

characterisation is far from easy. One can distinguish, however, central, or prototypical, instances, judged by informants to be good examples of the category: *good:bad, large:small, true:false, top:bottom*, etc.; and more or less peripheral examples, judged as less good, or about whose status as opposites there is not a perfect consensus, such as *command:obey, mother:father, town:country, clergy:laity*, etc. (Even *tea:coffee* and *gas:electricity* are felt by some speakers to have a degree of oppositeness, but only in situations where they represent a two-way choice.) I shall make some attempt in a later chapter to specify the characteristics which distinguish the good from the less good examples of the category.

Within the somewhat indeterminate general class of opposites there is a small number of relatively well-defined sub-types (concerning which the intuitions of ordinary speakers are paradoxically uncertain) with interesting and systematic properties. It is these which will occupy most of our attention in this and the two following chapters. There will remain, however, a large number of opposites about which little will be said, because they apparently do not lend themselves to significant generalisations, nor do they display interesting recurrent patterning. For instance, most of our distinguished sub-types serve as bases for morphologically derived forms. Generally speaking, the lexical derivatives of a pair of opposites are themselves opposites, sometimes with interesting properties in their own right (e.g. *lengthen* and *shorten* from *long* and *short*), but most often they display no interesting properties that are not related in an obvious way to those of the base forms. Another class of opposites about which little systematic can be said are impure opposites, that is to say, those which encapsulate, or include within their meaning, a more elementary opposition. For instance, *giant:dwarf* can be said to encapsulate the opposition between *large* and *small* (but this opposition does not exhaust their meaning); likewise, *shout* and *whisper* encapsulate *loud* and *soft*, *criticise* and *praise* encapsulate *good* and *bad*, and *stalactite* and *stalagmite*, *up* and *down*. As far as can be ascertained at present, these are idiosyncratic and unpredictable in both their occurrence and their properties.

We shall now turn to the description of the basic types of lexical opposite, beginning with **complementaries**.¹

9.2 Complementaries

Of all the varieties of opposites, complementarity is perhaps the simplest conceptually. The essence of a pair of complementaries is that between them they exhaustively divide some conceptual domain into two mutually exclusive compartments, so that what does not fall into one

of the compartments must necessarily fall into the other. There is no 'no-man's-land', no neutral ground, no possibility of a third term lying between them. Examples of complementaries are: *true:false, dead:alive, open:shut, hit:miss* (a target), *pass:fail* (an examination).

We can recognise complementaries by the fact that if we deny that one term applies to some situation, we effectively commit ourselves to the applicability of the other term; and if we assert one term, we implicitly deny the other. Thus *John is not dead* entails and is entailed by *John is alive*; and *The door isn't open* entails and is entailed by *The door is shut*.² Complementarity can also be diagnosed by the anomalous nature of a sentence denying both terms:

- ? The door is neither open nor shut.
- ? The hamster was neither dead nor alive.
- ? The statement that John has blue eyes is neither true nor false.

Opposites which are not complementaries do not yield anomaly under these circumstances:

- Her exam results were neither good nor bad.
- The temperature was neither rising nor falling.

The relation of sense holding between the members of a pair of complementaries is not weakened, or called into question, by the existence of situations where it is difficult to decide which term is appropriate: the relation between *dead* and *alive*, for instance, is not at all affected by medico-legal uncertainty as to what constitutes the point of death. Such referential indeterminacy afflicts all words, without exception. The point about complementaries is that, once a decision has been reached regarding one term, in all relevant circumstances, a decision has effectively been made regarding the other term, too.

Since a pair of complementaries bisects a particular conceptual domain, their peculiar properties manifest themselves only within that domain. In some cases, it is possible to define a domain within which two words have a complementary relationship independently, as it were, of the words themselves. For instance, we could say, given that we are talking about members of the species *Lion*, that a particular animal must in normal circumstances be either a *lion* or a *lioness*; therefore, within this domain, *lion* and *lioness* are complementaries. However, we shall not define complementaries in this way. For us, the limits of the relevant domain will be set by the normal presuppositions of use of the words themselves. If

someone says: 'What's in this box is not alive', we have a right to conclude that the box contains something that was once alive. Likewise, if someone says: 'John did not succeed in entering the building,' it would be normal to infer that John had been trying to enter the building. Hence, *dead* and *alive* are complementaries, because, within the domain they themselves define, i.e. organisms, denial of one term entails the assertion of the other. Similarly, within the domain defined by *succeed*:*fail*, namely, that of attempting to do something, *not succeeding* is equivalent to *failing*. This is not the case, however, with *lion* and *lioness*. It is not a normal inference from *It says on this cage that the animal is a lioness, but that is obviously wrong* that the cage contains a lion. That is to say, *lion*:*lioness* are complementaries only within a domain which is imposed, as it were, extrinsically. We shall say merely that *lion*:*lioness* encapsulate the complementary opposition between *male* and *female*. The latter are true complementaries by our definition, because in ordinary circumstances a hearer would take it for granted that *No, it's not a female* referred to a living thing, and given this restriction of domain, would confidently conclude that the referent of *it* was male.

It must be remembered that language is designed neither by nor for logicians, and while definitions of sense relations in terms of logical properties such as entailment are convenient, they are also partially misleading as a picture of the way natural language functions. This is because complementarity (for instance) is to some extent a matter of degree. There are cases that would satisfy the most fastidious of logicians: for instance, if someone is doing something, he can either *continue* doing it, or *cease* doing it, and this would seem to exhaust the possibilities that are conceivable in any circumstances. But with many terms, a proviso 'in all normal circumstances' seems necessary before the inferences which establish complementarity can be accepted as valid. This is perhaps true, for example, of *dead* and *alive*; could one not say of ghosts, or better still, vampires, that they existed in a state which was neither death nor life? Similarly, the existence of hermaphrodites and animals of totally indeterminate sex weakens the relationship between *male* and *female*. An even weaker relationship would hold between terms which required the proviso 'generally speaking': it is probably the case that if someone is not *left-handed*, then, generally speaking, we can conclude that he is *right-handed*. There is, in other words, a continuum between contradiction (e.g. *This proposition is true*:*This proposition is false*) and contrariety (e.g. *John is tall*:*John is short*). The intermediate points along this continuum are occupied by cases for which intermediate values are to a greater or lesser degree unex-

pected, or difficult to conceive of. There is no clear cut-off point along the continuum. Our tests give clear-cut results only for pairs near one end of this continuum.

