

CHAPTER 8

Paradigmatic sense relations of inclusion and identity

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CHAPTER 8

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8.1 The nature of sense relations

This chapter is mainly about a particular type of **sense relation**, that is, a semantic relation between units of meaning. But before discussing this in detail, we must look at the idea of a sense relation from a broader perspective.

8.1.1 What makes a significant sense relation?

Taking the most general view, there is a unique sense relation of some sort holding between any two words chosen at random, say, *dog* and *banana*. We could even give this one a name, say, *dogbananonymy*. However, it would not be a very interesting or significant relation. We need, therefore, to consider what makes a sense relation significant.

8.1.1.1 Recurrence

Probably the first point to make is that one of the main ways that sense relations can be significant is in structuring the vocabulary of a language. Natural vocabularies are not random assemblages of points in semantic space: there are quite strong regularizing and structuring tendencies, and one type of these manifests itself through sense relations. Now it is obvious that a sense relation which holds between only two vocabulary items cannot play much of a role in structuring a vocabulary. So sense relations which recur frequently across the vocabulary are at a premium. For instance, the relation between *dog* and *animal* and between *banana* and *fruit* is much more ‘interesting’, from this point of view, than that between *dog* and *banana*.

8.1.1.2 Discrimination

Conversely, a relation which holds between *all* pairs in the language, or even the majority, is for that reason less interesting as a relation. In other words, to

be interesting, a sense relation must not only include a significant number of lexical pairs, but also exclude a significant number. An example of a non-discriminating relation is “can occur in the same English sentence as...”. The relation between *dog* and *animal* is discriminating in this sense, because it does not hold between, for instance, *dog* and *banana*, or between *dog* and *fruit*.

8.1.1.3 Lexicalizability

The significance of a relation is enhanced if it corresponds to an easily intuited concept, especially if the concept has been lexicalized or is readily expressible in verbal form. (This betrays the cognitive bias of the author, and no apology is offered.) A sense relation which ordinary speakers find hard to grasp is probably not worth recognizing (or, at least, it will have to earn its status in some other way). On this basis, too, the relation between *dog* and *animal* comes out as significant, since it is easily verbalizable as *A dog is a kind of animal*, likewise, the relation between *long* and *short* is captured by the ordinary everyday word *opposite*.

8.1.1.4 Abstract vs. concrete relations

Sense relations may be relatively abstract or relatively concrete. This distinction can best be explained by example. Suppose we are told that lexical items X and Y manifest the same relation as *dog*:*animal* and *apple*:*fruit*. What can we say about the semantic area to which X and Y belong, or about the nature of the meaning which differentiates X from Y? The answer is: nothing at all. All we know is that X is more specific than Y, and that, prototypically, all the features of Y are contained in the meaning of X. Suppose, now, that we are told that the lexical items A and B are related in the same way that *mare* and *stallion*, and *ewe* and *ram* are related. In this case, we can say much more about the meanings of A and B, and what differentiates them. We know, for example, that A and B refer to members of one species of animal, and that what differentiates A from B is that A refers to the female of the species and B to the male. The (relevant) relation between X and Y is, by our terminology, an abstract one, whereas that between A and B is (semantically) concrete. Lexical semanticists have mostly been concerned with abstract relations, and it is with these that we shall begin. This does not mean, however, that more concrete relations are without interest; examples will crop up in later discussions.

8.1.1.5 Multiple simultaneous relations

It is perfectly possible for a number of relations to hold simultaneously between a pair of lexical items, even without taking account of polysemy. This is because relations, like word meanings, come in varying degrees of specificity. For instance, taking the pair *true* and *false* as an illustration, the following relations hold between them:

- (i) *True* has a different meaning from *false*.
- (ii) *True* and *false* cannot both be true when applied to the same proposition.
- (iii) *True* and *false* are opposites.
- (iv) *True* and *false* cannot both be false when applied to the same proposition.

These relations are progressively more specific, and later relations presuppose relations occurring earlier in the list. Thus, relation (i) holds between *father*, *architect*, *red.green*, *long.short*, as well as *truefalse*. Relation (ii) presupposes relation (i) but is more specific, as it holds between *red.blue*, *long.short*, and *truefalse*, but not *fatherarchitect'*, relation (iii) presupposes relation (ii), and holds between *long'.short* and *true false*, but not *red'.blue'*, relation (iv) presupposes relation (iii) and holds between *truefalse* but not *long'.short*. All of these relations are abstract, and each of them has some significance in lexical semantics, as we shall see.

