

## CHAPTER 4

# Compositionality

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## CHAPTER 4

# Compositionality

### 4.1 The principle of compositionality

In this chapter, the focus is on the way meanings combine together to form more complex meanings. We begin by considering a basic principle governing the interpretation of complex linguistic expressions, namely, the **principle of compositionality**. The strongest version of this principle runs as follows:

- (I) The meaning of a grammatically complex form is a compositional function of the meanings of its grammatical constituents.

This incorporates three separate claims:

- (i) The meaning of a complex expression is completely *determined* by the meanings of its constituents.
- (ii) The meaning of a complex expression is completely *predictable* by general rules from the meanings of its constituents.
- (iii) Every grammatical constituent has a meaning which contributes to the meaning of the whole.

(Claim (ii) incorporates claim (i), but claim (i) could be true without claim (ii) being true. Claim (iii) is presupposed by the other two, as they are formulated above.)

What is the rationale behind this principle? It derives mainly from two deeper presuppositions. The first is that a language has an infinite number of grammatical sentences; the second is that language has unlimited expressive power, that is, anything which can be conceived of can be expressed in language. There is no way that the meanings of an infinite number of sentences can be stored in a kind of sentence dictionary—there is not enough room in a finite brain for that. The infinite inventory of sentences arises from rule-governed combinations of elements from a finite list according to generative rules at least some of which are recursive; the only way such sentences could, in their entirety, be interpretable, is if their meanings are composed in rule-governed ways out of the meanings of their parts.

To begin with we shall assume that there is nothing problematic about the principle of compositionality and consider only straightforward cases; later we shall deconstruct the notion to some extent (although, in one form or another, it is inescapable).

## 4.2 Modes of combination

The principle of compositionality, although basic, does not take us very far in understanding how meanings are combined. There is more than one way of combining two meanings to make a third (to take the simplest case). We may make a first division between **additive modes** of combination and **interactive modes**. A combination will be said to be additive if the meanings of the constituents are simply added together, and both survive without radical change in the combination. Typical of additive combinations are simple syntactic co-ordinations:

- (1) [A man and a woman] [entered the room and sat down].
- (2) Jane is [tall and fair].

In interactive types of combination, the meaning of at least one constituent is radically modified. We can distinguish two types of interactive modification; first, the **endocentric** type, where the resultant meaning is of the same basic type as one of the constituents, and the **exocentric** type, where the resultant meaning is of a different basic type to either of the constituents. Let us look first at endocentric interactive combinations.

### 4.2.1 Endocentric combinations

Even under the general heading of endocentric combinations there are different modes of interaction between meanings. The following are illustrative (but not necessarily exhaustive).

#### 4.2.1.1 Boolean combinations

The Boolean combination is the most elementary type, and is illustrated by *red hats*. Extensionally, the class of red hats is constituted by the intersection of the class of hats and the class of red things; in other words, red hats are things that are simultaneously hats and red. Notice first, that what *a red hat* denotes is of the same basic ontological type as what *a hat* denotes (i.e. a THING), hence we are dealing with an endocentric combination; second, the effect of *red* is to restrict the applicability of *hat*, hence we are dealing with an interactive combination.

#### 4.2.1.2 Relative descriptors

The relative descriptor exemplifies a more complex interaction between meanings.

It is illustrated by *a large mouse*. This cannot be glossed “something which is large and is a mouse”, because all mice, even large ones, are small animals. *Large* must be interpreted relative to the norm of size for the class of mice, and means something more like “significantly larger than the average mouse”. Here we have a two-way interaction, because *mouse* determines how *large* is to be interpreted, and *large* limits the application of *mouse*. It is none the less the case that what *a large mouse* denotes is of the same basic ontological type as what *mouse* denotes, so we are still in the realm of endocentric combinations.