Complementaries are, generally speaking, either verbs or adjectives. It is convenient to consider the two types separately. An interesting feature of verbal complementaries, which distinguishes them from the adjectival sorts, is that the domain within which the complementarity operates is often expressible by a single lexical item, which itself contracts distinctive relations of oppositeness with one of the members of the complementary pair. Consider the pair *obey*:*disobey*. The relation of complementarity between these manifests itself only in the context of a successfully transmitted command: if there is no command, or if the command is directed elsewhere, or if it has not been heard or understood, or if the issuer of the command has no right to demand obedience, then it is not proper to speak of obeying and disobeying.³ The verb *command* therefore sets the scene for the complementarity of *obey* and *disobey* to appear. Most speakers feel that there is a relation of oppositeness (not, of course, complementarity) between *command* and *obey*. Interestingly, when asked for the opposite of *command*, most will reply with *obey*, but when asked for the opposite of *obey*, the invariable response is *disobey*, presumably because *obey*:*disobey* are 'better' opposites than *command*:*obey*. There are four types of opposite whose characteristic relations can hold between the lexical item which expresses the necessary presupposition for a pair of complementaries, and one of the members of the complementary pair. These four are: reversives, interactives, satisfactives and counteractives.

Let us first consider how reversivity and complementarity interlock in generating lexical triplets. Take the set *be born*:*live*:*die*. The outer pair, *be born* and *die* are reversives (these are discussed in detail in the next chapter; for the time being they may be characterised as denoting "change in opposite directions" – in the present instance, "entering life" and "leaving life"); *live* and *die* are complementaries: *He shall not live!* is equivalent to *He shall die!*, and *He shall not die!* to *He shall live!* For all complementaries of this group, the basic opposition is between "continuance of a state" and "change to an alternative state". Other triplets with more or less analogous relationships (although there are differences of detail which we shall not go into) are: *start*:*keep on*:*stop*, *learn*:*remember*:*forget*, *arrive*:*stay*:*leave*, *earn*:*save*:*spend*.

The opposites that are here termed 'interactives' have a 'stimulus-response' type of relationship: the verb expressing the precondition for complementarity denotes an action which has as its goal the elicitation of the

response denoted by its interactive opposite, which, in turn, is one of the terms of the complementary pair. An example of a set of lexical items related in this way is *command:obey:disobey*. In the context of a command, *obey* and *disobey* are complementaries, while *command* and *obey*, representing 'stimulus' and 'response', are interactives. The following are further examples of such triplets: *request:grant:refuse*, *invite:accept:turn down*, *greet:acknowledge:snub*, *tempt:yield:resist*.

The term †*satisfactive* is given to what is probably a rather weak form of oppositeness in which one term denotes an attempt to do something, and the other denotes successful performance. Satisfactives are included, with some hesitation, largely on the grounds that they participate, along with complementaries, in triplets which are very similar to those which contain interactives. Examples of satisfactives are: *try:succeed*, *seek:find*, *compete:win*, and *aim:hit*. Not everyone feels these to be opposites; but some do, and there is undoubtedly a binary relation of some sort between the members of a pair. With the exception of *seek:find*, all the instances quoted form triplets: *try:succeed:fail*, *compete:win:lose*, *aim:hit:miss*.

As a final example of lexical triplets involving complementaries, consider the following cases: *attack:defend:submit*, *charge:refute:admit*, *shoot* (in football): *save:let in*, *punch:parry:take*. The first and second terms of each triplet represent a new type of opposite. The first term denotes an aggressive action, and the second denotes measures to neutralise it. We shall call this type of opposition †*counteractive*. Notice that the members of the complementary pair represent an active and a passive response to the original action or, perhaps more revealingly, counteraction and lack of counteraction. (It is perhaps worth noting in passing that in many cases there is a verb expressing a less direct, but more dynamic, response to an initial aggressive action: *attack:counter-attack*, *punch:counter-punch*, *charge:counter-charge*, etc. These dynamic counteractives seem never to be expressed by distinct lexical roots in English, but only by pre-fixation with *counter-*. It is not clear why this should be so; intuitively, it does not seem fortuitous.)

It has been claimed that complementary adjectives are not normally *gradable*;⁴ that is to say, they are odd in the comparative or superlative degree, or when modified by intensifiers such as *extremely*, *moderately*, or *slightly*. This is true, to a greater or lesser degree, of many adjective complementaries in English: ? *extremely true*, ? *fairly dead*, ? *a little shut*, ? *more married than most*, ? *moderately female*, etc. But it is also true that very often one member of a pair lends itself more readily to grading than the other. Thus *dead* is less gradable than *alive*:

? *very dead*, ? *moderately dead*, ? *deader than before*
very alive, *moderately alive*, *more alive than before*

and *shut* is less gradable than *open*:

(tight shut), ? *slightly shut*, ? *moderately shut*, ? *more shut than before*
wide open, *slightly open*, *moderately open*, *more open than before*

There is also, however, a class of what at first sight appear to be more or less fully gradable complementary adjectives: *clean:dirty* and *safe:dangerous* will serve as examples:

moderately clean, *very clean*, *fairly clean*, *cleaner*
slightly dirty, *quite dirty*, *fairly dirty*, *dirtier*
moderately safe, *very safe*, *fairly safe*, *safer*
slightly dangerous, *quite dangerous*, *fairly dangerous*,
more dangerous

Pairs such as these have not been generally recognised as complementaries,⁵ perhaps because the usual tests give slightly equivocal results. Consider the pair *clean:dirty*: many speakers reject the entailments in 1 and do not find 2 anomalous:

1. *It's not clean* entails and is entailed by *It's dirty*
2. *It's neither clean nor dirty*.⁶

It seems that the bald statement *It's dirty* is reserved for distinctly dirty things, and would not be appropriate for only very slightly dirty things. However, a strengthening of the test produces clear results which differentiate these apparently gradable complementaries from antonyms such as *long* and *short*: *It's not clean* entails and is entailed by *It's at least slightly dirty*, and 3 is paradoxical for everyone:

3. ? *It's neither clean, nor even slightly dirty*.