8.1.2 What sort of entities do sense relations relate?

Sense relations are uncontroversially relations OF sense, but what are they relations *between!* The obvious answer is that they are relations between units of sense. In a way, this, too, is uncontroversial. But as we have seen, there are units of sense with different levels of discreteness, ranging from homonyms, through polysemes, to facets, ways of seeing and subsenses. In fact, we used the possession of distinct sense relations as one of the diagnostic features for a unit of sense. What this means is that, since units of sense are contextually sensitive, so are sense relations. *Knife* has the same, or a closely similar, relation to *cutlery* as *dog* has to *animal* only in appropriate contexts. However, I would like to distinguish this notion of the contextual dependence of sense relations from Lyons's notion (at least as it appears in Lyons 1968). Lyons suggests that, for instance, *horse* and *mare* are synonyms in *This — has just given birth to a foal*, but not in *I have just bought a-*His reasoning, which I do not wish to dispute, is that substitution of *horse* for *mare* in the first sentential frame makes no difference to the truth conditions of the resulting sentence, whereas it does in the second. However, according to the position adopted here, there is no synonymy between *mare* and *horse* in either of these frames: the first frame does not select a particular discrete reading of *horse*, but rather adds the feature [FEMALE] to the general reading. This difference, between the selection of a unit of sense and the modulation of a unit of sense, is discussed more fully in Chapter 6.

8.1.3 Varieties of sense relation

Sense relations situate themselves on one of three major axes: paradigmatic, syntagmatic, or derivational. The significance of each of these three types of relation is different.

8.1.3.1 Paradigmatic relations

Paradigmatic relations reflect the semantic choices available at a particular structure point in a sentence. For instance:

I'll have a glass of — .
 beer
 wine
 water
 lemonade
 etc.

Typically, paradigmatic relations involve words belonging to the same syntactic category, although not infrequently there are minor differences:

We bought some — .
 knives
 forks
 spoons
 cutlery

Here, *cutlery* is a mass noun, whereas all the others in the list are count nouns. In principle, paradigmatic relations may hold between members of any of the major syntactic categories. The following are examples involving verbs and adjectives respectively:

John — across the field.
 ran
 walked
 crawled

I'd like a glass of — sherry.
 dry
 sweet

Notice that the pairs *knives!forks*, *knives!cutlery*, and *dry!sweet* exemplify different paradigmatic sense relations. These will be dealt with in greater detail below.

8.1.3.2 Syntagmatic relations

Syntagmatic relations hold between items which occur in the same sentence, particularly those which stand in an intimate syntactic relationship. For instance, it is by virtue of syntagmatic sense relations, in this case between adjective and head noun, that *Fd like a glass of dry sherry* is normal, whereas *Fd like a glass of striped sherry* is odd. For similar reasons,

(1) The girl ran across the field.

is normal, but

(2) The girl sat across the field,

and

(3) The smell ran across the field.

are odd. Notice that in (2) it is the combination of verb and prepositional phrase (i.e. *sat* and *across the field*) which causes the oddness, whereas in (3), it is the combination of subject and verb (i.e. *the smell* and *ran*).

Any well-formed sentence of a natural language can be thought of as a string of elements, each one chosen from a set of possibilities provided by the language (at least, each one which is not uniquely determined by the syntax, like the *to* of *I want to leave now*). In each case, the set of possibilities from which the choice was made is not completely free, but is constrained by the other elements in the sentence, in the sense that a choice from outside a certain range will result in semantic incoherence. Thus, if we do not choose something from the realm of liquids for the completion of *John drank a glass of —*, the result will not be coherent. Syntagmatic sense relations, therefore, are an expression of coherence constraints. Paradigmatic sense relations, on the other hand, operate within the sets of choices. Each such set represents the way the language articulates, or divides up, some conceptual area, and each displays a greater or lesser degree of systematic structuring. Paradigmatic relations are an expression of such structuring. For instance, in the conceptual area of drinkable things, English provides a cover term, *liquid*, and a range of more specific terms such as *milk*, *beer*, *lemonade*, *brandy*, and so on; the more specific terms all stand in a particular semantic relation with the cover term, and in a different relation with each other, and some of them, for example *wine*, function as cover terms for yet more specific ones, thus extending the structuring of the field. (Relations such as these are discussed in some detail below.) It can be seen, therefore, that paradigmatic and syntagmatic relations function in tandem, syntagmatic relations delimiting the space within which paradigmatic relations operate.

