

## UNIT 11 SENSE RELATIONS (2)

### OPPOSITENESS AND DISSIMILARITY OF SENSE AND AMBIGUITY

**Entry requirements** SENSE (Unit 3), ANALYTIC, SYNTHETIC, and CONTRADICTION (Unit 9), and SENSE RELATIONS (1), (Unit 10). If you feel you understand these notions, take the entry test below. Otherwise review the relevant units.

- Entry test**
- (1) Analyticity is which of the following? Circle your choice.
    - (a) a sense relation between sentences
    - (b) a sense property of sentences
    - (c) a sense relation between predicates
    - (d) a sense property of predicates
  - (2) The sentence *John is older than himself* is:
    - (a) analytic
    - (b) synthetic
    - (c) a contradiction
  - (3) The relationship between the sentences *I detest semantics* and *I am not fond of semantics* is that:
    - (a) They are paraphrases of each other.
    - (b) The first entails the second.
    - (c) The second entails the first.
    - (d) The first is a hyponym of the second.
  - (4) Which of the following statements is correct?
    - (a) All analytic sentences are paraphrases of each other.
    - (b) All contradictions are paraphrases of each other.
    - (c) Given two sentences, identical except that one has a predicate X where the other has a predicate Y, where X is a hyponym of Y, then the sentence containing X is a paraphrase of the sentence containing Y.
    - (d) If a sentence X entails a sentence Y and sentence Y also entails sentence X, then X and Y are paraphrases of each other.
  - (5) Which of the following is correct?
    - (a) Synonymy is to entailment as hyponymy is to paraphrase.
    - (b) Synonymy is to paraphrase as hyponymy is to entailment.
    - (c) Synonymy is to hyponymy as entailment is to paraphrase.

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**Feedback** (1) (b) (2) (c) (3) (b) (4) (d) (5) (b)

If you scored at least 4 out of 5 correct, continue to the introduction.  
Otherwise, review Units 9 and 10 before continuing.

**Introduction** In this unit we complete our introductory review of sense relations. Our topics include what has been termed ‘oppositeness of meaning’, an area that traditionally was viewed in rather simple terms. Modern semanticists, as you will see, have explored and mapped many areas within this area of meaning that go well beyond the simple traditional ‘oppositeness’ notion.

A traditional view of antonymy is that it is simply ‘oppositeness of meaning’. This view is not adequate, as words may be opposite in meaning in different ways, and some words have no real opposites.

**Practice** Quickly, what would you say are the opposites of the following words?

- (1) *hot* \_\_\_\_\_
- (2) *thick* \_\_\_\_\_
- (3) *buy* \_\_\_\_\_
- (4) *lend* \_\_\_\_\_
- (5) *male* \_\_\_\_\_
- (6) *dead* \_\_\_\_\_
- (7) *lunch* \_\_\_\_\_
- (8) *liquid* \_\_\_\_\_

**Feedback** (1) *cold* (2) *thin* (3) *sell* (4) *borrow* (5) *female* (6) *alive* (7) no real opposite (*breakfast*, *dinner*?) (8) no real opposite – part of a three-termed system, with *solid* and *gas*

**Comment** *Hot* is not the opposite of *cold* in the same way as *borrow* is the opposite of *lend*. *Thick* is not the opposite of *thin* in the same way as *dead* is the opposite of *alive*.

We will not talk of simple ‘oppositeness of meaning’, but will define four basic types of antonymy (or semantic incompatibility). The first we define is binary antonymy (sometimes also called complementarity).

**Definition** BINARY ANTONYMS are predicates which come in pairs and between them exhaust all the relevant possibilities. If the one predicate is applicable, then the other cannot be, and vice versa. Another way to view this is to say that a predicate is a binary antonym of another predicate if it entails the negative of the other predicate.

**Example** *true* and *false* are binary antonyms.

If a sentence is true, it cannot be false. If it is false, it cannot be true. Alternatively, if something is true, this entails that it is not false. If it is false, this entails it is not true.

**Practice** Are the following pairs of predicates binary antonyms?

- |                                |          |
|--------------------------------|----------|
| (1) <i>chalk – cheese</i>      | Yes / No |
| (2) <i>same – different</i>    | Yes / No |
| (3) <i>copper – tin</i>        | Yes / No |
| (4) <i>dead – alive</i>        | Yes / No |
| (5) <i>married – unmarried</i> | Yes / No |
| (6) <i>love – hate</i>         | Yes / No |

**Feedback** (1) No, if something is not chalk, it is not necessarily cheese. (2) Yes, if two things are the same, they are not different: if they are not the same, they are different. (3) No (4) Yes (5) Yes (6) No, if I don't love you, I don't necessarily hate you.

