11 Semantics

I once referred to a character in one of my cartoons as a "dork" (a popular insult when I was growing up), but my editor called me up and said that "dork" couldn't be used because it meant "penis." I couldn't believe it. I ran to my New Dictionary of American Slang and, sure enough, he was right. All those years of saying or being called a "dork" and I had never really known what it meant. What a nerd. **Gary Larson (1989)**

Semantics is the study of the meaning of words, phrases and sentences. In semantic analysis, there is always an attempt to focus on what the words conventionally mean, rather than on what a speaker might want the words to mean on a particular occasion. This technical approach to meaning emphasizes the objective and the general. It avoids the subjective and the local. Linguistic **semantics** deals with the conventional meaning conveyed by the use of words and sentences of a language.

Conceptual versus associative meaning

When linguists investigate the meaning of words in a language, they are normally interested in characterizing the **conceptual** meaning and less concerned with the **associative** or stylistic meaning of words. Conceptual meaning covers those basic, essential components of meaning which are conveyed by the literal use of a word. Some of the basic components of a word like *needle* in English might include 'thin, sharp, steel, instrument'. These components would be part of the conceptual meaning of *needle*. However, you may have 'associations', or 'connotations', attached to a word like *needle* which lead you to think of 'painful' whenever you encounter the word. This 'association' is not treated as part of the conceptual meaning of *needle*. In a similar way, you may associate the expression *low-calorie*, when

used to describe a product, with 'good for you', but we would not want to include this association within the basic conceptual meaning of the expression. Poets and advertisers are, of course, very interested in using terms in such a way that their associative meanings are evoked, and some linguists do investigate this aspect of language use. However, in this chapter we shall be more interested in characterizing what constitutes the conceptual meaning of terms.

Semantic features

So, how would a semantic approach help us to understand something about the nature of language? One way it might be helpful would be as a means of accounting for the 'oddness' we experience when we read English sentences such as the following:

The hamburger ate the man
My cat studied linguistics
A table was listening to some music

Notice that the oddness of these sentences does not derive from their syntactic structure. According to some basic syntactic rules for forming English sentences (such as those presented in Chapter 10), we have well-structured sentences:

The hamburger	ate	the man
NP	V	NP

This sentence is syntactically good, but semantically odd. Since the sentence *The man ate the hamburger* is perfectly acceptable, what is the source of the oddness we experience? One answer may relate to the components of the conceptual meaning of the noun *hamburger* which differ significantly from those of the noun *man* , especially when those nouns are used as subjects of the verb *ate*. The kinds of nouns which can be subjects of the verb *ate* must denote entities which are capable of 'eating'. The noun *hamburger* does not have this property (and *man* does), hence the oddness of the first sentence above.

We can, in fact, make this observation more generally applicable by trying to determine the crucial component of meaning which a noun must have in order to be used as the subject of the verb *ate*. Such a component may be as general as 'animate being'. We can then take this component and use it to describe part of the meaning of words as either plus (+) or minus (–) the feature. So, the feature becomes +*animate* (= denotes an animate being) or –*animate* (= does not denote an animate being).

This procedure is a way of analyzing meaning in terms of **semantic features**. Features such as +*animate*, –*animate*; +*human*, –*human*; + *male*. –*male*, for example, can be treated as the basic features involved in differentiating the meanings of each word in the language from every other word. If you were asked to give the crucial distinguishing features of the meanings of this set of English words (*table, cow, girl, woman, boy, man*), you could do so by means of the following diagram:

	table	cow	girl	woman	boy	man
animate	–	+	+	+ .	+	+
human	–	–	+	+	+	+
male	–	–	–	–	+	+
adult	–	+	–	+	–	+

From a feature analysis like this, you can say that at least part of the basic meaning of the word *boy* in English involves the components (+*human*. +*male*, –*adult*). You can also characterize that feature which is crucially required in a noun in order for it to appear as the subject of a verb, supplementing the syntactic analysis with semantic features:

The _____ is reading a book.
    N (+*human*)

This approach then gives us the ability to predict what nouns would make the above sentence semantically odd. Examples would be *table*, or *tree*, or *dog*, because they all have the feature (–*human*).