8.1.3.3 Derivational sense relations

Derivational sense relations are only accidentally found between words forming part of a set of paradigmatic choices, and only accidentally contribute to cohesion. They do, however, participate in one type of structuring of the vocabulary of a language, since they manifest themselves between items in what are called **word families** (i.e. words derived from a single root). Consider the following set of words:

- | | |
|-----------------------------|--|
| (i) <i>cook</i> (v.tr.) | <i>Mary is cooking supper tonight.</i> |
| (ii) <i>cook</i> (y.intr.) | <i>Can John cook?</i> |
| (iii) <i>cook</i> (y.intr.) | <i>The chicken is cooking.</i> |
| (iv) <i>cook</i> (n.) | <i>Lesley is a good cook.</i> |

(v)	<i>Lesley is a cook.</i>
(vi) <i>cooker</i>	<i>We've bought a new cooker.</i>
(vii) <i>cooking</i> (n.)	<i>John's in love with Mary's cooking.</i>
(viii) <i>cookery</i>	<i>John is taking cookery lessons.</i>

The semantic relations between these words are partly systematic, partly idiosyncratic. Take the relation between *cook* (iii) and *cooker*. There is an obvious sense in which the *-er* of *cooker* has an instrumental meaning: a cooker is something that is used for cooking. But if John cooks the chicken over a fire, the fire does not thereby become a cooker. There is therefore some specialization of sense in the derivation of *cooker* from *cook* (iii) (if indeed that is the true source). However, it does not appear that there is any specialization in the meaning of the morpheme COOK, nor, indeed, in the meaning of the instrumental affix. The specialization seems to operate at the level of the whole word *cooker*. It is not sufficient to say, either, that a cooker must be an apparatus designed to be used for cooking (this is not true of fires generally), since a barbecue is not a cooker, nor is a microwave oven. Consider, now, the relationship between *cook* (iii) and *cook* (i) and (ii) (which are closely related). *Cook* (iii) refers only to the fact that the chicken is undergoing heat treatment so as to render it more acceptable as food. Sentence (ii), however, is not simply asking whether John is able to cause foodstuffs to undergo heat treatment (anyone can drop a chicken into a fire): it enquires whether John has certain complex and valuable skills. In this case, *cook* (ii) seems to carry a greater semantic load than *cook* (iii).

8.2 Paradigmatic relations of identity and inclusion

For convenience of exposition, we shall divide paradigmatic sense relations into two broad classes, first those which express identity and inclusion between word meanings, and second, those expressing opposition and exclusion. We shall begin with the former.

8.2.1 Hyponymy

One of the most important structuring relations in the vocabulary of a language is **hyponymy**. This is the relation between *apple* and *fruit*, *car* and *vehicle*, *slap* and *hit*, and so on. We say that *apple* is a **hyponym** of *fruit*, and conversely, that *fruit* is a **superordinate** (occasionally **hyperonym**) of *apple*. This relation is often portrayed as one of inclusion. However, what includes what depends on whether we look at meanings extensionally or intensionally. From the extensional point of view, the class denoted by the superordinate term includes the class denoted by the hyponym as a subclass; thus, the class of fruit includes the class of apples as one of its subclasses. If we are dealing with verbs, we have to

say that, for instance, the class of acts of hitting includes as a subclass the class of acts of slapping. Looking at the meanings intensionally, we may say that the meaning (sense) of *apple* is richer than that of *fruit* and includes, or contains within it, the meaning of *fruit*. This can be seen more clearly in the case of words which have obvious definitions. For instance, from the definition of *stallion* as “male horse” we can see that the meaning of *stallion* includes within it the meaning of *horse* plus something else. Similarly, if we define *murder* as “kill with intent and illegally”, we can see that *murder* both has more meaning than *kill* and includes the meaning of *kill*.

Hyponymy is often defined in terms of entailment between sentences which differ only in respect of the lexical items being tested: *It's an apple* entails but is not entailed by *It's a fruit*, *Mary slapped John* entails but is not entailed by *Mary hit John*. There are two sorts of difficulty with defining hyponymy in this way. One is that a sentence containing a hyponym does not invariably entail the corresponding sentence with the superordinate. For instance, although *It's a tulip* entails *It's a flower*, *It's not a tulip* does not entail *It's not a flower*, nor does *The fact that it was a tulip surprised Mary* entail *The fact that it was a flower surprised Mary*. Ideally, it ought to be possible to specify the sorts of sentence within which entailment holds; however, this turns out to be no easy task (see Cruse 1986: ch. 4.4 for some discussion).