These results may be contrasted with those obtained for *long* and *short*: *It's not long* does not entail *It's at least slightly short*, and 4 is not paradoxical:

4. *It's not long, nor is it even a little bit short*.

Other complementaries of this type are: *accurate:inaccurate*, *pure:impure*, *satisfactory:unsatisfactory*, *smooth:rough*, *drunk:sober*,

straight : bent, honest : dishonest, fresh : stale, well : unwell. These opposites have a number of puzzling properties which make them difficult to classify and describe. The position that will be taken here is that there are, in fact, two senses of (for example) *clean : clean*¹, which appears in contexts such as *It's clean*, and which has a complementary relation with *dirty*; and *clean*², which appears in *How clean is it?* and *It's cleaner now*, and which has an antonymic relation to *dirty*. (Antonyms are discussed in detail below.)

9.3 Antonyms

Examples of antonyms have already been introduced, without definition, for purposes of comparison. The term will be used in this book with the restricted sense defined by Lyons,⁷ rather than with its other most frequently encountered sense as a cover term for all types of lexical opposite. Antonymy is exemplified by such pairs as *long : short, fast : slow, easy : difficult, good : bad, hot : cold*. Antonyms share the following characteristics:⁸

- (i) they are fully gradable (most are adjectives; a few are verbs)
- (ii) members of a pair denote degrees of some variable property such as length, speed, weight, accuracy, etc.
- (iii) when more strongly intensified, the members of a pair move, as it were, in opposite directions along the scale representing degrees of the relevant variable property. Thus, *very heavy* and *very light*, for instance, are more widely separated on the scale of weight than *fairly heavy* and *fairly light*.
- (iv) the terms of a pair do not strictly bisect a domain: there is a range of values of the variable property, lying between those covered by the opposed terms, which cannot be properly referred to by either term. As a result, a statement containing one member of an antonym pair stands in a relation of contrariety with the parallel statement containing the other term. Thus, *It's long* and *It's short* are contrary, not contradictory, statements.

Furthermore, *It's neither long nor short* is not paradoxical, since there is a region on the scale of length which exactly fits this description.

Many properties can be conceptualised in terms of "more" and "less", thus creating a scale. We can think of such a scale as having an origin, or zero (corresponding to the absence of the scaled property), and extending more or less indefinitely in the direction of "more of" the property.

Of a pair of antonyms associated with such a scale, one will, as it were, tend towards zero, while the other will tend in the contrary direction. The terms of an antonymous pair are symmetrically disposed around a neutral region of the scale, which will be called the 'pivotal region', and which cannot be referred to by either member of the pair. In the majority of cases, the pivotal region is not designated linguistically by any lexical item (*tepid* and *lukewarm*, referring to the pivotal region between *hot* and *cold*, are exceptional).

The scale on which a pair of antonyms operate is, however, not quite so straightforward as the preceding remarks imply. In fact, to picture how a typical pair of antonyms work we need to refer to two scales – an absolute scale, which covers all possible values of the scaled property from zero to infinity, and a relative scale, which is movable relative to the absolute scale, and whose values are directly relatable to the terms of the antonymous pair. Take the example of *long : short*. These terms cannot be assigned to any constant length, or even to a range of lengths: the values (on the absolute scale) that they denote vary with every referent to which they are applied. Compare *a long/short river* and *long/short eyelashes*.

The way a pair of antonyms operates can be represented diagrammatically as shown in fig. 9.1. The vertical dimension in this diagram is not significant: it has the purpose, simply, of permitting the representation

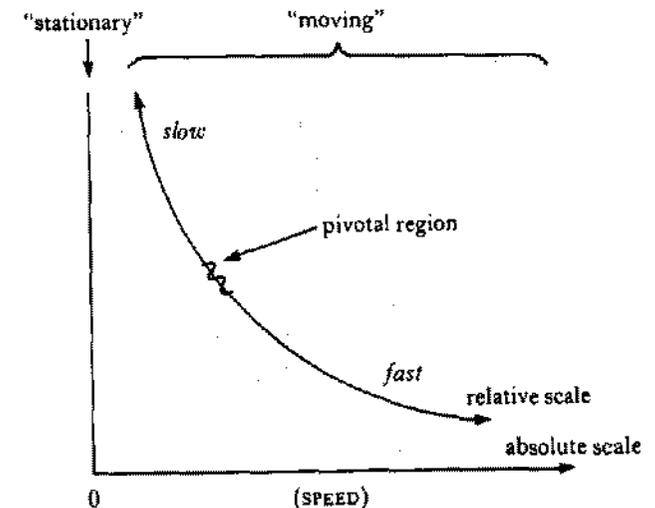


Figure 9.1

of an important property of *slow*. The value of *slow*, although it 'tends towards' zero speed, never actually reaches it, but approaches it, as mathematicians say, asymptotically. This is not a physical fact, but a linguistic one: we cannot say *completely slow* when we mean "stationary". The behaviour of *slow* is typical of that of 'zero-oriented' members of antonym pairs; thus, we cannot say *completely cheap* when we mean "free of charge", nor *completely short* when we mean "having zero length".

It has been said that antonyms, even when not explicitly comparative in form, are always to be interpreted comparatively.⁹ That is to say, expressions like *It's long* or *That's a long one* are to be understood to mean "longer than X", where X is some implicit reference point on the scale of length. (It would be more accurate to say "longer to a surprising or significant degree than X", since the amount of excess length which is needed to qualify a referent as *long* is different for different referents, and depends on inherent variability.) This is a species of definiteness: just as an addressee on hearing *Give me the book* must identify the particular book being demanded, so must someone hearing *Isn't he tall?* identify the particular reference point intended by the speaker. The most frequent reference point is some sort of average value within a class. But the hearer must also, of course, identify the relevant class. *A tall man entered the room* is likely to refer to someone taller than the average adult male human; *Isn't he tall?*, however, may mean "tall for his age, family, class at school, tribe, or profession" (e.g. if he is a jockey), or "taller than the last time the speaker saw him", etc.