#### 4.2.1.3 Negational descriptors

In negational descriptors, the effect of the modifier is to negate the head, while at the same time giving indications as to where to look for the intended referent. The following are examples of this type:

- (3)      a former President  
           an ex-lover  
           a fake Ming vase  
           an imitation fur coat  
           reproduction antiques

Notice that an imitation fur coat is not something that is simultaneously a fur coat and an imitation: it is an imitation, but it is not strictly a fur coat. On the other hand, there is no radical change in basic ontological type as a result of combining the meanings.

#### 4.2.1.4 Indirect types

Indirect combinations require a more complex compositional process, but still can be held to be rule governed. Consider the (often-discussed) case of *a beautiful dancer*. This phrase is ambiguous. One of the readings is of the standard Boolean type, denoting someone who is simultaneously beautiful and a dancer. The other reading, however, requires some semantic reconstruction of the phrase so that *beautiful* becomes an adverbial modifier of the verbal root *dance* and the phrase means “someone who dances beautifully”.

### 4.2.2 Exocentric combinations

An **exocentric** combination is one where the resultant meaning is of a radically different ontological type from that of any of the constituent meanings; in other words, there has been some sort of transformation. An example of this would be the combination between a preposition such as *in*, which denotes a relation, and a noun phrase such as *the box*, which denotes a thing, producing a prepositional phrase *in the box*, which denotes a place. Another example would be the production of a proposition from the combination of, say, *John*,

a person, and *laughed*, an action. These types, especially the latter one, are in some ways deeply mysterious, but we shall not dwell on them any further here.

### 4.3 Limits to compositionality I: *idioms, etc.*

There are some aspects of the combination of meanings which seem to call into question the principle of compositionality, and while the abandonment of the principle would seem too drastic, it may be that it should be reconsidered and perhaps reformulated. We are not talking here about the existence of non-compositional expressions, which can be accommodated by a reformulation of the principle: what is being referred to here concerns the validity of the principle in cases where it is usually considered to be operative. We shall look at three types of case which might undermine one's faith in the principle. But first we must look at non-compositional expressions,

#### 4.3.1 Non-compositional expressions

The principle of compositionality as set out above is not universally valid, although it must in some sense be a default assumption. That is, someone hearing a combination for the first time (i.e., one that has not been learned as a phrasal unit) will attempt to process it compositionally, and the speaker will expect this. The reason for the non-applicability of the principle is the existence of expressions not all of whose grammatical constituents contribute an identifiable component of its meaning. Think of phrases like *paint the town red* or *a white elephant*: knowing what *white* means and what *elephant* means is no help whatsoever in decoding the meaning of *white elephant*. It is possible to reformulate the principle to cover such cases:

(II) The meaning of a complex expression is a compositional function of the meanings of its semantic constituents, that is, those constituents which exhaustively partition the complex, and whose meanings, when appropriately compounded, yield the (full) global meaning.

Notice that this version is tautologous unless the notion "semantic constituent" can be defined independently. If it can, then we will have a way of accurately characterizing expressions (at least some of) whose grammatical constituents are not semantic constituents (thereby abandoning assumption

(iii) given earlier).

##### 4.3.1.1 Semantic constituents

**Semantic constituents** can in general be recognized by the **recurrent contrast test**. Prototypically, semantic constituents have the following characteristics:

(i) They can be substituted by something else (belonging to the same grammatical class), giving a different meaning.

This expresses the old principle “Meaning implies choice”: that is, an expression cannot have meaning unless it was chosen from a set of possible alternatives. The corollary of this is that if an element is obligatory, it cannot be said to have meaning. So, for instance, *cat* in *The cat sat on the mat* satisfies this criterion because it can be substituted by *dog* giving the semantically different *The dog sat on the mat*; conversely, *to* in *I want to eat* does not satisfy this criterion because it is both grammatically obligatory and unique. As we shall see, this criterion is too strict and is probably best regarded as prototypically valid.

- (ii) At least some of the contrasts of meaning produced by substitution in one context should be reproducible using the same items in a (formally) different context.

This sounds clumsy and obscure. It attempts to state precisely the simple idea that a meaningful linguistic item should be capable of carrying a constant meaning from context to context. Let us now look at some examples of this test in operation:

- (4) (mat/box) The cat sat on a —. =  
(mat/box) The— is dirty.