The second difficulty is that such definitions are too restrictive (and perhaps fail to match native speaker intuitions in other ways, too). For instance, many informants judge *dog:pet* and *knife:cutlery* to be at least as good examples of hyponymy as *stallion:horse*, even though there is no entailment in the first two cases (at least on my interpretation of *cutlery*, according to which only eating implements qualify). The problem is that entailment needs to be context independent, whereas judgements of hyponymy are context sensitive. While it is true that not all dogs are pets, for most people, in the default context of everyday urban life, dogs *are* pets and perhaps the default context evoked by the lexical item *knife* out of context is the mealtime context.

Although hyponymy is a paradigmatic relation, it has syntagmatic consequences. There are expressions which prototypically require items related hyponymously:

apples and other fruit
 ?fruit and other apples
 ?apples and other pears
 Apples are my favourite fruit.
 ?Apples are my favourite pears.
 ?Fruit are my favourite apples.

Rather than trying to define it in terms of necessary and sufficient criteria, perhaps the most illuminating way of approaching hyponymy (and a parallel treatment is possible for other sense relations) is to say that it is a relational concept with a prototype structure, that is, one which has good and less good

examples, but no clear definition or boundaries (see Chapter 7 for a more detailed exposition of prototype theory). The concept of hyponymy can be expressed in ordinary language as *X is a type/kind/sort of Y*. It is interesting that some pairs of words that satisfy the logical definition of hyponymy collocate more acceptably in this frame than others:

A horse is a type of animal.

?A kitten is a sort of cat. (A kitten is a young cat.)

?A stallion is a type of horse. (A stallion is a male horse.)

?A queen is a kind of woman. (A queen is a woman.)

In Cruse (1986) the relation exemplified by *horse:animal* but not *stallion:horse* was labelled **taxonymy**, because of its relevance to classificatory systems. Taxonyms typically resist (genuine) analysis in componential terms and do not have obvious definitions:

A stallion is a male horse.

A horse is a — animal.

Notice that *A horse is an equine animal* is a pseudo-definition, since any attempt at characterizing the meaning of *equine* will necessarily be along the lines of “horse-like” or “pertaining to horses”. (See further discussion of this issue in Chapter 13.) There would seem to be two alternatives here: either we regard taxonymy as the prototypical form of hyponymy, with non-taxonyms like *stallion:horse* being less central (the approach adopted in Cruse (1994/?)), or we recognize two separate relations, hyponymy and taxonymy, each with its own prototype structure, with good and less good examples, but no definition and no clear boundaries.

Understood as a purely logical notion, hyponymy is a transitive relation: if A is a hyponym of B, and B a hyponym of C, then A is necessarily a hyponym of C (consider A = *spaniel*, B = *dog*, C = *animal*). However, several cases where transitivity seems to break down have been pointed out:

A hang-glider is a type of glider.

A glider is a type of aeroplane.

◆A hang-glider is a type of aeroplane.

A car-seat is a type of seat.

A seat is a type of furniture.

* A car-seat is a type of furniture.

A possible resolution of this apparent anomaly is to say that informants are not making their judgements in terms of hyponymy, but in terms of taxonymy, which is not defined logically, and is not transitive. What the informants are agreeing to in the case of the first two sentences in each set above is something like:

A prototypical hang-glider is a type of glider.

A prototypical glider is a type of aeroplane.

* A prototypical hang-glider is a type of aeroplane.

Transitivity breaks down here because a hang-glider is not a prototypical glider.

8.2.2 Meronymy

Another relation of inclusion is meronymy, which is the lexical reflex of the part-whole relation. Examples of meronymy are: *hand:finger*, *teapot':spout*, *wheel:spoke*, *car:engine*, *tele sc ope:lens*, *tree:branch*, and so on. In the case of *finger:hand*, *finger* is said to be the **meronym** (the term **partonym** is also sometimes found) and *hand* the **holonym**. Meronymy shows interesting parallels with hyponymy. (They must not, of course, be confused: a dog is not a part of an animal, and a finger is not a kind of hand.) In both cases there is inclusion in different directions according to whether one takes an extensional or an intensional view. A hand physically includes the fingers (notice that we are not dealing with classes here, but individuals); but the meaning of *finger* somehow incorporates the sense of *hand*. (Langacker says that the concept "finger" is 'profiled' against the domain "hand".)