9.4 Sub-classes of antonyms

Antonyms can be divided into three (possibly four) sub-types. I shall delimit the types initially on the basis of the relationship between the semantic properties of those lexical units of the adjective lexemes which appear in sentences of the form *It's X*, and the semantic properties of the lexical units which appear in corresponding comparative forms (although, as we shall see, there are other correlated differences). There are basically two possible relationships, one involving what we shall call **pseudo-comparatives**, and the other **true comparatives**. Consider, first, the relation between the occurrences of *heavy* in 5 and 6:

5. This box is heavy.
6. This box is heavier than that one.

Notice that a preceding assertion that the box is *light* yields oddness in the case of 5, but not with 6:

7. ? This box is light, but it's heavy.
8. This box is light, but it's heavier than that one.

In other words, *heavier* does not mean "heavy to a greater degree", but "of greater weight". We shall therefore describe *heavier* as the pseudo-comparative of *heavy* (in, e.g., *It's heavy*). (Evidence will be offered below that two distinct, but related, senses of *heavy* are involved here – *heavier* is the true comparative of one, and the pseudo-comparative of the other.) Consider, now, the relation between the occurrences of *hot* in 9 and 10:

9. It's hot today.
10. It's hotter today than yesterday.

A preceding assertion that the weather is *cold* produces oddness in both cases:

11. ? It's cold today, but it's hot.
12. ? It's cold today, but it's hotter than yesterday.

It seems that *hotter* DOES mean "hot to a greater degree". We shall therefore describe *hotter* as the true comparative of *hot*, and it will be argued that 11 and 12 contain the SAME sense of *hot*.

We are now in a position to define the three groups of antonyms:

Group I: there is a pseudo-comparative corresponding to each member of a pair.

It's short, but it's longer than the other one.
It's long, but it's shorter than the other one.
e.g. *heavy* : *light*, *fast* : *slow*, *high* : *low*, *deep* : *shallow*,
wide : *narrow*, *thick* : *thin*, *difficult* : *easy*

Group II: there is a pseudo-comparative corresponding to one member of a pair, but the other member has a true comparative.

John's a dull lad, but he's cleverer than Bill.
? Bill's a clever lad, but he's duller than John.
e.g. *good* : *bad*, *pretty* : *plain*, *kind* : *cruel*, *polite* : *rude*

Group III: both members of a pair have true comparatives.

? It's hot, but it's colder than yesterday.
? It's cold, but it's hotter than yesterday.
e.g. *nice* : *nasty*, *sweet* : *sour*, *proud of* : *ashamed of*, *happy* : *sad*

Group II has a sub-group consisting of those hybrid opposites like *clean* :

dirty and *safe*: *dangerous*, which in the positive degree behave like complementaries. In respect of their graded uses, however, there is no doubt that they belong to Group II:

? It's still clean, but it's dirtier than before.

It's still dirty, but it's cleaner than before.

Accordingly, two sub-groups will be distinguished. It would be useful to have names for these antonym types. We shall therefore call those in Group I **polar antonyms**, those in Group II **overlapping antonyms**, and those in Group III **equipollent antonyms**. Group II(b), a sub-class of overlapping antonyms, will be termed **privative antonyms**.¹⁰

The three groups that have been established also display differences with respect to certain other properties. First, members of the three groups differ in respect of the sort of properties they typically refer to. Polar (Group I) antonyms (e.g. *long*:*short*) are typically evaluatively neutral, and objectively descriptive. In the majority of cases, the underlying scaled property can be measured in conventional units, such as inches, grams, or miles per hour. Overlapping (Group II) antonyms all have an evaluative polarity as part of their meaning: one term is commendatory (e.g. *good*, *pretty*, *polite*, *kind*, *clean*, *safe*, *honest*) and the other is deprecatory (e.g. *bad*, *plain*, *rude*, *cruel*, *dirty*, *dangerous*, *dishonest*). What distinguishes privative antonyms in this respect is not entirely clear: it may be that they characteristically refer to situations where the desirable state is less the presence of some valued property than the absence of an undesirable one, such as dirt or danger. All equipollent (Group III) antonyms – there are not many of them – refer to distinctly subjective sensations or emotions (e.g. *hot*:*cold*, *happy*:*sad*), or evaluations based on subjective reactions, rather than on 'objective' standards (e.g. *nice*:*nasty*, *pleasant*:*unpleasant*).

Second, the three groups differ in respect of the possibility of forming questions on the pattern of *How X is it?*, with the main (nuclear) stress of the sentence on *X* (all antonyms occur normally in *how*-questions with the stress on *how* or *is*); and they differ too, with regard to the semantic nature of the questions thus formed. Consider the question *How heavy is it?* Just as *X is heavier than Y* tells us nothing about the actual weight of *X* or *Y*, the questioner here expresses no presumption or expectation concerning the weight of the questioned item. Such expressions will be described as **impartial** (in this case, impartial with respect to the contrast between *It's heavy* and *It's light*). On the other hand, *How hot is it?* and *It's hotter than before* both carry a presupposition that *hot*, rather than

cold, would be an appropriate description of the questioned item.¹¹ These expressions will be described as **committed**. (Notice that although *How heavy is it?* is impartial, *How heavy is it?* is committed.) The characterisation of the three groups in respect of *How X is it?* questions (which will henceforth simply be referred to as *how*-questions) is as follows:

Polar: Only one member of a pair yields a normal *how*-question (cf. *How long is it?* but ? *How short is it?*), and this question is impartial.¹²

Overlapping: Both terms of a pair yield normal *how*-questions, but one term yields an impartial question (e.g. *How good is it?*), and the other term yields a committed question (e.g. *How bad is it?*).

Equipollent: Both terms of a pair yield normal *how*-questions, and both questions are committed (*How hot is it?*, *How cold is it?*).

It is worth noting that quantified comparatives of the form *twice as/half as X* show the same patterning as *how*-questions in respect of normality and impartiality.¹³

This is a convenient point to raise the matter of distinctions of lexical units within lexemes. Consider the occurrences of the form *long* in 13, 14 and 15:

13. It's long.

14. This one is longer than that one.

15. How long is it?

How many different lexical units *long* occur in these sentences? The following evidence is relevant. First of all, 16 is zeugmatic. This suggests that the sense of *long* which appears in 15 is different from that which appears in *It isn't long* (and presumably also in 13):

16. A: How long is it?

B: ? It isn't.

On the other hand, if B's answer in 17 can be taken as equivalent to a comparative, it is not odd in the way that would be expected if 15 and 14 contained different senses:

17. A: How long is this one?

B: More so than the last one, but still a bit short.

(cf. also:

A: What is the length of this one?