Here we have two items, *mat* and *box*, which produce the same semantic contrast in two different contexts. These two items therefore pass the recurrent contrast test for semantic constituency, and can be considered to be semantic constituents of the sentences which result when they are placed in the appropriate slots. Although we have shown that, for example, *mat* is a semantic constituent of *The cat sat on the mat*, we have not shown that it is a **minimal semantic constituent**, that is, one that cannot be divided into yet smaller semantic constituents. For that we must test the parts of *mat*. Let us now apply the recurrent contrast test to the *-at* of *mat*.

- (5) (-at/-oss) The cat sat on them—.=(?)(-at/-oss) He has a new b—.

Notice first of all that the first part of the test is satisfied: substituting *-at* by *-oss* gives us *The cat sat on the moss*, whose meaning is different from that of *The cat sat on the mat*. The second part of the test is not satisfied, however, because no context can be found where putting *-oss* in place of *-at* produces the same contrast of meaning that it does in *The cat sat on the mat*. (Only one of the contexts where the substitution of forms is possible is illustrated in (5).) What is being claimed is that the contrast between *The cat sat on the mat* and *The cat sat on the moss* is not the same as that between *He has a new bat* and *He has a new boss*, and that an equivalent contrast can *never* be produced by switching between *-at* and *-oss*. Some people are uncertain what is meant by ‘the same contrast’. It may be helpful to think in terms of a semantic proportionality like stallion:mare::ram:ewe (“stallion is to mare as ram is to ewe”), which can be verbalized as ‘the contrast between *mare* and *stallion* is the same as that between *ewe* and *ram*’.

It is useful to run through a few of the results of this test. We find, for instance, that although the *dis-* of *disapprove* comes out as a semantic constituent (because the presence vs. absence of *dis-* has the same semantic effect in the context of *approve* as it has in the context of *like*), the *dis-* of *disappoint* is not a semantic constituent because the semantic effect of removing it does not recur with any other stem (intuitively, adding *dis-* does not create an opposite, as it does with both *approve* and *mount*). On the same basis, the *re-* of *re-count* (“count again”) is a semantic constituent, but not the *re-* of *re-count* (“narrate”), nor the *re-* of *report*, *receive*, *revolve*, etc. The reader should find that, on reflection, these results accord with intuition. Perhaps less in accord with intuition, at least initially, is the fact that neither the *straw-* nor the *-berry* of *strawberry*, and neither the *black-* nor the *-bird* of *blackbird*, pass the test for semantic constituency. Let us take the *blackbird* example (the same arguments apply to lots of similar cases). Surely a blackbird is not only a bird, but also black? Yes, of course. However the test says not only that the contrast between, *A blackbird was singing* and *A bird was singing* is not matched by that between, say, *John was wearing a black suit* and *John was wearing a suit*, but that it cannot be matched at all. Think of it this way: adding together the meaning of *black* and the meaning of *bird* does not give us the meaning of *blackbird*, it gives us the meaning of *black bird*. To understand what *blackbird* means, we have to have learned to attach a meaning to the whole complex *blackbird* which is not derivable from *black* and *bird*. Some might wish to argue that *black-* in *blackbird* carries whatever meaning differentiates blackbirds from other kinds of bird. However, this is not intuitively appealing: can one give even an approximate paraphrase of this meaning? Furthermore, there is no evidence that elements like *black-* behave in any way like semantic constituents (for more detailed arguments, see Cruse (1986: ch. 2.4)).

With this notion of semantic constituent we can make non-tautologous sense of the principle of compositionality as expressed in (II). We can also characterize a type of grammatically complex expression not all of whose grammatical constituents are semantic constituents. These we shall call idioms. By this definition, *blackbird* is an idiom, but the term is more usually applied to phrasal units, and we shall now consider some of these.