There is no simple logical definition of meronymy in terms of entailment between sentences, as there is with hyponymy. But the relation does none the less have logical properties, which are particularly manifest in connection with locative predicates. For instance, if X is a meronym of Y, then for an entity A, *A is in X* entails but is not entailed by *A is in Y*. For instance, a *cockpit* is part of an *aeroplane* (this is an oversimplification, but it will do for the moment), hence *John is in the cockpit* entails *John is in the aeroplane*. For similar reasons, *John has a boil on his elbow* unilaterally entails *John has a boil on his arm*. However, there are too many exceptions for it to be possible to frame a straightforward definition on this basis: for instance, *The wasp is on the steering-wheel* does not entail *The wasp is on the car*, but rather, *The wasp is in the car*.

Meronymy can also be characterized in terms of normality in diagnostic frames, such as *An X is a part of a Y*, *A Y has an X/Xes*, and so on:

A finger is a part of a hand.

A hand has fingers.

?A hand is part of a finger.

?A finger has palms/wheels.

It soon becomes apparent, however, that such definitions do not yield clear-cut membership decisions for candidate pairs. Meronymy, even more strikingly than hyponymy, displays a prototypic character, and it seems more profitable to enquire into the features which contribute to centrality in the concept. The principal ones would seem to be the following:

8.2.2.1 Necessity

Some parts are necessary to their wholes, whereas others are optional. For instance, although a beard is part of a face, beards are not necessary to faces. On the other hand, fingers are necessary to hands. (We are not talking here of *logical* necessity, of course. This is what in Cruse (1986) was called **canonical necessity**: that is, a **well-formed** hand must have fingers.) Necessity also operates in the reverse direction, that is, some parts are non-canonical if they are not parts of appropriate wholes (e.g. finger), whereas some parts are capable of constituting satisfactory wholes on their own, and are only optionally parts of something else. Consider the case of a concert hall as part of a leisure centre. Presumably, other things being equal, necessity points towards centrality.

8.2.2.2 Integrality

Some parts are more integral to their wholes than others. One way of diagnosing integrality is by judging how easy it is to describe the part as being attached to its whole. For instance, both *The handle is a part of the door* and *The handle is attached to the door* are normal, as are *The hand is a part of the arm* and *The hand is attached to the arm*. On the other hand, *The fingers are attached to the hand* and *The handle is attached to the spoon* are both odd, and the difference seems to lie in the degree of integration of part into whole. Here again there seems to be a positive correlation between integrality and the centrality of a pair as manifestations of meronymy.

8.2.2.3 Discreteness

Some parts are more clearly divided from their sister parts than others (within a properly assembled whole). Obviously if they can be detached without harm, the division is clear. Likewise, if the part moves independently of the whole, like an arm with respect to the body, the division is clear. But some parts, such as the tip of the tongue, or the lobe of the ear, are less clearly separated. Other things being equal, we may presume that the more discrete a part is, the more prototypical the relation is.

8.2.2.4 Motivation

Generally speaking, 'good' parts have an identifiable function of some sort with respect to their wholes. For example, the handle of a door is for grasping and opening and shutting the door; the wheels of a car enable it to move smoothly over the ground; the blade of a knife is what enables the knife to fulfil its characteristic function of cutting, and so on. Functional motivation is especially important for a part which is not physically distinct, or is so only vaguely, like the tip of the tongue.

8.2.2.5 Congruence

The features of congruence are range, phase, and type.