**Comment** Sometimes two different binary antonyms can combine in a set of predicates to produce a four-way contrast.

**Practice** (1) Place the words *man*, *boy*, *woman*, *girl* in the appropriate boxes in this chart.

|           | Male | Female |
|-----------|------|--------|
| Adult     |      |        |
| Non-adult |      |        |

(2) Fill in the words *bachelor*, *spinster*, *husband*, *wife* in the chart below.

|           | Male | Female |
|-----------|------|--------|
| Married   |      |        |
| Unmarried |      |        |

**Feedback** (1) 

|     |       |
|-----|-------|
| man | woman |
| boy | girl  |

 (2) 

|          |          |
|----------|----------|
| husband  | wife     |
| bachelor | spinster |

**Practice** (1) In the first chart, *girl* was diagonally opposite to *man*.  
Would one normally think of *girl* as the antonym of *man*? Yes / No

(2) In the second chart, *wife* was diagonally opposite to *bachelor*.  
Would one normally think of *wife* as the antonym of *bachelor*? Yes / No

**Feedback** (1) No, one could normally think of either *woman* or *boy*. (2) No, one would usually think first of either *spinster* or possibly *husband*, or *married man*.

**Comment** We see that combinations of binary antonyms produce more complicated (e.g. four-way) systems of contrast, but that within such systems the most

natural way to pair off pairs of antonyms is along the same dimension, e.g. *man* vs *woman* (along the male/female dimension), but not *man* vs *girl* (cutting across both dimensions).

**Definition** If a predicate describes a relationship between two things (or people) and some other predicate describes the same relationship when the two things (or people) are mentioned in the opposite order, then the two predicates are CONVERSES of each other.

**Example** *Parent* and *child* are converses, because *X is the parent of Y* (one order) describes the same situation (relationship) as *Y is the child of X* (opposite order).

**Practice** Are the following pairs of expressions converses?

- |                                            |                 |
|--------------------------------------------|-----------------|
| (1) <i>below</i> – <i>above</i>            | <i>Yes / No</i> |
| (2) <i>grandparent</i> – <i>grandchild</i> | <i>Yes / No</i> |
| (3) <i>love</i> – <i>hate</i>              | <i>Yes / No</i> |
| (4) <i>conceal</i> – <i>reveal</i>         | <i>Yes / No</i> |
| (5) <i>greater than</i> – <i>less than</i> | <i>Yes / No</i> |
| (6) <i>own</i> – <i>belong to</i>          | <i>Yes / No</i> |

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**Feedback** (1) Yes, if X is below Y, Y is above X. (2) Yes (3) No (4) No (5) Yes (6) Yes

**Comment** The notion of converseness can be applied to examples in which three things (or people) are mentioned. The case of *buy* and *sell* is one such example.

- Practice**
- |                                                                                  |                 |
|----------------------------------------------------------------------------------|-----------------|
| (1) If John bought a car from Fred, is it the case that Fred sold a car to John? | <i>Yes / No</i> |
| (2) Are <i>buy</i> and <i>sell</i> converses?                                    | <i>Yes / No</i> |
| (3) Are <i>borrow</i> and <i>lend</i> converses?                                 | <i>Yes / No</i> |
| (4) Are <i>give</i> and <i>take</i> converses?                                   | <i>Yes / No</i> |
| (5) Are <i>come</i> and <i>go</i> converses?                                     | <i>Yes / No</i> |

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**Feedback** (1) Yes (2) Yes (3) Yes, if X borrows something from Y, Y lends that thing to X. (4) No, if X takes something from Y, Y does not necessarily give that thing to X (for example, X might take it without Y's permission), so *give* and *take* are not exact converses, although they almost meet the definition. (5) No, if Mohammed goes to the mountain, the mountain does not come to Mohammed.

**Comment** In both types of antonymy discussed so far, binary antonymy and converseness, the antonyms come in pairs. Between them, the members of

a pair of binary antonyms fully fill the area to which they can be applied. Such areas can be thought of as miniature semantic systems. Such semantic systems are sometimes known as ‘semantic fields’.

Thus, for example, *male* and *female* between them constitute the English sex system, *true* and *false* are the two members of the truth system etc. Other such systems (or fields) can have three, or four, or any number of members, depending upon the way in which the system is organized.

- Practice (1) What would you call the system of oppositions to which the words *Spring* and *Summer* both belong?
- .....
- (2) How many members does this system have altogether?
- .....
- (3) What would you call the system to which *solid* and *gas* belong?
- .....
- (4) How many members does this system have?
- .....
- (5) Can you think of an example of a seven-member system? (Hint: you use it every day of the week.)
- .....
- (6) Four-member systems are quite common. How many can you think of?
- .....

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|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feedback | (1) The ‘season system’ would be a natural name. (2) four (3) It could be called the ‘physical-state system’. (4) Three: <i>liquid</i> , <i>solid</i> , and <i>gas</i> . (5) The system that includes <i>Monday</i> , <i>Tuesday</i> , <i>Wednesday</i> , etc. (6) <i>hearts</i> , <i>clubs</i> , <i>diamonds</i> , <i>spades</i> ; <i>earth</i> , <i>air</i> , <i>fire</i> , <i>water</i> ; <i>North</i> , <i>East</i> , <i>South</i> , <i>West</i> (although this last one is frequently boosted to a system with more members, such as <i>South-West</i> , <i>North-East-by-North</i> , etc.). |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Comment What these systems have in common is that (a) all the terms in a given system are mutually incompatible, and (b) together, the members of a system cover all the relevant area. For instance, a playing card cannot belong to both the hearts suit and the spades suit. And besides hearts, clubs, diamonds, and spades, there are no other suits. Systems such as these are called systems of multiple incompatibility. There are large numbers of open-ended systems of multiple incompatibility.

- Practice (1) How many English colour words (like *red*, *grey*) are there?
- .....