B: Greater than that of the last one, but still short.)

On this evidence, then, it would seem that 14 and 15 contain one and the same sense of *long*, and 13 a different one. This is confirmed by the suggestion of zeugma in 18, which indicates a distinction between 13 and 14:

18. A: Is this one long?
B: ? No – more so than the last one, though.

The *long* in *twice as long* is harder to test, but it seems reasonable to assume that it is the same as that in 14 and 15. Similar considerations lead to the conclusion that *short* in *It's short* and *It's shorter* represent distinct senses; likewise *clean* in *It's clean* is different from *clean* in *It's cleaner* and *How clean is it?* The two senses of *long* (likewise those of *heavy*, *wide*, *fast*, *clean*, etc.) are, of course, systematically related and their respective units are to be assigned to the same lexeme. Notice that in 19, 20 and 21 there is no need to postulate different lexical units *hot*:

19. It's hot.
20. It's hotter than yesterday.
21. How hot is it?

Many of the differences between the groups can be given an intuitively satisfying explanation if we assume that for overlapping and equipollent antonym pairs (but not polars) the properties denoted by each of the members of a pair are conceived as being quasi-autonomous. That is to say, whereas SHORTNESS, for example, is no more and no less than the absence of LENGTH, GOODNESS and BADNESS, CLEVERNESS and DULLNESS, and HOTNESS and COLDNESS are to some extent independent properties. At a more abstract level, of course, there is a common underlying gradable property for both members of a pair (otherwise they would not be opposites): MERIT for *good*:*bad*, TEMPERATURE for *hot*:*cold*, etc. But at a more superficial level, the properties have a certain independence. We can thus say that whereas a single scale underlies a pair of polar antonyms, there are two scales underlying a pair of overlapping or equipollent antonyms. This already offers a natural explanation for certain of the differences between polar antonyms, on the one hand, and overlapping and equipollent antonyms on the other. It is reasonable to assume that the normality of *twice/half as X* and *How X is it?* depends on the existence of a scale of X-NESS. *Short*, *slow* and *shallow*, for example, are odd in these frames because there is no scale of SHORTNESS, SLOWNESS, or SHALLOWNESS. (A speaker is, of course, free to create an ad hoc scale: *How slow is it?*, although not fully normal, is by no means uninterpretable.)

The relationship between the senses associated with a pair of polar antonyms can be portrayed diagrammatically as shown in fig. 9.2. We need now to be able to picture overlapping and equipollent antonyms in a way

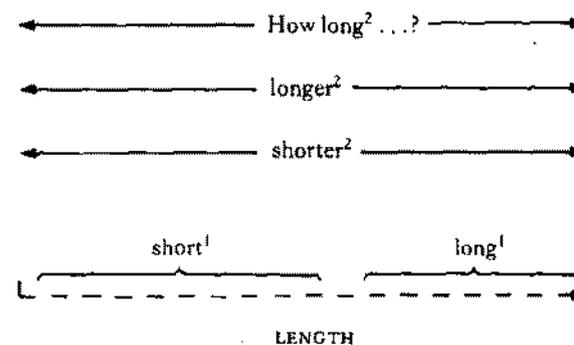


Figure 9.2

which will account naturally for their differences. Consider, first, the equipollent type, represented by *hot*:*cold*. Since nothing that is *colder* can be *hot*, and nothing *hotter* can be *cold*, then if we assume that each term is restricted to its own scale it appears that nothing can fall simultaneously on the two scales; or, to put it another way, there is no overlap between the scales of COLDNESS and HOTNESS. The relationship between the scales can therefore be represented as shown in fig. 9.3.

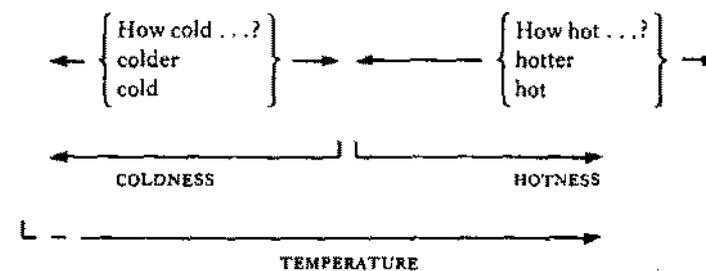


Figure 9.3

There is an important difference between the *hot*:*cold* contrast and the *long*:*short* contrast: the difference between *hot* and *cold* is in a sense absolute, rather than relative. The distinction is based neither on an average nor on a norm, but ultimately on a difference of sensation quality. However, although the distinction between *hot* and *cold* is absolute, once we are on one or other of the scales a principle of relativity applies. The temperature required for a day to qualify as *hot* is much lower than that required of an oven, which in turn is lower than that required of a furnace.

Let us now consider how *warm* and *cool* fit into the picture. The facts are somewhat complex. First, the normality of all the following sentences suggests that each of the terms operates on its own scale:

- How hot is it? X is twice as hot as Y.
- How warm is it? X is twice as warm as Y.
- How cool is it? Z is twice as cool as Y.
- How cold is it? X is twice as cold as Y.

How cool is it? and *twice as cool* are the least normal of these expressions, but even here the oddness is not of the same order as that of *? twice as short*. (It is interesting to note that hotness, warmth and coldness – but not coolness – are physiologically distinct sensations.) If we accept the linguistic evidence for the existence of separate scales, then the picture is as shown in fig. 9.4.

