1 | Basic notions of semantics

The first preparatory text for this course introduces you to fundamental concepts in the study of word meaning. Whenever the text incorporates passages from other sources, deviations or omissions of material from these sources are indicated by [green brackets].

1.1 | Introduction to the course

Language is the most powerful tool of communication available to human beings. No other means of communication can convey such a wide, rich and nuanced range of messages. Due to this potential, language is instrumental in establishing and regulating the foundations of our societies, our political institutions, laws, educational systems, the media and so on. At the same time, language is the force that is operative in persuasion (e.g. in advertising), propaganda and discrimination. From this perspective, language can also be seen as a "loaded weapon", as linguist Dwight Bolinger (1980) once famously put it.

All of these powers of language derive from the ways in which our utterances encode or suggest certain meanings. Therefore, what we need to develop first is a basic understanding of how "meaning-making" works in language, both from the speaker's and the hearer's perspective, and of the role that social and other contextual factors play in this process. This is what the present course is all about. It will continue in the spirit of *Introduction to Linguistics I* by being structured around important discoveries about language as a system and how it is put to use. In many cases, these will be the same kinds of discovery again that English-speaking children make of their native language as they grow up learning and using it.

Our exploration of "meaning-making" in language will be broken down into several steps. In the first part of the course (Chapters 1–6), we will investigate the *conventional* meanings associated with words, phrases and sentences. In order to have a handy cover term for all these smaller and larger units, we will simply call them **linguistic expressions** in this and the following chapters. The subfield of linguistics that studies the "meanings that are conventionally encoded by linguistic expressions" (Israel 2014: 150) is called **semantics**. In Chapters 1–5, we will be specifically concerned with the semantics of individual words and word combinations (e.g. fixed phrases like *bite the bullet*), and this is also known as **lexical semantics**. In Chapter 6, we will then look at the conventional meaning of entire sentences, which goes by the name of **sentence semantics**. As we go along, our study of

Linguistic expression

The word *semantics* is derived from Ancient Greek *sēmaínein*, ('to signify/to mean').

Lexical and sentence semantics

semantics will also allude to how words are stored in the mind, how they can change their meaning over time and how a single word can acquire multiple different meanings (Chapters 3–5).

What is really remarkable about human language, however, is how the conventional meaning of linguistic expressions is actually exploited in language use. For one thing, we often read much more into one another's utterances than what has literally been said, and this kind of inference process is often intended by the speaker! For example, when someone asks you

(1) *Will you come to my party tonight?*

and you answer by saying

(2) *I've got a linguistics exam tomorrow morning.*

you are not actually, or directly, answering the question, but you rely on the ability of your communicative partner – your **interlocutor** – to work out that your answer is (probably) a concealed 'No'. The sentence in (2) thus illustrates nicely that we have to distinguish between the conventional meanings of linguistic expressions – the semantic meaning of (2) – and the communicative meanings that such sentences convey in an actual context. These latter meanings, the ultimate communicative intentions of our utterances, are studied in **pragmatics**. We will introduce you to this fascinating subfield of linguistics in Chapters 7–8.

interlocutor = 'Gesprächspartner'

Pragmatics

The question of how language is used in actual contexts is explored further in Chapter 9, but from a different perspective. We will survey how different aspects of the communicative setting, such as the formality of the context and the interlocutors' regional origins, age, social status or gender, influence their linguistic choices. This is the central question of **sociolinguistics**, the systematic study of variation in language. This topic will also give us a chance to see how linguistic research is actually carried out, i.e. how hypotheses on the relationship between language and social factors are formulated, what kinds of data can be gathered on such questions and how they can be analyzed appropriately. The concluding Chapter 10, therefore, will provide a glimpse at doing linguistic research. It will round off your foundational education in the study of language, which is what this module as a whole is all about.

Sociolinguistics

In the remainder of the present chapter, we will lay the groundwork for the study of word meaning, i.e. of lexical semantics.

1.2 | Introducing word meaning

"When talking about how meaning is expressed with language, our gut feeling is that linguistic meaning resides mainly in words. Words are the key to a great part of the information we store in our heads. According to some estimates (e.g. Aitchison 2012: 7), an educated adult speaker of English knows between 50,000 and 80,000 words (the numbers vary according to the individual, the method of measuring, etc.). However, in spite of the great number of words we store, we can use a word in no time at all. Native speakers can recognize a word 200 milliseconds after its onset, well before it has been completely pronounced. It is no wonder that psychologists are trying to elucidate in what ways words are organized in our minds […]. But for semantics there are questions that come before that: How do words mean? How do we use words to convey meaning?" (Valenzuela 2017: 79) In order to (begin to) answer this question, let us approach the problem from the perspective of a young child learning English again.