- (2) How many names of plants are there in English (e.g. *holly*, *daffodil*)?  
 .....  
 (3) How many names of different metals are there in English (e.g. *brass*, *tin*)?  
 .....  
 (4) Think of three further examples of such open-ended systems of multiple incompatibility.  
 .....  
 .....

**Feedback** (1)–(3) an indefinite number (4) the vehicle system (*car*, *bus*, *train*, etc.); the animal system (*bat*, *bear*, *tiger*, etc.); the flower system (*pansy*, *primrose*, *poppy*, etc.); the furniture system (*table*, *chair*, *bed*, etc.), and many, many more.

**Definition** Two predicates are GRADABLE antonyms if they are at opposite ends of a continuous scale of values (a scale which typically varies according to the context of use).

**Example** *Hot* and *cold* are gradable antonyms.

Between *hot* and *cold* is a continuous scale of values, which may be given names such as *warm*, *cool*, or *tepid*. What is called *hot* in one context (e.g. of oven temperatures in a recipe book) could well be classed as *cold* in another context (e.g. the temperatures of stars).

**Practice** Are the following pairs gradable antonyms?

- |                                   |                 |
|-----------------------------------|-----------------|
| (1) <i>tall</i> – <i>short</i>    | <i>Yes / No</i> |
| (2) <i>long</i> – <i>short</i>    | <i>Yes / No</i> |
| (3) <i>clever</i> – <i>stupid</i> | <i>Yes / No</i> |
| (4) <i>top</i> – <i>bottom</i>    | <i>Yes / No</i> |
| (5) <i>love</i> – <i>hate</i>     | <i>Yes / No</i> |

**Feedback** (1) Yes (2) Yes (3) Yes (4) No (5) Yes, intermediate expressions on the scale include *like*, *dislike*, *be indifferent to*.

**Comment** A good test for gradability, i.e. having a value on some continuous scale, as gradable antonyms do, is to see whether a word can combine with *very*, or *very much*, or *how?* or *how much?* For example, *How tall is he?* is acceptable, but *How top is that shelf?* is not generally acceptable.

**Practice** Apply this test to the following words to decide whether they are gradable (G) or not (NG).

- |                  |               |
|------------------|---------------|
| (1) <i>near</i>  | <i>G / NG</i> |
| (2) <i>cheap</i> | <i>G / NG</i> |

|                       |        |
|-----------------------|--------|
| (3) <i>beautiful</i>  | G / NG |
| (4) <i>electrical</i> | G / NG |
| (5) <i>triangular</i> | G / NG |

Feedback (1) G (2) G (3) G (4) NG (5) NG

**Practice** To sum up these exercises in antonymy and incompatibility, classify the following pairs as binary antonyms (*B*), multiple incompatibles (*M*), converses (*C*), or gradable antonyms (*G*).

|                                            |               |
|--------------------------------------------|---------------|
| (1) <i>cat</i> – <i>dog</i>                | B / M / C / G |
| (2) <i>easy</i> – <i>difficult</i>         | B / M / C / G |
| (3) <i>good</i> – <i>bad</i>               | B / M / C / G |
| (4) <i>better than</i> – <i>worse than</i> | B / M / C / G |
| (5) <i>deciduous</i> – <i>evergreen</i>    | B / M / C / G |
| (6) <i>pass</i> – <i>fail</i>              | B / M / C / G |
| (7) <i>urban</i> – <i>rural</i>            | B / M / C / G |

Feedback (1) M (Both *cat* and *dog* belong to the open-ended English animal name system.) (2) G (3) G (4) C (The relationship between *better than* and *worse than* is one of converseness, even though both *better* and *worse* are themselves gradable terms, since, for example, *very much better* or *how much worse?* are acceptable expressions.) (5) B (6) B (7) a debatable case – probably B for some people, G for others.

**Comment** We saw in the previous unit that certain relationships between predicates, such as hyponymy and synonymy, could be paired off with certain relationships between sentences (or more precisely, between propositions expressed by sentences) such as entailment and paraphrase. Antonymy is a relationship between predicates, and the corresponding relationship between sentences is contradictoriness.

**Definition** A proposition is a CONTRADICTION of another proposition if it is impossible for them both to be true at the same time and of the same circumstances. The definition can naturally be extended to sentences thus: a sentence expressing one proposition is a contradictory of a sentence expressing another proposition if it is impossible for both propositions to be true at the same time and of the same circumstances. Alternatively (and equivalently) a sentence contradicts another sentence if it entails the negation of the other sentence.

**Example** *This beetle is alive* is a contradictory of *This beetle is dead*.

**Practice** Say whether the following pairs are contradictories (i.e. contradict each other) or not. Assume constancy of reference of all referring expressions.

- |                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| (1) <i>John murdered Bill</i><br><i>Bill was murdered by John</i>          | <i>Yes / No</i> |
| (2) <i>John murdered Bill</i><br><i>John did not kill Bill</i>             | <i>Yes / No</i> |
| (3) <i>Bill died</i><br><i>James can't swim</i>                            | <i>Yes / No</i> |
| (4) <i>Mary is Ann's parent</i><br><i>Mary is Ann's child</i>              | <i>Yes / No</i> |
| (5) <i>Room 404 is below this one</i><br><i>Room 404 is above this one</i> | <i>Yes / No</i> |
| (6) <i>This doorhandle is brass</i><br><i>This doorhandle is plastic</i>   | <i>Yes / No</i> |

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**Feedback** (1) No (2) Yes (3) No (4) Yes (5) Yes (6) Yes

**Comment** Below is a suggested statement of the relationship between contradictoriness and antonymy (and incompatibility). We will see whether this statement actually works correctly for all the types of antonymy and incompatibility that we have discussed.