- (i) Range: in many (if not in most) cases, the range of generality of the meronym is not the same as that of the holonym. The most frequent non-congruent cases are first, when the meronym is more general than the holonym but completely includes it, in which case we may speak of a **supermeronym**, and second, when the two ranges overlap, in which case the term **semi-meronym** may be used. Examples of the former are: *handle:knife!umbrella*, *spout'.teapot!watering can*, *wheel'.car! train*, *leg'.chair! table*, *switch'.iron!lamp*, and *lens.glasses!microscope*, all of which may form part of different wholes, as illustrated. As an example of a semi-meronym, consider *handle\door*, there are doors without handles, and handles not attached to doors, so neither range includes the other.
- (ii) Phase: parts and wholes are phase congruent when, as in prototypical cases, they exist at the same time. But take the case of *grape~juice\wine* or *flour.bread*. It does not seem wholly wrong to say that grape-juice is part of wine, or that flour is part of bread, but it does not seem right, either. It is more correct, in these cases, to speak of **ingredients**, which go toward the making of something, but may not exist as such in the final product.
- (iii) Type: prototypical parts and wholes are of the same ontological type. I will not try to define this, but merely illustrate it. For instance, ideally, if a part is designated as a mass noun, then the whole should be likewise (*?A grain is a part of sand*, *?Wood is part of a table*). Think, too, of *vein:hand* and *nerve.leg* (as opposed to *palmr.hand* and *calf leg*, on the one hand, and *vein:vascular system* and *nerve'.nervous system*, on the other). The consistent type pairs are somehow 'better'. (Cruse (1986) refers in such cases to **segmental parts** (leg, arm, finger) and **systemic parts** (nerve, vein, bone, etc.).)

It is interesting to compare 'parts' and 'pieces', with respect to the above criteria.

- (a) Necessity: this criterion is difficult to apply, but there is no reason why, say, a vase should break in such a way that a particular piece was formed, so it seems that individual pieces are not necessary.
- (b) Integrality: in the unshattered whole vase, there are no pieces, so this criterion is not applicable.
- (c) Discreteness: pieces are discrete once they have been formed, but in the unbroken state of the relevant whole, they are not distinguishable, so it is probably fair to say that they are not discrete.
- (d) Motivation: pieces are in principle arbitrary, and have no distinct function with respect to their wholes.

- (e) Congruence:
- (i) range: pieces have a one-to-one relationship with their wholes and are therefore fully congruent with respect to range: a piece of one Ming vase that one has accidentally dropped cannot simultaneously be a piece of another;
 - (ii) phase: in a sense there is a phase discrepancy between pieces and wholes: during the period when the canonical whole exists there are no pieces, and the canonical whole ceases to be, the moment the pieces are formed;
 - (iii) type: pieces are always of the same ontological type as their wholes.

It should perhaps be added that pieces do not fall into stable categories that can be designated by common nouns; also pieces are exclusively concrete, whereas parts may not be: one can have, say, a **part** of a concert, but hardly a piece of a concert.

As with hyponymy, we would expect a logical conception of meronymy to be transitive: if A is wholly located within the confines of B, and B is wholly located within the confines of C, then A is necessarily wholly located within the confines of C. (Notice that the “piece of” relation is transitive in this way) However, speakers’ judgements of meronymy do not always point to transitivity:

Fingers are parts of the hand.
 The hand is a part of the arm.
 ?Fingers are parts of the arm.

Cruse (1986) suggests that this failure of transitivity is connected with the distinction between **attachments** (i.e. parts of which it can normally be said that they are attached to their immediate wholes) and **integral parts** (i.e. parts that cannot be described in the above way). It seems that transitivity does not hold across the boundary of an attachment. However, it must be said that this correlation, even if valid, does not constitute an explanation.

8.2.3 Synonymy

If we interpret synonymy simply as sameness of meaning, then it would appear to be a rather uninteresting relation; if, however, we say that synonyms are words whose semantic similarities are more salient than their differences, then a potential area of interest opens up. What sorts of differences do not destroy an intuition of sameness? Why are such synonyms so frequent? (Absolute sameness of meaning would seem to be functionally unmotivated.) Do they proliferate in particular areas of the vocabulary? Some of these questions are insufficiently researched, and will not be answered here.

Let us first distinguish three degrees of synonymy: absolute synonymy, propositional synonymy, and near-synonymy.