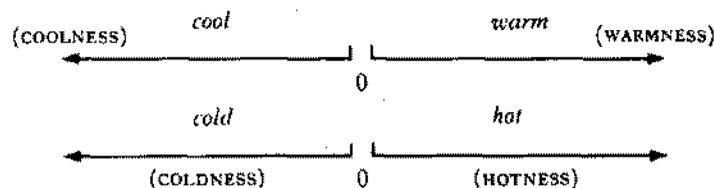


Figure 9.4

This arrangement, however, fails to account for the peculiar distribution of *cooler* and *warmer*. The problem is that *cooler* can be used of any temperature provided that it does not fall within the range of *cold*, and *warmer* can be used of any temperature that does not fall within the range of *hot*. Thus we can speak of one *hot* furnace being *cooler* than another, and of the temperature at the North Pole as being *warmer* than that of the surface of the moon. It is almost as if there were two different lexical terms *cool*: *cool*¹, which had its own scale, and denoted a moderate degree of coldness, and *cool*², which acted as a polar antonym of *hot*; similarly, there might be a *warm*¹ with its own scale, and a *warm*², which was a polar antonym of *cold*. This would yield a picture like that shown in fig. 9.5. In this way the observed range of *cooler* could be explained as the

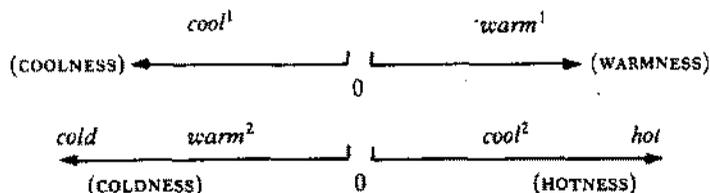


Figure 9.5

combined ranges of *cooler*¹ and *cooler*² and, similarly, *mutatis mutandis* with *warmer*. An obvious difficulty with this proposal is that there do not, at first sight, appear to be any normal uses of *cool*² and *warm*² to denote, respectively, 'relatively *cool* on the *hot* scale' and 'relatively *warm* on the *cold* scale'. A day on which the temperature is 'mildly hot' is a *warm* day, and by no stretch of the imagination a *cool* day. There do occur, however, in special circumstances, uses of *cool* and *warm* which correspond closely to what one would expect from *cool*² and *warm*²:

- Place the mixture in a cool oven.
- This substance burns with a cool flame.
- Put it in the warm part of the refrigerator.

An *oven* and a *flame* can perhaps be regarded as inherently *hot*, and a *refrigerator* as inherently *cold*: under these circumstances, *warm* and *cool* behave like polar antonyms of *cold* and *hot*. If the above analysis is correct, then we have four opposite pairs: *hot*:*cold*, *warm*¹:*cool*¹, *hot*:*cool*², and *cold*:*warm*². This account sheds some light on the properties of, and relations between, *cold*, *cool*, *warm* and *hot*, but it cannot be denied that many problems remain, and it could be that a rather different sort of model is required from the one we have been using.

In the case of overlapping antonyms, exemplified by *good*:*bad*, things that are *bad* may nonetheless be *better*; whatever is *good*, however (for the majority of speakers), cannot be normally qualified as *worse*. Thus the scale of *BADNESS* must overlap the scale of *MERIT* (over which *good*² operates), but not extend into the region on the *MERIT* scale covered by *good*¹. The relationships between the terms associated with the scale of *MERIT* can therefore be pictured as shown in fig. 9.6.

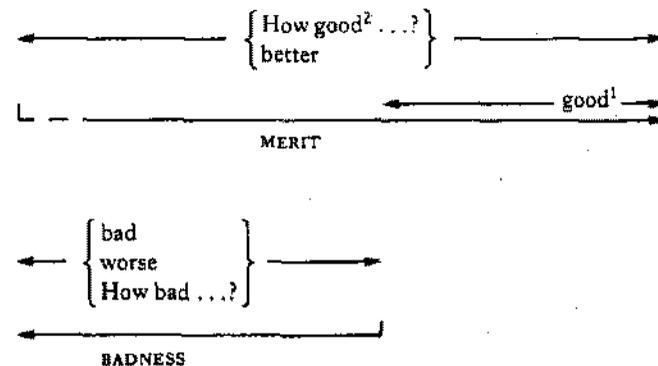


Figure 9.6

There is a theoretical third possibility for the relation between two sub-scales, which, if realised, would yield a fourth group of antonyms. There could be two completely overlapping scales, as shown in fig. 9.7. The predicted properties of such a group would be:

- a. both terms of a pair would have pseudo-comparatives
- b. both terms would yield impartial questions
- c. both terms would be normal and impartial in quantified comparatives

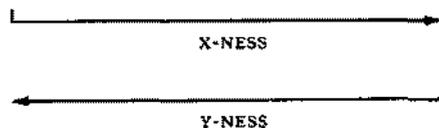


Figure 9.7

There are no fully convincing examples of this type of opposition in English, although the pair *hard:soft* (as applied, for instance, to cheese or butter) is difficult to classify, and might be a candidate.

9.5 Inherentness

It has been argued that the scale of MERIT on which *good* and *better* operate overlaps with that of BADNESS, a consequence of this being that something *bad* can be described as being *better* than something which is even worse. However, this general statement needs qualification and refinement, in view of cases like 22:

- 22a. Bill's accident was worse than John's.
- b. ? John's accident was better than Bill's.

It appears that, after all, not every *bad* thing can be normally described as *better* than something else, even when that something else is qualifiable as *worse*. The following is a selection of lexical items which do not collocate normally with *better*: *headache, depression, failure, debt, famine, drought, storm, earthquake, flood*. They are all nouns whose referents may be said to be 'inherently bad'. Apparently *better* will collocate normally only with nouns which can collocate normally with *good*. A related peculiarity of inherently bad nouns is that they cannot be questioned with *How good is...?*:

23. ? How good was the drought last year?

How bad was the drought?, on the other hand, is perfectly normal. The latter restriction is the easier to motivate. In asking *How X is it?*, one is effectively saying: "Place it for me on the scale of X-NESS." In the case of floods and other inherently bad things we have a theoretical choice of questions: *How good is it?* and *How bad is it?*, i.e. "Place it for me on the scale of GOODNESS" or "Place it for me on the scale of BADNESS." Choosing the wider scale carries an implication that one is prepared for an answer anywhere along it; that is to say, one signals a readiness to accept that the item might be *good*. This is, of course, nonsense in the case of inherently bad items, so it is more normal, for these, to choose the narrower scale. The restriction of *better* to referents that are not inherently bad is less obvious in its motivation, but the rationale is presumably similar.

Peculiar collocational behaviour with inherent nouns is confined to overlapping antonyms, and is a consequence of a restricted sub-scale overlapping a wider sub-scale, thus presenting the speaker with a choice of scales when a referent falls within the region of overlap. In principle, all overlapping antonyms are capable of displaying the effects of inherentness:

- 24a. John's torturing of the cat was crueller than Bill's.
- b. ? Bill's torturing of the cat was kinder than John's.
- c. ? How kind was John's torturing of the cat?
- 25a. Cedric's insult was ruder than Crispin's.
- b. ? Crispin's insult was more polite than Cedric's.
- c. ? How polite was Cedric's insult.