Statement A

Given two sentences, both identical except that: (a) one contains a word X where the other contains a word Y, and (b) X is an antonym of Y (or X is incompatible with Y), then the two sentences are contradictories of each other (i.e. contradict each other).

Notice that the formulation of this statement is exactly parallel to what we called the Basic Rule of Sense Inclusion in Unit 10, the rule relating hyponymy to entailment in basic cases. Let us see whether the above statement of the relation between antonymy and contradictoriness is as successful.

**Practice** Do the following pairs of examples conform to Statement A?

- |                                                                            |                 |
|----------------------------------------------------------------------------|-----------------|
| (1) <i>This cat is male</i><br><i>This cat is female</i>                   | <i>Yes / No</i> |
| (2) <i>John hates Californians</i><br><i>John loves Californians</i>       | <i>Yes / No</i> |
| (3) <i>This mouse is dead</i><br><i>This mouse is alive</i>                | <i>Yes / No</i> |
| (4) <i>John owns three male cats</i><br><i>John owns three female cats</i> | <i>Yes / No</i> |

- (5) *Some people love Californians*  
*Some people hate Californians* Yes / No
- (6) *I found a dead mouse in the shower*  
*I found a live mouse in the shower* Yes / No

Feedback (1) Yes (2) Yes (3) Yes (4) No, John might own three male and three female cats. (5) No (6) No, I might have found two mice, one dead, one alive.

Comment In the first three examples the two sentences are identical except for a pair of antonyms (or incompatibles), and the sentences contradict each other. These examples, then, conform to Statement A. In the last three examples the two sentences are identical except for a pair of antonyms or incompatibles, but the sentences do not contradict each other. They are therefore counterexamples to Statement A, and we must conclude that Statement A is wrong. What, then, is the correct statement of the relation between contradictoriness and antonymy? Indeed, is there any single statement that correctly captures this relationship? We shall not pursue the matter here, but a correct formulation seems to need to make use of the concepts of referring expression, predication, and quantification. (See Units 4 and 5 for the first two of these.)

One of the goals of a semantic theory is to describe and explain ambiguities in words and in sentences.

Definition A word or sentence is AMBIGUOUS when it has more than one sense. A sentence is ambiguous if it has two (or more) paraphrases which are not themselves paraphrases of each other.

Example *We saw her duck* is a paraphrase of *We saw her lower her head* and of *We saw the duck belonging to her*, and these last two sentences are not paraphrases of each other. Therefore *We saw her duck* is ambiguous.

Practice The following sentences are all ambiguous. For each one give two paraphrases which are not paraphrases of each other. Be very careful to make sure that your answers are exact paraphrases of the original sentence, as far as this is possible.

- (1) *The chicken is ready to eat*

.....  
 .....

- (2) *Visiting relatives can be boring*

.....  
 .....

(3) *They passed the port at midnight*

.....

.....

(4) *The thing that bothered Bill was crouching under the table*

.....

.....

(5) *The captain corrected the list*

.....

.....

|          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Feedback | (1) The chicken is ready to be eaten vs The chicken is ready to eat some food<br>(2) It can be boring to visit relatives vs Relatives who are visiting can be boring<br>(3) They passed the seaport at midnight vs They passed the port wine at midnight<br>(4) It was crouching under the table that bothered Bill vs The creature that bothered Bill was crouching under the table<br>(5) The captain corrected the inventory vs The captain corrected the tilt |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Comment** Some semanticists adopt a definition of ‘sentence’ according to which a sentence cannot be ambiguous. For such scholars, a sentence is a particular string of words associated with one particular sense. According to this usage, for example, *The chicken is ready to eat* is not one sentence, but represents two different sentences. We adopt a usage that has been current in recent Linguistics, and according to which sentences like *The chicken is ready to eat* (and the others given above) are single ambiguous sentences. This is essentially a matter of terminology.

**Definition** In the case of words and phrases, a word or phrase is **AMBIGUOUS** if it has two (or more) **SYNONYMS** that are not themselves synonyms of each other.

**Example** *Trunk* is synonymous with *elephant’s proboscis* and with *chest*, but these two are not synonyms of each other, so *trunk* is ambiguous. Similarly *coach* is synonymous with *trainer* and with *charabanc* (or *bus*) but these two are not synonyms of each other, so *coach* is ambiguous.

**Practice** Each of the following words is ambiguous. For each one, give two synonymous words or phrases that are not themselves synonymous. You might find it helpful to use a dictionary for this exercise.

- (1) *bust* ..... vs .....
- (2) *plane* ..... vs .....
- (3) *crop* ..... vs .....

- (4) *pen* ..... vs .....  
 (5) *sage* ..... vs .....