The approach which has just been outlined is not without problems. For many words in a language it may not be so easy to come up with neat components of meaning. If you try to think of which components or features you would use to distinguish the nouns *advice, threat* and *warning*, for example, you will have some idea of the scope of the problem. Part of the problem seems to be that the approach involves a view of words in a language as some sort of 'containers', carrying meaning-components.

Semantic roles

Instead of thinking of the words as 'containers' of meaning, we can look at the 'roles' they fulfill within the situation described by a sentence. If the situation is a simple event, such as *The boy kicked the ball*, then the verb describes an action (*kick*). The noun phrases describe the roles of entities. such as people and things, involved in the action. We can identify a small number of **semantic roles** for these noun phrases.

Agent, theme, instrument

In the sentence above, one role is taken by *the boy* as 'the entity that performs the action', techically known as the **agent**. Another role is taken by *the ball*, as 'the entity that is involved in or affected by the action', technically known as the **theme**. The theme can also be an entity (*the ball*) that is simply being described, as in *The ball was red*. Identifying entities denoted by noun phrases as the agent or the theme is a way of recognizing the semantic roles of those noun phrases in a sentence.

Although agents are typically human, they can also be non-human forces (*the wind blew the ball away*), machines (*the car ran over the ball*), or creatures (*the dog caught the ball*). If an agent uses another entity in performing an action, that other entity fills the role of **instrument**. In *writing with a pen* or *eating with a spoon*, the noun phrases *a pen* and *a spoon* have the semantic role of instrument.

The theme can also be human. Indeed, the same physical entity can appear in two different semantic roles, as in *The boy kicked himself*. Here *the boy* is agent and *himself* is theme.

Experiencer, location, source, goal

When a noun phrase designates an entity as the person who has a feeling, a perception or a state, it fills the role of **experiencer**. If you see, know or enjoy something, you do not really have to perform any action (hence you are not an agent). You are in the role of experiencer. If someone asks, *Did you hear that noise?*, the experiencer is *you* and the theme is *that noise*.

A number of other semantic roles designate where an entity is in the description of the event. Where an entity is (*on the table, in the room*) fills the role of **location**. Where an entity moves from is the **source** and where it moves to is the **goal**. When we talk about transferring money *from savings to checking*, the source is *savings* and the goal is *checking*. All these semantic roles are illustrated in the following scenario.

Mary   saw   a mosquito   on the wall.
EXPERIENCER   THEME   LOCATION

She   borrowed   a magazine   from George
AGENT   THEME   SOURCE

and she   hit the bug   with the magazine.
AGENT   THEME   INSTRUMENT

She   handed   the magazine back   to George.
AGENT   THEME   GOAL

"Gee thanks," said George.
                    AGENT

Lexical relations

Not only can words be treated as 'containers' or as fulfilling 'roles', they can also have 'relationships'. In everyday talk, we frequently give the meanings of words in terms of their relationships. If you were asked to give the meaning of the word *conceal*, for example, you might simply reply "it's the same as *hide*", or give the meaning of *shallow* as "the opposite of *deep*", or the meaning of *daffodil* as "it's a kind of *flower*". In doing so, you are characterizing the meaning of a word not in terms of its component features, but in terms of its relationship to other words. This procedure has also been used in the semantic description of languages and is treated as the analysis of **lexical relations**. The types of lexical relations which are usually analyzed are defined and exemplified in the following sections.

Synonymy

Synonyms are two or more forms with very closely related meanings, which are often, but not always, intersubstitutable in sentences. Examples of synonyms are the pairs *broad – wide, hide – conceal, almost – nearly, cab – taxi, liberty – freedom, answer – reply*.

It should be noted that the idea of 'sameness of meaning' used in discussing synonymy is not necessarily 'total sameness'. There are many occasions when one word is appropriate in a sentence, but its synonym would be odd. For example, whereas the word *answer* fits in this sentence: *Cathy had only one answer correct on the test*, its near-synonym, *reply*, would sound odd. Synonymous forms may also differ in terms of formality. The sentence *My father purchased a large automobile* seems much more serious than the following casual version, with four synonymous replacements: *My dad bought a big car.*

Antonymy

Two forms with opposite meanings are called **antonyms**, and commonly used examples are the pairs *quick – slow, big – small, long – short, rich – poor, happy – sad, hot – cold, old – young, male – female, true – false, alive – dead.*