For most or all of the lexical items we have so far examined it could plausibly be claimed that the 'inherent badness' was an inalienable feature of their meaning. However, this is not a necessary condition for the effects of inherentness to manifest themselves. What matters is simply that the speaker, at the time of utterance, should feel that a certain whole class of referents should be 'a bad thing', rather than a class that has good and bad members. Consider the sentence:

This year's strike was better than last year's.

This sentence would hardly occur during a conversation between managing directors, to whom all strikes are evil, but could very well occur in a conversation between shop stewards. On the other hand, *This year's strike was worse than last year's* would be more likely in a managerial discussion; it might also be uttered by a union official, but would have the opposite interpretation, i.e. that percentage support was down this year.

As this model predicts, both terms are committed in the verbal equivalent to a comparative:

- ? I like her, but I dislike her more than Susan.
 ? I dislike her, but I like her more than Mary.

Other examples of this type are: *despise* : *admire* and *approve* : *disapprove*; similar in structural relations, but different in that the experiencer is the direct object, are *please* : *displease*.¹⁵

A further resemblance between verbs of this group and adjectival opposites is that they include what appear to be underlying superlatives, analogous to *huge* : *tiny* and *scorching* : *freezing*. *Love* and *hate* seem to be of this type. First, they are not so fully gradable as *like* and *dislike*:

- I quite like him, I dislike it, a little*
? I quite love him, ? I hate him, a little

Second, they are modifiable by unstressed *absolutely*:

- I absolutely love it!, I absolutely hate it!*
? I absolute like it!, ? I absolutely dislike it!

Finally, *love* and *hate*, in contrast to *like* and *dislike*, can be prosodically intensified.

The scales of HOTNESS and COLDNESS can be seen to be closely related because they both measure degrees of TEMPERATURE. That is to say, we can identify a more abstract scale which unites the two properties. Intuitively, the same ought to be true of *like* and *dislike* and the other stative verbal opposites; but it is a curious fact that there is no independent evidence for it. There is no neutral way, for instance, of asking what someone's degree of liking or disliking for something is, analogous to *What is the temperature?* We can say *How do you feel about Mary?*, but this seems too general, and could refer to any emotional colour. It is not immediately obvious whether this is a significant or a fortuitous lack.

9.8 Contrastive aspects

At present, available information concerning the existence and membership of sub-classes of antonyms in other languages than English is unfortunately too fragmentary to enable firm contrastive generalisations to be made. However, there is enough to justify a few tentative suggestions.

We have seen that oppositions between gradable adjectives can be classified into four fairly distinct types: polar antonyms (e.g. *long* : *short*), overlapping antonyms (e.g. *good* : *bad* and *clean* : *dirty*, with the latter

exemplifying the sub-group of privative antonyms), and equipollent antonyms (e.g. *hot* : *cold*); we have also seen that in English, group membership tends to be correlated with certain types of meaning: polar antonyms are objectively descriptive, overlapping antonyms are evaluative, and equipollent antonyms refer to sensations, emotions and subjective reactions.

A preliminary observation is that the nearest translation equivalents in another language of a pair of English antonyms will not necessarily belong to the same structural group as the English pair. For instance, *chaud* and *froid* in French do not, like their English equivalents *hot* and *cold*, belong to the equipollent type, but to the polar type: speakers of French I have consulted find the following sentences quite normal:

- Il fait chaud, mais il fait plus froid qu'hier.
 Il fait froid, mais il fait plus chaud qu'hier.

The German pair *gut* : *schlecht* also appear to be polar antonyms, unlike their English counterparts, which are of the overlapping type.¹⁶ (It is worth noting that for a minority of English speakers, too, *good* and *bad* are polar antonyms: for them, *John's performance was excellent, but it was worse than Bill's* is perfectly normal.¹⁷ However, like the majority group, they judge *How good is your headache?* to be odd. For such speakers, *worse* apparently has two senses, (i) a pseudo-comparative of *bad*, which may be applied to things that are not inherently bad, and (ii) a true comparative of *bad*, restricted to inherently bad things. They find the following sentence zeugmatic, since for them the *worse* which can qualify a good set of exam marks cannot simultaneously qualify a headache, although the lexeme *worse* collocates normally with either of these singly:

That John's headache was worse than Bill's perhaps explains why his exam marks were, too, although they were, in fact, very good.

For the majority of English speakers this sentence is abnormal for different reasons, but it is not zeugmatic.) The Egyptian Arabic equivalents of *good* and *bad*, on the other hand, are privative antonyms.¹⁸

Looking at the three antonym groups, one might suggest that antonyms of the equipollent type (*hot* : *cold*) are, in a sense, the most 'subjective', and the polar type (*long* : *short*) the most 'objective', with the overlapping variety (*good* : *bad*) occupying an intermediate position. To put it another way, polar antonyms are the most highly conceptualised and distanced from the raw psycho-physical facts, while equipollent antonyms are the most 'primitive', being the most closely modelled on the psycho-physical facts (for instance, heat and cold are physiologically distinct sensations;

linguistically, *hot* and *cold* operate on their own distinct scales). On this basis, one might hazard a tentative suggestion. Presumably all languages will have adjectives, and very probably pairs of opposites, denoting degrees of such properties as length, temperature, beauty, merit, pleasantness, and so on. But perhaps in some languages the meanings of relative adjectives are in general more highly conceptualised than in others. In this respect, English, with some equipollent antonyms and substantial numbers of overlapping antonyms, is relatively 'subjective'. In contrast, Macedonian seems to be highly conceptualised, since all antonyms are apparently of the polar type.¹⁹ French is perhaps intermediate between English and Macedonian: polar and overlapping antonyms (including privatives) are certainly present, but an informal questioning of informants has failed to unearth any convincing examples of equipollent antonyms. It may be that if a language has only one type of antonym, there is a strong likelihood that they will be polars; if there are two types, they will resemble our polar and overlapping antonyms; equipollents will only be represented if the other two are also present. Further research is needed before this hypothesis can be confirmed or disconfirmed.