**Feedback** (1) sculpture of a person's head, shoulders and chest vs broken (2) aeroplane vs flat surface (3) harvest vs handle of a riding whip (4) handwriting instrument using ink vs enclosure (5) wise vs herb (*Salvia officinalis*)

**Comment** We use the term 'word' in the sense of 'word-form'. That is, anything spelled and pronounced the same way (in a given dialect) is for us the same word. Some semanticists work with a more abstract notion of word, in which a word-form is associated with a particular sense, or group of related senses, to give a 'word'. For such semanticists, for example, *sage* corresponds to two different words, whereas for us *sage* is a single word with different senses, i.e. an ambiguous word. We use 'predicate' for 'word-in-a-particular-sense'. Predicates cannot be ambiguous, according to this definition.

In the case of ambiguous words, a distinction is sometimes made between polysemy and homonymy. This distinction has basically to do with the closeness, or relatedness, of the senses of the ambiguous words.

**Definition** A case of HOMONYMY is one of an ambiguous word whose different senses are far apart from each other and not obviously related to each other in any way with respect to a native speaker's intuition. Cases of homonymy seem very definitely to be matters of mere accident or coincidence.

**Examples** *Mug* (drinking vessel vs gullible person) would be a clear case of homonymy. *Bank* (financial institution vs the side of a river or stream) is another clear case of homonymy.

There is no obvious conceptual connection between the two meanings of either word.

**Definition** A case of POLYSEMY is one where a word has several very closely related senses. In other words, a native speaker of the language has clear intuitions that the different senses are related to each other in some way.

**Example** *Mouth* (of a river vs of an animal) is a case of polysemy.

The two senses are clearly related by the concepts of an opening from the interior of some solid mass to the outside, and of a place of issue at the end of some long narrow channel.

Polysemy in nouns is quite common in human languages. Some additional examples will be given for you to think about in the exercises at the end of this unit.

**Example** *Run* is another more complicated case of polysemy in which the word has more than one related sense. Note that in this case we have an example of polysemy with a verb (at least in most of its senses). So polysemy is not restricted to just one part of speech.

The multiple senses of *run* are related to each other in a somewhat more abstract way than in the case of the senses of *mouth*. Some uses of *run* which bring out a few of its complex interrelated senses include: *run a race (on foot)*, *run for office*, *this road runs from east to west*, *the motor is running*, *the water is running down the roof*, *run a computer program*, *a run in a stocking*, etc. Can you determine how these various senses are related to each other?

**Practice** The following are all polysemous words. For each one, we have indicated two closely related senses. What you have to do is to say how these senses are related, i.e. what they have in common. To show you the way, we have done the first one for you.

- (1) *chimney* (pipe or funnel-like structure on a building for smoke to escape through vs narrow vertical space between rocks up which a climber can wriggle by pressing against the sides)

Both senses contain the concept of a narrow vertical shaft in some solid material

- (2) *cup* (drinking vessel vs brassiere cup)

- (3) *guard* (person who guards, sentinel vs solid protective shield, e.g. around machinery)

- (4) *ceiling* (top inner surface of a room vs upper limit)

- (5) *Earth/earth* (our planet vs soil)

- (6) *drive* (as in *drive a nail* vs as in *drive a car*)

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|                 |                                                                                                                                                                                                                                                                                                   |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Feedback</b> | (2) Both senses have the concept of container with a particular round shape. (3) Both contain the concept of protection against danger. (4) Both contain the concept of a maximum upper boundary. (5) Both contain the concept of land at different levels of generality (earth as land, not sky; |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

earth as soil, not water). (6) Both contain the concept of causing something to move in a particular direction.

**Comment** Many linguists are beginning to realize that polysemy is probably much more common in human language than was previously thought. It is probably more true than not that most words have related variations in sense that depend on the particular linguistic context in which they are used. In practice, however, it is nearly impossible to draw a clear line between homonymy and polysemy. As a matter of fact, it appears that homonymy and polysemy occupy places along a graded continuum of meaning with homonymy at one extreme and vagueness at the other extreme, with polysemy falling somewhere in between. A word is said to be 'vague' when it appears to have one basic sense (monosemy) which is nevertheless flexible enough to allow for minor variations in meaning or use which are not particularly entrenched in the mind of the speaker. The English word *aunt* is often cited as an example of vagueness, since most speakers feel it has one fairly unified sense in spite of the fact that it can be used to refer to distinct members of a person's family: the sister of either a person's father or his or her mother. However, as usual in these units on sense and sense relations, we will try to concentrate on clear cases, where there is no difficulty in drawing the distinction.

**Practice** Decide whether the following words are examples of homonymy (*H*) or polysemy (*P*).

- |                                                                       |              |
|-----------------------------------------------------------------------|--------------|
| (1) <i>bark</i> (of a dog vs of a tree)                               | <i>H / P</i> |
| (2) <i>fork</i> (in a road vs instrument for eating)                  | <i>H / P</i> |
| (3) <i>tail</i> (of a coat vs of an animal)                           | <i>H / P</i> |
| (4) <i>steer</i> (to guide vs young bull)                             | <i>H / P</i> |
| (5) <i>lip</i> (of a jug vs of a person)                              | <i>H / P</i> |
| (6) <i>punch</i> (blow with a fist vs kind of fruity alcoholic drink) | <i>H / P</i> |

**Feedback** (1) H (2) P (3) P (4) H (5) P (6) H

**Comment** To simplify matters we will concentrate on clear cases of homonymy from now on and not mention polysemy further. But you will have the opportunity to consider another example of polysemy in the exercises at the end of this unit.