#### 4.3.1.2 Idioms

Phrasal idioms are expressions like:

- to pull (someone)’s leg
- to paint the town
- red to kick the bucket
- to be round the twist
- to be up the creek
- to have a bee in (one)’s bonnet etc.

It is important to realize that when one of these expressions is used in a sentence, it is rare that the whole sentence is idiomatic in the sense defined above. Take the case of *Jane pulled Martha's leg about her boyfriend*. By the recurrent contrast test, the following items come out as (minimal) semantic constituents: *Jane*, *-ed*, *Martha*, *about*, *her*, *boyfriend* (possibly *boy* and *friend*), *pull-* —'s *leg*. Strictly, it is only the last item which is an idiom; notice that it is semantically equivalent to a single lexical item, such as *tease* or *congratulate*. All the items except those which form part of the idiom can be changed without destroying the idiomatic meaning; however, changing *pull*, or *leg*, causes the idiomatic meaning to be lost. Although it is not true of all idioms, it seems fruitless to ask what *pull* and *leg* mean in *to pull someone's leg*', they do not mean anything, just as the *m-* of *mat* does not mean anything—all the meaning of the phrasal unit attaches to the phrase, and none to its constituents.

Phrasal idioms have some peculiar grammatical properties, which can be attributed either to the fact that their constituents have no meaning, or to the fact that such meaning is not independently active. The following are the main points:

(i) Elements are not separately modifiable without loss of idiomatic meaning:

- (6) \*She pulled her brother's legs.
- (7) \*She pulled her brother's left leg.
- (8) \*She pulled her brother's leg with a sharp tug.

Only the idiom as a whole is modifiable:

- (9) She pulled her brother's leg mercilessly.

(ii) Elements do not co-ordinate with genuine semantic constituents:

- (10) \*She pulled and twisted her brother's leg.
- (11) \*She pulled her brother's leg and arm.

(Notice, however, the normality of *She pulled her brother's and her father's leg*, where only semantic constituents are co-ordinated.) The asterisks in (10) and (11) apply only to the idiomatic reading.

(iii) Elements cannot take contrastive stress, or be the focus of topicalizing transformations, and the like:

- (12) \*It was her brother's LeG that she pulled.

(cf. *It was her brother's leg that she pulled, which is normal.*)

- (13) \*What she did to her brother's leg was pull it.

(iv) Elements cannot be referred back to anaphorically:

- (14) \*Mary pulled her brother's leg; John pulled it, too.



(cf. the normality of *Mary pulled her brother's leg; John did, too*, where the whole idiom is referred to anaphorically.)

(v) An idiom does not survive the substitution of any of its constituent elements by a synonym or near-synonym:

(15) \*The poor old chap kicked the pail.

(16) \*She tugged his leg about it.

(17) \*She pulled his lower limb about it.

In all these respects the superficially anomalous behaviour of idioms is in fact a natural consequence of the fact that their constituents are, in a real sense, meaningless. For instance, the typical function of an adjective is to restrict or modify in some way the meaning of the noun it modifies. But if the noun has no meaning, it is scarcely surprising that appending an adjective to it should be anomalous. The same applies to processes which normally function to highlight or focus on the meaning of a particular element, as in (iii) above. Finally, since *pull in to pull someone's leg* does not have any meaning, no sense can be attached to the notion of replacing it with a synonymous item (any more than there is sense in the idea of replacing the *m-* in *mat* with a synonymous item).

(vi) Some aspects of grammar (e.g. voice) may or may not be part of an idiom:

(18) His leg was being pulled continually by the other boys.

(The idiomatic meaning is not destroyed here, so 'active voice' is not part of the idiom proper.)

(19) \*The bucket was kicked by him.

(Here the idiomatic meaning is destroyed when voice is changed, and therefore can be considered part of the idiom proper.)