Notes

- 9.1 For opposites in general see Ogden (1932), Martin (1976), Lyons (1977: 270-80), Geckeler (1980), Warezyck (1981).
1. The term *complementary* is from Lyons (1968: 460-2). As far as possible I have adopted Lyons's terminology.
- 9.2
2. It must be borne in mind that, in judging the logical relation between *John is not dead* and *John is alive*, it is necessary to assume (i) that the referential presuppositions of both statements are satisfied - i.e. there exists an appropriate person named John, (ii) the statements both refer to the same person, and (iii) that the predicate is predicable of the subject - *The table is not dead*, for instance, does not entail *The table is alive*.
 3. The conditions for the successful performance of a speech act are known as **felicity conditions**. See Austin (1962: chs. 2, 3 and 4) and Levinson (1983: 229-35 and 238-40).
 4. See Lyons (1968: 462).
 5. See, however, Cruse (1980).
 6. This must not, of course, be interpreted as a metalinguistic statement - for instance, as *It's neither 'clean' nor 'dirty'*.
- 9.3 Antonyms have received a good deal of attention from linguists: see, in addition to the works cited under 9.1, Sapir (1944), Ducháček (1965), Bierwisch (1967), Lyons (1968: 463-7), Pohl (1970), Ljung (1974), van Overbeke (1975), Cruse (1976), Bolinger (1977), Cruse (1980), Lehrer and Lehrer (1982), Lehrer (1985).

7. See Lyons (1968: 463-4).
 8. For a more formal definition see Lehrer and Lehrer (1982).
 9. See Sapir (1944).
- 9.4 This section is based largely on Cruse (1976) and (1980). See also Lehrer (1985).
10. For the privative nature of Group II(b) antonyms see Kastovsky (1982). The terms *privative* and *equipollent* were first introduced by Trubetskoj (1969: 74-7) to designate types of phonological opposition, along with a third term, *gradual*, which we have not made use of. The three types of opposition may be briefly characterised as follows. A privative opposition is one between two terms, one of which possesses a distinctive feature that the other one lacks. The phonemes /p/ and /b/ in English may be said to manifest a privative opposition, the feature which is respectively present and absent being that of voicing. Lyons (1977: 279) gives *animate* : *inanimate* as an example of a privative opposition, on the grounds that the terms denote, respectively, presence and absence of life. However, it is the referents of the terms which have, or do not have, life; it is less easy to show that the privativeness applies to the senses of the lexical items. Coseriu (1975: 40) conceives of privativeness in terms of the presence or absence of specific semantic traits. So, for instance, for him, *albus* : *candidus* (L.) manifest a privative opposition, since they differ in respect of the presence or absence of the trait "luminosité"; the opposition between *dominer* and *maîtriser* (Fr.) is likewise privative, the trait which is respectively absent and present being "volonté". An equipollent opposition is one between two terms each of which carries a positive differentiating feature. The phonemes /t/ and /s/ in English can be seen as manifesting an equipollent opposition, the former possessing the feature 'stop', and the latter the feature 'fricative'. Lyons's example of an equipollent opposition is *male* : *female*; Coseriu gives the colour terms *yellow*, *red*, etc. Gradual oppositions are those where the contrast between the terms of the opposition lies in their possessing different values of a single property. Distinctions of vowel height are often held to be examples of this type. Coseriu's examples of gradual oppositions are *tiède* : *chaud*, *grand* : *énorme*, *seconde* : *minute* : *heure* : *jour*, etc.
 11. These presuppositions of *hatter*, *colder*, etc. would appear to be what Grice (1975: 44) calls **conventional implicatures**. (See also Levinson (1983: 127-32).)
 12. Some speakers accept *How short is it?* in restricted contexts: it is invariably committed.
 13. Most speakers appear to find *half as short* (etc.) more difficult to construe than *twice as short* (etc.); for a few, they would appear to be synonymous. (*Half as long* and *twice as long* are, of course, fully normal for all speakers.)
- 9.6
14. Cf. Bolinger (1972: 281-8).
- 9.7
15. Notice that *dislike* is not equivalent to a logical negation of *like*. (Confusingly, *I do not like him* has an interpretation equivalent to *I dislike him*: to obtain an unequivocal logical negation one must say *It's not true that I like him*.) Negative prefixes on gradable adjectives (such as *happy*) and stative verbs (such as *like*, *approve*) tend not to produce contradictory opposites (i.e. complementaries), but contrary opposites (i.e. antonyms). (This does not apply to adjectives like *clean* which denote the absence of an undesirable property.) See Zimmer (1964).

16. This was first pointed out to me by W. Haas, whose first language is German; I have since had ample confirmation from German-speaking students, who are often reluctant to accept that English is different.
17. From my questioning of many classes of students I would estimate that roughly 10 per cent use *worse* in this way. (It is possible that the fact that *worse* is not morphologically related to *bad* has something to do with this.)
18. Zikri (1979).
19. Marsh-Stefanowska (1981).

10 Opposites II: directional oppositions

10.1 Directional opposites

Underlying many lexical opposites there is a type of opposition which we shall call **directional**. It can be seen in its purest form in the everyday notion of contrary motion (i.e. motion in opposite directions). This is relatively easy to define, in the simplest case: two bodies A and B, moving in straight lines at speeds $S(1)$ and $S(2)$, respectively, are moving in opposite directions if the speed of A relative to B is equal to the sum of $S(1)$ and $S(2)$. We shall take this as the most primitive manifestation of the directional opposition. As we shall see, no pair of lexical opposites expresses pure linear contrary motion – not even such a pair as *ascend* : *descend*. However, many opposites clearly owe their oppositeness to the fact that they encapsulate the basic directional opposition, or represent a conceptual transformation or metaphorical extension of it. These form the subject matter of the present chapter.

10.2 Directions

A direction, in the simplest case, defines a potential path for a body moving in a straight line; a pair of lexical items denoting opposite directions indicate potential paths, which, if followed by two moving bodies, would result in their moving in opposite directions, as defined above. Although there are no lexical pairs denoting pure contrary motion, there are pairs which in their most basic senses denote pure opposite directions. They are all adverbs or prepositions: *north* : *south*, *up* : *down*, *forwards* : *backwards* are examples.

Any direction from a base point must be established either with respect to some second reference point, or by reference to the orientation or motion of some entity. For instance, from any point on the earth's surface, *north* may be defined as the direction in which a body must travel in order to reach the North Pole by the shortest route; or maybe it is the direction indicated by the Pole Star; *south* can be defined in relation to