, but the difficulty remains. However we tackle the problem, we shall be faced with an infinite set of components, because in principle any piece of information may be used to disambiguate a sentence.
Componential analysis appears, at first sight, to be an attractive way of handling semantic relations. But it raises far too many difficulties to be at all workable.