You will have noticed that it is not always possible to find an exactly synonymous phrase for a given word. For example, in the case of *sage* above, we had to resort to the Latin botanical label, which was, strictly speaking, cheating, since synonymy is usually thought of as a relation between words (and phrases) in the same language. Where exact synonyms are not available, it is possible to indicate different senses of a word by giving different environments in which the word may be used.

**Example** *Grass* has two senses which are indicated by the following environments:

- (a) *Please keep off the grass*
- (b) *The informer grassed on his partners-in-crime*

**Practice** For each of the following words, give two full sentences which include them and which bring out distinct senses of the word.

- (1) *rock* .....  
.....
- (2) *hard* .....  
.....
- (3) *file* .....  
.....

---

**Feedback** Here are some possible answers: (1) The ship hit a rock and sank; I will buy an electric guitar and become a rock star (2) This wood is hard; Playing the violin is hard (3) We will open a file for our overseas contracts; I sharpened the scissors with a file

**Comment** In many cases, a word used in one sense belongs to one part of speech, and used in another sense, it belongs to a different part of speech.

**Example** *long* in the sense of *yearn* is a verb and in the sense of *not short* is an adjective

**Practice** Disambiguate the following ambiguous words simply by giving two or more parts of speech.

- (1) *sack* .....      .....
- (2) *fast* .....      .....
- (3) *flat*.....      .....

---

**Feedback** (1) verb vs noun (2) verb vs noun vs adjective vs adverb (3) noun vs adjective

**Practice** Below are four suggested statements of the relationship between ambiguous sentences and ambiguous words. Only one of them is actually correct. Think carefully about them and about actual examples of ambiguous words and sentences and say which statement is correct. Take some time over this exercise before checking your answer.

Statement A

All sentences which contain one or more ambiguous words are ambiguous, and every sentence which contains no ambiguous words is unambiguous.

## Statement B

Some sentences which contain ambiguous words are ambiguous while others are not, and some sentences which contain no ambiguous words are ambiguous while others are not.

## Statement C

Some sentences which contain ambiguous words are ambiguous while some are not, but all sentences which contain no ambiguous words are unambiguous.

## Statement D

All sentences which contain ambiguous words are ambiguous, but some sentences which contain no ambiguous words are also ambiguous while others are not.

---

|          |                                 |
|----------|---------------------------------|
| Feedback | Statement B is the correct one. |
|----------|---------------------------------|

|         |                                                                                                                   |
|---------|-------------------------------------------------------------------------------------------------------------------|
| Comment | We will now go in detail through the reasoning which leads to the conclusion that statement B is the correct one. |
|---------|-------------------------------------------------------------------------------------------------------------------|

|          |                                                                                                                                                                                     |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Practice | (1) Below are some sentences containing ambiguous words. (The ambiguous words are given in capitals.) In each case say whether the sentence is ambiguous (A) or not ambiguous (NA). |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                         |        |
|---------------------------------------------------------|--------|
| (a) <i>A KIND young man helped me to CROSS the road</i> | A / NA |
|---------------------------------------------------------|--------|

|                                     |        |
|-------------------------------------|--------|
| (b) <i>A pike is a KIND of fish</i> | A / NA |
|-------------------------------------|--------|

|                                    |        |
|------------------------------------|--------|
| (c) <i>I'm very CROSS with you</i> | A / NA |
|------------------------------------|--------|

|     |                                                                                                            |
|-----|------------------------------------------------------------------------------------------------------------|
| (2) | Your answers to these questions should enable you to eliminate two of the statements A–D above. Which two? |
|-----|------------------------------------------------------------------------------------------------------------|

---

|          |                                                                                              |
|----------|----------------------------------------------------------------------------------------------|
| Feedback | (1) (a) NA (b) NA (c) NA (2) Statements A and D are shown to be incorrect by these examples. |
|----------|----------------------------------------------------------------------------------------------|

|         |                                                                                                    |
|---------|----------------------------------------------------------------------------------------------------|
| Comment | This leaves just statements B and C as possibilities. Let us see how we can eliminate one of them. |
|---------|----------------------------------------------------------------------------------------------------|

|          |                                                                                                                                            |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Practice | For each of the following sentences, say (a) whether the sentence contains any ambiguous words, and (b) whether the sentence is ambiguous. |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------|

|                                          |              |
|------------------------------------------|--------------|
| (1) <i>I observed John in the garden</i> | (a) Yes / No |
|------------------------------------------|--------------|

|              |
|--------------|
| (b) Yes / No |
|--------------|

|                                        |              |
|----------------------------------------|--------------|
| (2) <i>We had to decide on the bus</i> | (a) Yes / No |
|----------------------------------------|--------------|

|              |
|--------------|
| (b) Yes / No |
|--------------|

- (3) *Fred said that he would pay me on Thursday* (a) *Yes / No*  
 (b) *Yes / No*
- (4) Your answers to these questions should enable you to eliminate either statement B or statement C above. Which one? .....

**Feedback** (1) (a) No (b) Yes (2) (a) No (b) Yes (3) (a) No (b) Yes (4) Statement C is eliminated by these examples, which are not compatible with the second half of it.