8.2.3.1 Absolute synonymy

Absolute synonymy refers to complete identity of meaning, and so for the notion to have any content we must specify what is to count as meaning. Here a contextual approach will be adopted, according to which meaning is anything which affects the contextual normality of lexical items in grammatically well-formed sentential contexts. Against this background, absolute synonyms can be defined as items which are equinormal in all contexts: that is to say, for two lexical items X and Y, if they are to be recognized as absolute synonyms, in any context in which X is fully normal, Y is, too; in any context in which X is slightly odd, Y is also slightly odd, and in any context in which X is totally anomalous, the same is true of Y. This is a very severe requirement, and few pairs, if any, qualify. The following will illustrate the difficulty of finding uncontroversial pairs of absolute synonyms ('+' indicates "relatively more normal" and indicates "relatively less normal"):

(i) *brave:courageous*

Little Billy was so brave at the dentist's this morning. (+)

Little Billy was so courageous at the dentist's this morning. (-)

(ii) *calm:placid*

She was quite calm just a few minutes ago. (+)

She was quite placid just a few minutes ago. (-)

(iii) *big:large*

He's a big baby, isn't he? (+)

He's a large baby, isn't he? (-)

(iv) *almost:nearly*

She looks almost Chinese. (+)

She looks nearly Chinese. (-)

(v) *die:kick the bucket*

Apparently he died in considerable pain. (+)

Apparently he kicked the bucket in considerable pain. (-)

Among the items sometimes suggested as candidates for absolute synonymy, and for which differentiating contexts are hard to find, are *sofa:settee*, and *pullover:sweater*. However, even for these items, in a typical class of students, a sizeable minority will find contexts which for them are discriminatory. One thing is clear, and that is that under this description absolute synonyms are vanishingly rare, and do not form a significant feature of natural vocabularies. The usefulness of the notion lies uniquely in its status as a reference point on a putative scale of synonymy.

Notice that by the definition given above, only one differentiating context is

needed to disqualify a pair of words as absolute synonyms. However, only one such context would be a suspicious circumstance: unless there was at least one class of such contexts, one might legitimately doubt whether the effect was a genuine semantic one. Notice, too, that there is a problem, not taken up here, of ensuring that the same unit of meaning is involved in all the contexts used in the argument.

8.2.3.Z Propositional synonymy

Propositional synonymy can be defined, as its name suggests, in terms of entailment. If two lexical items are propositional synonyms, they can be substituted in any expression with truth-conditional properties without effect on those properties. Put in another way, two sentences which differ only in that one has one member of a pair of propositional synonyms where the other has the other member of the pair are mutually entailing: *John bought a violin* entails and is entailed by *John bought a fiddle*, *I heard him tuning his fiddle* entails and is entailed by *I heard him tuning his violin*; *She is going to play a violin concerto* entails and is entailed by *She is going to play a fiddle concerto*. Notice that *fiddle* is less normal in the last example, while leaving truth conditions intact, which shows that *fiddle* and *violin* are not absolute synonyms.

Differences in the meanings of propositional synonyms, by definition, necessarily involve one or more aspects of non-propositional meaning, the most important being (i) differences in expressive meaning, (ii) differences of stylistic level (on the colloquial-formal dimension), and (iii) differences of presupposed field of discourse. Most usually, more than one of these comes into play at any one time. Take the case of *violin fiddle*. Here the difference depends on certain characteristics of the speaker. If the speaker is an ‘outsider’ to violinistic culture, *fiddle* is more colloquial, and possibly also jocular compared with *violin*. However, if the speaker is a professional violinist talking to another professional violinist, *fiddle* is the neutral term, with no jocular-ity, disrespect, or colloquiality, whereas *violin* is used mainly to outsiders. In the case of *shin fibula*, the difference is almost purely one of field of discourse: *shin* is the everyday term, with no special expressive or stylistic loading, whereas *fibula* is used by medical specialists acting in that role (again neutrally). As a final set of examples consider:

This was the first time they had had intercourse.

This was the first time they had made love.

This was the first time they had fucked.

The first version would be more likely than the others in a court of law, the second is probably the most neutral, while the third would be more likely in a typical novel found in an airport bookstall.

Propositional synonyms seem to be commonest in areas of special emotive significance, especially taboo areas, where a finely graded set of terms is often available occupying different points on the euphemism-dysphemism scale.

They also seem to be prevalent in connection with concepts which are applicable in distinct contexts, with differing significance and implications in those contexts.

8.2.3«3 Near-synonymy

The borderline between propositional synonymy and near-synonymy is at least in principle clear, even if decisions may be difficult in particular cases. The borderline between near-synonymy and non-synonymy, however, is much less straightforward and it is not obvious what principle underlies the distinction. Two points should be made at the outset. The first is that language users do have intuitions as to which pairs of words are synonyms and which are not. No one is puzzled by the contents of a dictionary of synonyms, or by what lexicographers in standard dictionaries offer by way of synonyms, even though the great majority of these qualify neither as absolute nor as propositional synonyms. The second point is that it is not adequate to say simply that there is a scale of semantic distance, and that synonyms are words whose meanings are relatively close. (This would explain the somewhat uncertain lower boundary of near-synonymy: people are typically vague as to what constitutes, say, an old woman, or a tall man.) The reason this is not adequate is that there is no simple correlation between semantic closeness and degree of synonymy. The items in the following are semantically closer as we go down the list, but they do not become more synonymous:

entity	process
living thing	object
animal	plant
animal	bird
dog	cat
spaniel	poodle
etc.	