#### 4.3.1.3 Frozen metaphors

We have been looking at idioms which are non-compositional in the sense that their apparent constituents are not real semantic constituents, and the meanings which such constituents have in expressions where they are semantic constituents may not have any relevance at all to the meaning of the phrasal (or other) unit, or, if this is not the case, then do not allow the meaning of the complex expression to be inferred by any normal compositional process. There is, however, a class of idiom-like expressions, which come out as non-compositional by the recurrent contrast test, and may show some of the features of syntactic frozenness typical of idioms, such as resistance to modification, transformation, and so forth, but which differ from idioms in an important respect, namely, that the effect of synonym substitution is not a complete collapse of the non-literal reading. Compare the substitutions in (20) with those in (21):

(20) The ball's in your court now.  
           on your side of the net

A cat can look at a queen.  
       mouse                  archbishop

I can read her like a open book,  
           decipher

He has one foot in the grave.  
           both feet          tomb  
           one leg           coffin

(21) I gave him a piece of my mind.  
           part conceptual system

He drives me up the wall,  
       forces                  room partition

He has a bee in his bonnet about it.  
           hornet helmet

In the examples in (20) one can hardly say that the substitution has no effect, but the non-literal meaning is still recoverable, or at least approximately so, and the change in meaning is commensurate with the closeness of the synonymy relation. This seems to indicate that the connection between the meanings which results from normal compositional processes in these expressions and their non-compositional readings is not an arbitrary one. What seems to happen on synonym substitution is that the original metaphorical process is revived, yielding a reading not far from the conventionalized reading. In the examples in (21), there is always an element of the global meaning of the complex expression (sometimes all of it) which is arbitrary with respect to the 'free' meanings of the constituents.

It has been implied in the preceding discussion that the literal meanings of the constituents of idioms are not always completely inactive or irrelevant to the idiomatic reading. The degree of relatedness between literal and non-literal meanings of idioms varies continuously from none at all to such a high degree that the expression falls into a shadowy border area between idiomaticity and full compositionality. If we look for a change at noun compounds, *a red herring* represents one end of the scale, namely zero relatedness between literal and non-literal readings; *blackbird* is an intermediate case; *bread and butter* is in the borderline zone: what is not recoverable from a straightforward composition in this case is the fact that the bread is sliced and the butter spread on it (a loaf of bread and a pack of butter would qualify as *butter and bread*, but arguably not as *bread and butter*).

## 4.3.1.4 Collocations

We have so far been thinking of compositionality exclusively from the point of view of the hearer: given an expression consisting of more than one meaningful element, how do we work out what the global meaning of the expression is? There is, however, another side to compositionality, namely the point of view of the speaker: given that a speaker wishes to formulate a particular message, and no single element is available, how do they construct a complex expression to convey it? Corresponding to the speaker's viewpoint, there are idioms of encoding. Some of these are also idioms of decoding, but there are others which are not idioms of decoding. To these we shall give the name *collocations*. Like the more familiar kind of idioms, they have to be individually learned.

As examples of collocations take the intensifiers *great*, *heavy*, *high*, *utter*, *extreme*, and *severe*. The following table shows that they have definite preferences and dispreferences:

	great	heavy	high	utter	extreme	deep	severe
frost	-	+	-	-	?	-	+
rain	-	+	-	-	-	-	-
wind	?	-	+	-	-	-	-
surprise	+	-	-	+	+	-	-
distress	+	-	-	-	+	+	+
temperature	?	-	+	-	+	-	-
speed	+	-	+	-	?	-	-

## 4.3.1.5 Clichés

Some expressions which are apparently fully compositional should arguably be included in the class of phrasal units; these are the so-called **clichés**. Let us take as an example the politician's *I've made my position absolutely clear* (when he's been slithering and swerving for five minutes in the course of a probing interview). In so far as its propositional meaning is concerned, this expression would have to be categorized as fully compositional. However, it does have global properties, as a whole phrase, although of a more subtle kind. It seems highly likely that such phrases are stored as complete units in the brains of both speaker and hearer; as such, they are easy to retrieve while speaking and easy to decode for the hearer. They also tend to slip past without making much of an impact, their truth or falsehood not seriously examined. They function as default encodings of certain meanings. The effect of using a non-default encoding of the same meaning is to call attention to the utterance, it becomes 'marked'. Being less frequently encountered, it takes more processing effort on

the part of both encoder and decoder and, by the principle of relevance, the hearer looks for some modification of the message that would have been conveyed by the default form. In the case of an alternative formulation of the same propositional content like *I've given an unambiguous exposition of my views*, the message might be harder to dismiss, but also the speaker might be taken to be stepping outside his conventional role as politician, which might on certain occasions not be desirable.