**Comment** This leaves statement B. Of course, the fact that statements A, C, and D are wrong does not prove that statement B is right. We still need to test statement B against the linguistic facts. Statement B predicts the existence of four different types of examples, as illustrated in the chart below:

|                                        | Ambiguous sentence | Unambiguous sentence |
|----------------------------------------|--------------------|----------------------|
| Sentence containing ambiguous words    |                    |                      |
| Sentence containing no ambiguous words |                    |                      |

**Practice** Given below are five sentences. Put the numbers (1)–(5) in the chart above.

- (1) *Semantics is a subdiscipline of Linguistics*  
 (2) *Semantics is a branch of the study of language*  
 (3) *John sawed a rotten branch off the ash tree*  
 (4) *The drunken visitor rolled up the carpet*  
 (5) *Cinderella watched the colourful ball*

**Feedback**

|     |         |
|-----|---------|
| (5) | (2) (3) |
| (4) | (1)     |

**Definition** A sentence which is ambiguous because its words relate to each other in different ways, even though none of the individual words are ambiguous, is **STRUCTURALLY (or GRAMMATICALLY) AMBIGUOUS**.

**Example** *The chicken is ready to eat* (and many of the other sentences we have used) is structurally ambiguous.

**Definition** Any ambiguity resulting from the ambiguity of a word is a **LEXICAL AMBIGUITY**.

**Example** *The captain corrected the list* is lexically ambiguous.

**Comment** Structural ambiguity is basically a question of ‘what goes with what’ in a sentence, and this can be shown by diagrams of various sorts. We will mention one such diagramming technique, constituency diagrams, which we will present with square brackets around the relevant parts of the sentence (or phrase).

**Example** The phrase *old men and women* is structurally ambiguous. It is synonymous with *women and old men* and with *old men and old women*. We represent these two senses with square brackets thus:

- (1)    [*old men*] and *women*  
         *old* [*men and women*]

The first diagram indicates that *old* modifies only *men*, and the second indicates that *old* modifies the whole phrase *men and women*.

**Comment** As you learn more semantics, you will learn in more detail of more accurate ways to represent meaning and, hence, of describing ambiguity. The material in this unit is just a start. Ambiguity of various kinds is never far from the centre of our attention in semantics.

To end this unit, we will mention some things that must not be confused with ambiguity.

**Definition** A phrase is REFERENTIALLY VERSATILE if it can be used to refer to a wide range of different things or persons. This is very similar to the notion of vagueness mentioned earlier in this unit.

**Example** The pronoun *she* can be used to refer to any female person. On a given occasion *she* might be used to refer to Mary, on another occasion to Lucy, etc., but this does NOT mean that *she* is ambiguous, because although it is used to refer to different people this is not a matter of a difference in sense.

**Comment** We must also mention again referential vagueness. Some nouns and adjectives are gradable. Examples are *tall* and *short* (adjectives) and *mountain* and *hill* (nouns). Just as there is no absolute line drawn in the semantics of English between *tall* and *short*, there is no absolute distinction between *mountain* and *hill*. What is referred to on one occasion with *that mountain* might be called *that hill* on another occasion. Hence expressions such as *that hill* and *that mountain* are referentially vague. Referential vagueness is not the same thing as ambiguity. We saw that this was also the case when we considered the word *aunt*, which does not seem to have more than one sense, even though it can be used to refer to more than one distinct member of a kinship system.

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**Summary** Binary antonymy, converseness, and gradable antonymy are sense relations between predicates which fit a simple pretheoretical notion of ‘oppositeness of meaning’. Multiple incompatibility, though not traditionally thought of as

a kind of oppositeness, is formally similar to binary antonymy, the main difference being in the number of terms (i.e. 2 or more than 2) in the system concerned. Contradictoriness is a sense relation between sentences (and propositions), related in an apparently complicated way to the sense relations mentioned above.

Lexical ambiguity depends on homonymy (senses not related) and polysemy (senses related). To show the relationship between ambiguous sentences and ambiguous words we proposed the following statement: some sentences which contain ambiguous words are ambiguous while others are not, and some sentences which contain no ambiguous words are ambiguous while others are not. We then discussed the differences between grammatical ambiguity and lexical ambiguity and suggested ways of representing grammatical ambiguity. Finally we distinguished referential versatility and referential vagueness from ambiguity.

## Unit 11 Study Guide and Exercises

**Directions** After you have read Unit 11 you should be able to tackle the following questions to test your understanding of the main ideas raised in the unit.