In principle this list could continue indefinitely without ever producing synonyms. The point is that these words function primarily to contrast with other words at the same hierarchical level (see Chapter 10). In other words, a major function of *dog* is to indicate “not cat/mouse/camel/(etc.)”, that is, to signal a contrast. Synonyms, on the other hand, do not function primarily to contrast with one another (this is what was meant by saying earlier that in the case of synonyms, their common features were more salient than their differences). In certain contexts, of course, they may contrast, and this is especially true of near-synonyms: *He was killed, but lean assure you he was NOTmurdered, madam.*

Characterizing the sorts of difference which do not destroy synonymy is no easy matter. As a rough and ready, but not very explicit, generalization it may be said that permissible differences between near-synonyms must be either minor, or backgrounded, or both. Among ‘minor’ differences may be counted the following:

- (i) adjacent position on scale of 'degree': *fog'.mist, laughichuckle, hot'.scorching, big: huge, disaster catastrophe,pull'.heave, weep: sob, etc.;*
- (ii) certain adverbial specializations of verbs: *amble:stroll, chuckle: giggle, drink:quaff*
- (iii) aspectual distinctions: *calm:placid* (state vs. disposition);
- (iv) difference of prototype centre: *brave* (prototypically physical):*courageous* (prototypically involves intellectual and moral factors).

An example of a backgrounded major distinction would be *pretty* ("female" presupposed) vs. *handsome* ("male" presupposed), the propositional meaning of both of which may be glossed as "good-looking". When the gender distinction is foregrounded, as in *man', woman*, the resulting terms are not synonymous. Saying why we get near-synonyms in a particular instance, rather than fully contrastive terms, is also difficult. A possibility is that contrastive terms appear when the conceptual differences have concrete behavioural consequences, as in technical and 'expert' fields. Much research remains to be done in the field of synonymy

Discussion questions and exercises

- i. Which of the following hyponym-superordinate pairs represent taxonymy?

sow:pig poodle:dog sheepdog:dog mother:woman cottaged:house hailstone:precipitation ice:water teenager:person boot:footwear icing:sugar

2. Classify the following pairs of words using the following categories:

- (a) Central/prototypical examples of meronymy.
- (b) Examples of meronymy, but non-central.
- (c) Borderline cases.
- (d) Not examples of meronymy.

Attempt to explain the degrees of centrality that you find in terms of a set of prototypical features:

<i>belt:buckle</i>	<i>shoedace</i>
<i>jacket:dapel</i>	<i>building:façade</i>
<i>hand:vein</i>	<i>bottle:cap</i>
<i>beard:hair</i>	<i>bread:crumb</i>
<i>hot-water bottle:-.water</i>	<i>omelette:egg</i>
<i>colander.hole</i>	<i>fork:prong</i>
<i> fingertip</i>	<i>bed:sheet</i>
<i>cassette-player.cassette</i>	<i>candle:wick</i>
<i>potato:peelings</i>	<i>door.hinge</i>

3. Consider the following set of words:

brave courageous gallant valiant intrepid heroic plucky bold daring

- (a) What types of synonymy are represented?
- (b) Look the words up in a typical learner's dictionary, such as the *Oxford Advanced Learner's Dictionary*, or the *Collins Cobuild Dictionary*, and consider how adequately they are differentiated.

Suggestions for further reading

The pioneering work on sense relations is Lyons (1963) and (1968).

The topics of this chapter are discussed in greater detail in Cruse (1986), especially chapters 4-8. Cruse (1994) proposes a prototype-theoretical treatment of sense relations; an initial attempt at a formal semantic approach can be found in Cann (1993), and a more developed treatment in Cann (forthcoming). For a psychologist's view of sense relations, see Chaffin (1992).

For a cross-linguistic (anthropological) treatment of meronymy, see Anderson (1978) and Brown (1976) and (forthcoming¹⁵).