The exact relation between minimal idioms like *bread and butter* and what we have called clichés is not clear. It may be that the latter should be considered to lie on the same scale as the former, but are even more minimally idiomatic, since no propositional difference is involved.

#### 4.4 Limits to compositionality II: *Non-compositional aspects of compositional expressions*

##### 4.4.1 Noun compounds

Many noun compounds can be considered to be idioms (see below) by our criteria. For instance, *tea-towel* is clearly of the same general type as *blackbird*. But there are other examples which show recurrent semantic properties, which enable the constituents to satisfy the criteria for semantic constituents, but which display semantic properties that are not predictable in any way except perhaps on the basis of pragmatic world knowledge. For instance, consider the different relations between the first and second elements in the following:

*pocket knife* (“knife that can be carried in the pocket”)

(The same relationship appears in *pocket calculator* and *hand gun*.)

*kitchen knife* (“knife for use in the kitchen”)

(The same relationship appears in *kitchen paper* and *garden knife*.)

*meat knife* (“knife for cutting meat”)

(The same relationship appears in *meat tenderizer* and *bread knife*.)

The relations fall into clear types (to a large extent), but there is no obvious way of predicting that for instance, a *tablecloth* is used to cover a table, but a *dishcloth* is used to wipe dishes.

##### 4.4.2 Active zones

**Active zone** is Langacker’s term for the precise locus of interaction between two meanings in combination, typically an adjective and its head noun, or a verb and its complement. Some examples will make the notion clear. Take the case of a colour adjective and its head noun. Very often the colour does not apply globally to the object denoted by the head noun (although it may do), but only to a part:

<i>a red hat</i>	whole hat is red
<i>a red book</i>	outside covers are red
<i>a red apple</i>	a significant portion of outer skin is red
<i>a yellow peach</i>	inner flesh is yellow
<i>a pink grapefruit</i>	inner flesh is pink
<i>a red traffic sign</i>	symbols only are red
<i>a red pencil (1)</i>	red on outside
<i>a red pencil (2)</i>	writes red
<i>red eyes</i>	'white' of eyes is red
<i>blue eyes</i>	iris is blue

Is this idiom? Intuitively it is not, and the constituents of such expressions can easily be shown to pass the recurrent contrast test (it may of course be the case that the test is faulty, or insufficiently sensitive). These cases also seem to be different from the noun-compound cases: here, specification of the active zone in different ways does not radically change the mode of interaction: in all the above cases we know that the colour adjective indicates that the referent of the head noun is distinctive by virtue of its possession of an area with certain perceptual properties. But active zones need in some sense to be learned, and are not predictable by any sort of formal rule.

#### 4.4.3 Complex categories

The point at issue in relation to complex categories is what happens when simple categories are merged to form a complex category. This is known in prototype theoretical circles as the **guppy effect**. Essentially, it is claimed that certain properties of a complex category cannot be predicted from the corresponding properties of the constituent categories. The example which gives its name to the 'effect' brings us back once again to noun compounds. When informants are asked to say what they consider to be the best or most representative example(s) of the category PET, they tend to go for cats and dogs; when asked to name the best examples of the category FISH, they choose trout, or salmon, or something of the sort. However, when asked for the best example of the category PET FISH, the answer is *guppy*, which is not regarded as central in either of the constituent categories. The effect is not confined to noun compounds: the same can be observed with an adjective-noun phrase such as *orange apple*. Items chosen by subjects as the best examples of the category ORANGE APPLE are different from those chosen as the best examples of the category APPLE, and their colour does not correspond to that chosen when asked which from a range of colours is the best example of the colour ORANGE. We shall return to the guppy effect and its significance in Chapter 7; for the moment we shall merely note its existence and the fact that it indicates a limitation on compositionality.