Antonyms are usually divided into two main types, those which are 'gradable', and those which are 'non-gradable'. **Gradable antonyms**, such as the pair *big – small*, can be used in comparative constructions like *bigger than – smaller than*. Also, the negative of one member of the gradable pair does not necessarily imply the other. For example, if you say *that dog is not old*, you do not have to mean *that dog is young*. With **non-gradable antonyms**, also

called 'complementary pairs', comparative constructions are not normally used (the expressions *deader* or *more dead* sound strange), and the negative of one member does imply the other. For example, *that person is not dead* does indeed mean *that person is alive*. So, the pairs *male – female* and *true – false* must also be non-gradable antonyms, whereas the others in the list above are gradable.

Although it works for the small number of non-gradable antonyms in a language, it is important to avoid describing most antonym pairs as one word meaning the negative of another. Consider the opposites *tie – untie*. The word *untie* doesn't mean 'not tie'. It actually means 'do the reverse of tie'. Such pairs are called **reversives**. Other common examples are *enter – exit, pack – unpack, lengthen – shorten, raise – lower*, and *dress – undress*.

Hyponymy

When the meaning of one form is included in the meaning of another, the relationship is described as **hyponymy**, and some typical example pairs are *daffodil – flower, dog – animal, poodle – dog, carrot – vegetable, banyan – tree*. The concept of 'inclusion' involved here is the idea that if any object is a *daffodil*, then it is necessarily a *flower*, so the meaning of *flower* is 'included' in the meaning of *daffodil*. Or, *daffodil* is a hyponym of *flower*.

When we consider hyponymous relations, we are essentially looking at the meaning of words in some type of hierarchical relationship. You could, in fact, represent the relationships between a set of words such as *animal, ant, asp, banyan, carrot, cockroach, creature, daffodil, dog, flower, horse, insect, living things, pine, plant, snake, tree* and *vegetable* as a hierarchical diagram in the following way:
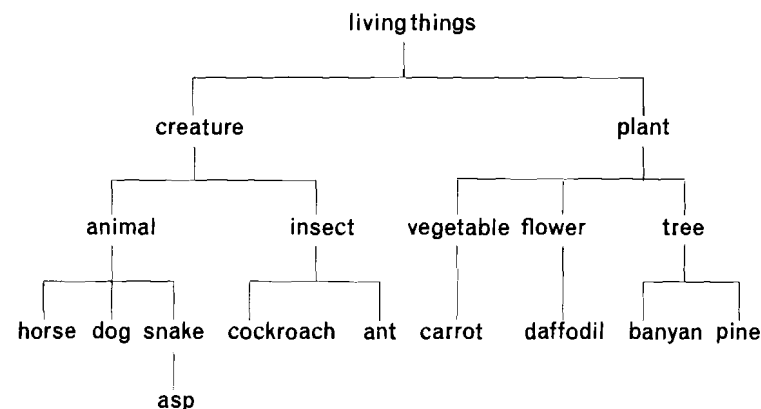
From this diagram, we can say that "*horse* is a hyponym of *animal*" or that '*ant* is a hyponym of *insect*'. We can also say that two or more terms which share the same superordinate (higher-up) term are **co-hyponyms**. So, *horse* and *dog* are co-hyponyms, and the superordinate term is *animal*.

The relation of hyponymy captures the idea of 'is a kind of', as when you give the meaning of a word by saying "an *asp* is a kind of *snake*". It is often the case that the only thing some people know about the meaning of a word in their language is that it is a hyponym of another term. That is, you may know nothing more about the meaning of *asp* other than that it is a kind of *snake*.

It is worth emphasizing that it is not only words for 'things' that are hyponyms. Terms for actions, such as *cut*, *punch*, *shoot* and *stab*, can all be found as co-hyponyms of the superordinate term *injure*.

Prototypes

While the words *canary*, *dove*, *duck*, *flamingo*, *parrot*, *pelican*, *robin*, *swallow* and *thrush* are all equally co-hyponyms of the superordinate *bird*, they are not all considered to be equally good exemplars of the category 'bird'. For many American English speakers, the best exemplar, or the **prototype**, of 'bird' is the robin. The concept of a prototype helps explain the meaning of certain words, like *bird*, not in terms of component features (e.g. 'has feathers', 'has wings'), but in terms of resemblance to the clearest exemplar. Thus, even native speakers of English might wonder if *ostrich* and *penguin* should be hyponyms of *bird* (technically, they are), but have no trouble deciding about *sparrow* or *pigeon*. The last two are much closer to the prototype.