- 1 You should understand these terms and concepts from this unit:
  - types of antonymy
    - binary antonymy (complementarity)
    - converses/converseness (relational opposites)
    - systems of multiple incompatibility
    - gradable antonyms
  - contradictoriness (said of sentences)
  - ambiguity (structural and lexical)
  - homonymy
  - polysemy
  - referential versatility & vagueness vs ambiguity
- 2 Be sure you understand why oppositeness of meaning is not as simple as it sounds. Try to restate the issue in your own words. What seems to be necessary in order for two words to be classed as antonyms of any type?
- 3 A test for binary antonyms is that the negative of one term must be equivalent to (or entail) the other: thus, *dead* and *alive* are binary antonyms because if something is not dead then it must be alive. Use this test to determine which of the following pairs of predicates are binary antonyms. If some (or all) are uncertain, identify and explain them.

|                    |                  |
|--------------------|------------------|
| a wood/metal       | e happy/sad      |
| b big/small        | f give/receive   |
| c awake/asleep     | g present/absent |
| d honest/dishonest | h in/out         |

- 4 Binary antonyms can be thought of as incompatible terms which are members of two-term sets (the ‘miniature semantic systems’ we described in the text). This notion can be extended to other groups of words which are not so much opposites as they are incompatible members of a larger (multiple-term) semantic system (or **semantic field**), such as the days of the week, the seasons of the year, etc. Note that the members of such larger sets are co-hyponyms and that the term which refers to the field itself is a superordinate term. Think of a few additional such systems of multiple incompatibility (with varying numbers of members) that were not mentioned in this unit.
- 5 Identify the type of antonymy or incompatibility (binary, gradable, converses, or multiple incompatibles) for each pair of words below.
 

|                         |                    |
|-------------------------|--------------------|
| a high/low              | f legal/illegal    |
| b punch/slap            | g lessor/lessee    |
| c husband/wife          | h expensive/cheap  |
| d higher/lower          | i table/chair      |
| e pregnant/not pregnant | j parent/offspring |
- 6 Explain the difference between a **contradiction** (a sense property of a sentence) and **contradictoriness** (a sense relation between sentences).
- 7 Which of the following pairs of sentences are **contradictories**?
  - a Max baked the cake / The cake was baked by Max
  - b Max is Sam’s father / Max is Sam’s child
  - c This class begins at 9:45 a.m. / This class begins at 8:45 p.m.
  - d Jane died / Jane is still alive
- 8 We said in this unit that ‘a sentence contradicts another sentence if it entails the negation of the other sentence’. Show that this is true for the contradictories you found in item 7 above.
- 9 Give an example different from the ones in the text in which two sentences which are identical except for a pair of antonyms or incompatibles DO contradict each other, and an example in which they do NOT contradict each other.
- 10 Disambiguate the following **ambiguous** sentences by supplying paraphrases which are not themselves paraphrases of each other.
  - a Climbing plants can look strange
  - b Jane waited by the bank
  - c They are moving sidewalks
  - d The English history teacher knows a lot
  - e The minister married my sister
  - f She’s selling synthetic buffalo hides
  - g The long drill was boring

- h The boy saw the man with a telescope  
 i He gave me a punch  
 j The grass was very expensive
- 11 Identify which sentences in exercise 10 above are examples of **structural ambiguity** and which are examples of **lexical ambiguity**.
- 12 For each polysemous word below identify several common senses and try to show how they are related to each other. Try to find some other examples for item (j).
- |             |                |
|-------------|----------------|
| a iron      | f around       |
| b conductor | g flight (fly) |
| c eye       | h go           |
| d face      | i hand         |
| e foot      | j .....        |
- 13 Go back to the various senses of the word *run* that were mentioned earlier in this unit. Try to see if you can come up with a few more uses that are different from the ones given previously, and then try to figure out how the various senses of the word are related to each other. (**Hint:** You might want to start by identifying the sense that seems most concrete, basic, or prototypical, based on native speaker intuitions, and then work from there to figure out how the other senses could have developed from that basic sense. But don't be surprised if the common thread linking the senses of *run* is fairly abstract and not every sense of *run* shares exactly the same set of abstract characteristics. It's usually sufficient for the polysemous senses of a word to be related to each other as long as they share at least some characteristics in common.)
- 14 Explain why it is difficult to draw a clear line between **homonymy** and **polysemy**. Give an example to illustrate this difficulty. Why is this an important question for lexicographers (dictionary makers)?
- 15 Now try your hand at figuring out how the various polysemous senses of the English preposition *over* are related to each other. As we did for the word *run*, here are some examples to get you started, but you will need to come up with additional examples of your own to get a full picture of the complexity of the related senses of this word.
- a The lamp is over the table  
 b Mary put the painting over the couch  
 c Frank walked over the log  
 d Jan put a table cloth over the table  
 e The plane flew over the city  
 f They live over the river from us  
 g The movie is now over

- h The baby put her hands over her face
- i There were soldiers stationed all over the field
- j The spider walked all over the wall

- 16 In this unit we discussed the relationship between ambiguous sentences and ambiguous words. Give an example (other than ones in the book) of a sentence containing one or more ambiguous words
- a that is unambiguous
  - b that is ambiguous
- 17 Give an example of a sentence (other than the ones in the book) of a sentence containing NO ambiguous words
- a that is unambiguous
  - b that is ambiguous
- 18 A test for referential vagueness vs referential ambiguity is that it is possible to negate one of the senses of an ambiguous lexical item while asserting another sense at the same time and in the same context of discourse. This is not possible with vagueness, as is shown in the following examples, in which *punch* is ambiguous but *bird* is vague. The star (\*) notation indicates that sentence (b) below is unacceptable.
- a I punched the paper but I didn't punch the paper
  - b \*There is a bird (i.e. a robin) on the lawn  
but there isn't a bird (i.e. a penguin) on the lawn.

What different senses of *punch* are possible in (a)? Show how this test can be used to demonstrate that *pig* is also ambiguous.