The guppy effect has given rise to much comment. Some have argued that the lack of compositionality reveals a weakness in prototype theory; simul-

taneously, prototype theorists have laboured to devise an algorithm which will enable the prototype of a complex category to be calculated from the individual prototypes of the component categories (with limited success).

My own feeling is that the characteristics of a complex category *are* calculable from those of its component categories; the problem is that current descriptions of categories are so impoverished. Suppose we take a thoroughgoing holistic view of categories, in which the entirety of encyclopaedic information about a category is a legitimate part of its characterization. So, for instance, the description of ORANGE would provide a complete range of hues falling under ORANGE, together with an index of centrality (or whatever); likewise, the description of AppLe would include, among other things, an indication of all the hues that apples can manifest. Given this information, the prototypical ORANGE APPLES are simply those APPLES whose hues approximate most closely to a prototypical ORANGE. There is obviously no requirement here for the resultant apples either to be prototypical apples, or for them to have a prototypical orange colour. Where is the mystery? The same argument applies to PET FISH: the prototypical pet fish are those fish which manifest the greatest proportion of the characteristics of prototypical pets: to work this out we need a detailed enough knowledge of the range of characteristics displayed by fish and by pets. (Notice that the grammar has some influence here: prototype pet fish are those fish nearest to prototype pets; this is not necessarily the same category as those pets which are nearest to prototype fish.)

#### 4.5 Some reflections on compositionality

The debate about compositionality is by no means over. Let us conclude by distinguishing three positions *vis-à-vis* the principle of compositionality.

- (i) The building-block model (alternatively, ‘check-list theories’). This is intimately connected with strong componentialism: the meaning of an expression can be finitely described, and is totally accounted for by standard compositional processes acting on the equally determinate meanings of its component parts.
- (ii) The scaffolding model (perhaps better, ‘the semantic skeleton’ model). According to this view, what compositionality provides is the bare bones of a semantic structure for a complex expression, which is fleshed out by less predictable pragmatic means, using encyclopaedic knowledge, context, and so on. This can be viewed as a weaker version of the principle of compositionality.
- (iii) The holistic model. This, too, is a strong version of compositionality. It requires that the meaning of every item is an indefinitely large entity which consists of its relations with all other items in the language. In a

sense, all the effects of combination with other items are already present in the meaning: all that is needed is to extract the relevant portions. This radical view has its own problems, but it should be considered alongside the others.

## Discussion questions and exercises

i. Identify the type of combination exhibited in the following phrases:

a forged passport	a dead cat	long eyelashes
a clever footballer	a high price	artificial cream
a former Miss World	a black hat	a brilliant pianist
a poor singer	a small planet	a striped dress

2. Each of the following sentences contains at least one conventionalized expression of some sort. Attempt a classification of these under the following headings (using the definitions given in the chapter):

(a) true idioms; (b) frozen metaphors; (c) collocations; (d) clichés (fixed, but more-or-less transparent expressions).

- (i) You have to hand it to him — he's got guts.
- (ii) The ball's in your court now.
- (iii) You're completely up the creek on this one.
- (iv) Why don't you just wait and see?
- (v) She's got a bee in her bonnet about it.
- (vi) The affair was blown up out of all proportion.
- (vii) He took it in good part.
- (viii) Use your loaf!
- (ix) The situation went from bad to worse.
- (x) He swallowed it lock, stock and barrel.
- (xi) They beat the living daylights out of him.
- (xii) Well, you live and learn, don't you?

3. Make a study of English words carrying the prefix *dis-*. In how many of these is the prefix an independent semantic constituent? (See Cruse 1986: ch. 2.) Where *dis-* is a semantic constituent, how many distinct sense relations does *dis-X* represent? Discuss any difficulties.