Given the category label *furniture*, we are quicker to recognize *chair* as an exemplar than *bench* or *stool*. Given *clothing*, people recognize *shirts* quicker than *shoes*, and given *vegetable*, they accept *carrot* before *potato* or *tomato*. It is obvious that there is some general pattern to the categorization process involved in prototypes and that it determines our interpretation of word meaning. However, this is one area where individual experience results in variation in interpretation, as when people disagree about whether *tomato* is a fruit or a vegetable.

Homophony, homonymy and polysemy

There are three other, less well-known terms which are often used to describe relationships among words in a language. The first of these is **homophony**. When two or more different (written) forms have the same

pronunciation, they are described as **homophones**. Some examples are *bare* - *bear*, *meat* - *meet*, *flour* - *flower*, *pail* - *pale*, *sew* - *so*.

The term **homonymy** is used when one form (written and spoken) has two or more unrelated meanings. Examples of **homonyms** are the pairs *bank* (of a river) - *bank* (financial institution), *bat* (flying creature) - *bat* (used in sports), *race* (contest of speed) - *race* (ethnic group), *pupil* (at school) - *pupil* (in the eye) and *mole* (on skin) - *mole* (small animal). The temptation is to think that the two types of *bank* must be related in meaning. They are not. Homonyms are words which have quite separate meanings, but which have accidentally come to have exactly the same form.

Relatedness of meaning accompanying identical form is technically known as **polysemy**, which can be defined as one form (written or spoken) having multiple meanings which are all related by extension. Examples are the word *head*, used to refer to the object on top of your body, on top of a glass of beer, on top of a company or department; or *foot* (of person, of bed, of mountain), or *run* (person does, water does, colors do).

The distinction between homonymy and polysemy is not always clear cut. However, one indication of the distinction can be found in the typical dictionary entry for words. If a word has multiple meanings (polysemic), then there will be a single entry, with a numbered list of the different meanings of the word. If two words are treated as homonyms, they will typically have two separate entries. You could check in your dictionary and probably find that the different meanings of words like *head*, *get*, *run*, *face* and *foot* are treated as examples of polysemy, whereas *mail*, *bank*, *sole* and *mole* are treated as examples of homonymy.

Of course, one form can be distinguished via homonymy, then shown to have various uses via polysemy. The words *date* (= oblong, fleshy fruit) and *date* (= point in time) are homonyms. But the 'point in time' kind of *date* is polysemous in terms of a particular day and month (= on a letter), an arranged meeting time (= an appointment), a social meeting (= with someone of the opposite sex) and even a person (= that someone of the opposite sex). The question *How about a date?* could have many interpretations.

These last three lexical relations are, of course, the basis of a lot of wordplay, particularly used for humorous effect. In the nursery rhyme, *Mary had a little lamb*, we think of a small animal, but in the comic version of *Mary had a little lamb, some rice and vegetables*, we tend to think, instead, of a small amount of meat. The polysemy of *lamb* allows the two interpretations. The Pillsbury Flour Company once took advantage of homophony to promote a brand of flour with the slogan *Everybody kneads it*. If you are asked the

following riddle: *What's black and white and red all over?*, you may initially be confused by the answer: *a newspaper*. The trick depends on the homophony of *red* and *read*. And if you have come across this riddle: *Why are trees often mistaken for dogs?*, then you will have encountered the use of homonymy in the answer: *Because of their bark*.

Metonymy

The relatedness of meaning found in polysemy is essentially based on similarity. The *head* of a company is similar to the *head* of a person on top of (and controlling) the body. There is another type of relationship between words, based simply on a close connection in everyday experience. That close connection can be based on a container–contents relation (*bottle – coke*; *can – juice*), a whole–part relation (*car – wheels*; *house – roof*) or a representative–symbol relationship (*king – crown*; *the President – the White House*). These are examples of **metonymy**.

It is our familiarity with metonymy that makes *He drank the whole bottle* easy to understand, although it sounds absurd literally (i.e. he drank the liquid, not the glass object). We also accept *The White House announced ...* or *Downing Street protested ...* without being puzzled that buildings appear to be talking. You use metonymy when you talk about *filling up the car*, *having a roof over your head*, *answering the door*, *giving someone a hand*, or *needing some wheels*. If you see a mail delivery company called *Spokes*, you know, via metonymy, how they are making those deliveries (i.e. by bicycle).

Many examples of metonymy are highly conventionalized and easy to interpret. However, many others depend on an ability to infer what the speaker has in mind. The metonymy in *Get your butt over here* is easier to understand if you are used to male talk in the United States, *the strings are too quiet* if you're familiar with orchestral music, and *I prefer cable*, if you have a choice in how you receive television programs (in the USA). Making sense of such expressions often depends on context, background knowledge and inference. These are all topics in the following chapter.

Collocation

One other distinct aspect of our knowledge of words has nothing to do with any of the factors considered so far. We know which words tend to occur with other words. If you ask a thousand people what they think of when you say *hammer*, more than half will say *nail*. If you say *table*, they'll mostly say *chair* and for *butter – bread*, for *needle – thread*, and for *salt – pepper*. One

way we seem to organize our knowledge of words is simply in terms of **collocation**, or frequently occurring together.

Some collocations are joined pairs of words such as *salt and pepper* or *husband and wife*. However, *salt* will also make some people say *water* because of the common collocation *salt water*. And for many people in the USA, the word *red* elicits *white and blue* (the colors of the flag). It may be that part of knowing a language is knowing not only what words mean, but what their typical collocations are. Thus, part of your knowledge of *fresh* is as it occurs in the phrase *fresh air*, or *knife* as in *knife and fork* or *enough* as in *enough already*. Okay, that's enough already!

Study questions

1 What is the basic lexical relation between the following pairs of words?

(a) *shallow deep* (b) *mature ripe* (c) *suite sweet*
(d) *table furniture* (e) *single married* (f) *move run*

2 How would you describe the oddness of the following sentences, using semantic features?

(a) *The television drank my water* (b) *His dog writes poetry*

3 Identify the semantic roles of all the noun phrases in this sentence: *With his new golf club, Fred whacked the ball from the woods to the grassy area near the river and he felt good.*

4 Which of the following opposites are gradable, non-gradable, or reversive?

(a) *absent present* (b) *high low* (c) *fill empty*
(d) *fail pass* (e) *fair unfair* (f) *appear disappear*

5 Which of the following examples are best described as polysemy or as metonymy?

(a) *Computer **chips** are an important new technology.*
(b) *The bookstore has some new **titles** in linguistics.*
(c) *Yes, I love those. I ate a whole **box** on Sunday!*
(d) *I had to park on the **shoulder** of the road.*
(e) *The **pen** is mightier than the **sword**.*

Discussion topics/projects

A One way to identify the semantic structure of sentences is to start with the verb as the central element and define the semantic roles required by

that verb. For example, a verb like *kill* requires an agent and a theme, as in *The cat killed the mouse*. We can represent this observation as:

KILL [AGENT _____ THEME].

As another example, we can represent the verb *give* as in *Mary gave the book to George*:

GIVE [AGENT _____ THEME, GOAL]

(i)   How would you define the set of semantic roles for the following verbs, as in the pattern just shown?
break build die eat fear happen kiss like occupy offer put receive resemble send steal taste teach understand want write

(ii) Does it help, in this exercise, to make a distinction between obligatory roles (i.e. you must have these or the sentence will not be grammatical) and optional roles (these are often present, but their absence doesn't make the sentences ungrammatical)?

B   The words in the following list are all related in terms of the superordinate term *tableware*.
(i)   First, create a hierarchical diagram to illustrate whatever hyponymous relations exist among these words:
glass cup plate cutlery napkin tumbler fork goblet teaspoon flatware bowl crockery tablecloth wineglass ladle dish saucer spoon salt-shaker knife mug candlestick bottle pan tray peppermill bread-basket linen table-mat

(ii) Second, can you work out what the prototype item of tableware is? One research procedure would be to create a list of these terms down one side of a page, with a scale beside each term. The scale would go from 5 (= excellent example of 'tableware') to 1 (= not really an example of 'tableware'). Make copies of your list (plus scale) and ask people to indicate their choices on the scale. The highest score would presumably be the prototype. What do you think of this procedure?

C   A famous example of a sentence that is syntactically 'good', but semantically 'odd', was suggested by Noam Chomsky (1957): *Colorless green ideas sleep furiously*. How many mismatches of meaning are present in this one sentence? Can it be interpreted at all? Having done that, what

do you make of this advertisement from an American store: *Colorful white sale this week*?

D   In the use of gradable antonyms there is generally one member of the pair that is used more often than the other in certain constructions. It is called the 'unmarked' member. For example, we usually ask *How old is he?* if we want to know someone's age, and not *How young is he?* This is taken as evidence that *old* is the unmarked member of the *old–young* pair. Additional evidence is the common practice of saying that someone is *five years old* and not *five years young* in talking about age.
(i)   Can you determine the 'unmarked' member in each of the following pairs?
small–big   short–long   wild–tame   cheap–expensive near–far   many–few   early–late   dangerous–safe good–bad   fresh–stale   easy–difficult   strong–weak thick–thin   wide–narrow   full–empty

(ii) Can you think of any special situations where the 'marked' member is more typically used? What kind of meaning is conveyed by such uses?

E   There is one aspect of contemporary English that seems very redundant (to some people). One example would be: *You will receive a free gift*. We might complain that if it's a *gift*, it is necessarily *free*, so it is redundant to use both words. Do you agree with this point of view? Do the following expressions also contain redundancies? Might there be a reason for such combinations?

We should provide advance warning
I'll make it my first priority
That was an unexpected surprise
Could you repeat that again?
They had already heard that before
We got it for a cheap price
There was a general consensus
It was in close proximity
And that was his final conclusion

Further reading
There is a good basic coursebook on semantics by Hurford & Heasley (1983). More general treatments are presented in Allan (1986), Palmer (1981) and Leech (1974). The latter has an extended discussion of different types of 'asso-

ciative' meaning. Semantic feature analysis can be found in Bever &
Rosenbaum (1971) and Kempson (1977). An accessible review of the psychol-
ogy of word meaning is presented in Miller (1991). A more complex discussion
is in Jackendoff (1983). On lexical relations, see Cruse (1986) and Lipka (1990).
An extended treatment of antonymy can be found in Lehrer (1985). The most
comprehensive work on the subject, and hence rather technical, is Lyons
(1977). Also technical, but providing introductions to the philosophical issues
in semantic analysis are Chierchia & McConnel-Ginet (1990), Garfield &
Kiteley (1991) and Martin (1987). An overview of semantic roles is presented
in Andrews (1985) and more comprehensive surveys can be found in Cook
(1989) and Palmer (1994). Discussions of prototypes are in Aitchison (1994),
Lakoff (1987), Pulman (1983), Rosch (1978) and Tsohadzidis (1990). On collo-
cation, see Sinclair (1991). The frequencies mentioned in the collocations sec-
tion are from Postman & Keppel (1970).

12 Pragmatics

A: I have a fourteen year old son
B: Well that's all right
A: I also have a dog
B: Oh I'm sorry   **Harvey Sacks (1992)**

In the previous chapter, we concentrated on meaning in language as a prod-
uct of the meaning of words. There are, however, other aspects of meaning
which are not derived solely from the meanings of the words used in phrases
and sentences. In making sense of the quote above, it may help to know that
A is trying to rent an apartment from B. When we read or hear pieces of lan-
guage, we normally try to understand not only what the words mean, but
what the writer or speaker of those words intended to convey. The study of
'intended speaker meaning' is called **pragmatics**.

Invisible meaning
In many ways, pragmatics is the study of 'invisible' meaning, or how we rec-
ognize what is meant even when it isn't actually said (or written). In order
for that to happen, speakers (and writers) must be able to depend on a lot of
shared assumptions and expectations. The investigation of those assump-
tions and expectations provides us with some insights into how more gets
communicated than is said.

Driving by a parking lot, you may see a large sign like the one in the pic-
ture. Now, you know what each of these words means, and you know what
the sign as a whole means. However, you don't normally think that the sign
is advertising a place where you can park your 'heated attendant'. (You take
an attendant, you heat him up, and this is the place where you can park him.)