1.2.1 | From reference to meaning

From birth onwards, children are surrounded by all kinds of utterances from which they have to isolate individual words. They can do that because they notice that a certain recurrent form, e.g. the sound sequence /bɔːl/, always occurs together with a specific stimulus in their environment, such as a particular green ball they often see or fiddle about with. In this way, infants come to associate the sound form /bɔːl/ with the object in question. The child's initial assumption, therefore, might well be that the meaning of *ball* is the specific green round item that it is used for. This object is called the **referent** of the word, and when a word is being used to point to a specific referent, we speak of an act of **reference**.

Referent and reference

But the real discovery that children need to make is actually that the specific green ball they associate with the word *ball* is not the only referent of that word. Once they encounter similar objects (different size, different colour, different context but essentially the same kind of thing), they notice that the same sound form is used for those referents as well. It now becomes clear that *ball* is a word that refers to a whole class of items, not just a single one, and that these items have certain things in common. What begins to form in the child's mind is thus a **concept**, a mental representation of a category of items in the world. For our word *ball*, this will result in something like 'a round object that is used as a toy or in sports'. A concept is thus a kind of tacit mental description, if you will, rather than a specific visual image. After all, if the word *ball* can be used to refer to many different balls in the world, which one of those will be our mental image? Therefore, concepts must be more abstract knowledge structures rather than concrete "pictures in our minds". Think about it: If your concept for the word *dog* were only your own pet dog, you would not really be able to use the word *dog* in a more general way; but this is exactly how words are typically used, unless they are proper names like *Africa* or *NATO*.

Concept

So, the child's first discovery about semantics can be systematized in a triangular fashion which comprises a certain form, a concept and a set of possible referents of that form. This constellation is known as the **semiotic triangle**, which is given in Fig. 1:

The semiotic triangle

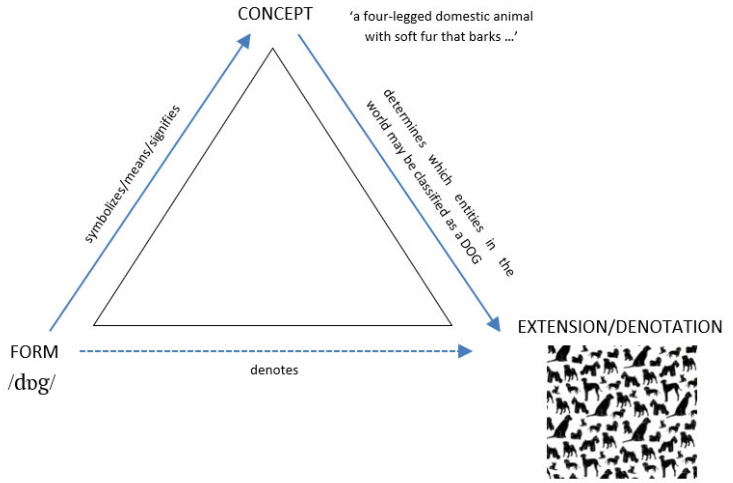


Figure 1

The semiotic triangle

(adapted from Ogden and Richards 1946: 11)

The picture on the right-hand side of Fig. 1 is meant to illustrate the set of all potential referents of the word *dog*. This set is called a word's **extension** – the kinds of things that the word's usage "extends to" – or, alternatively, its **denotation**.[1] Note that the arrow between the

Extension/ denotation

[1] These two terms are often used interchangeably, but strictly speaking, they are slightly different: The extension of a word is really the set of all potential referents of that word. Therefore, all the objects in the world that can be picked out by the word *dog* form the extension of that word. Denotation is a relationship that exists between a word and its potential referents. Linguists thus often say that a word like *dog* **denotes** a set of (possible) referents.

form and its denotation in the triangle is a broken line, unlike the others. This is because a form is "not directly linked to its denotation, but only indirectly via its" concept (Löbner 2013: 24). The concept associated with a given form decides on the word's denotation: if a young child's emerging concept of a dog is that of a 'four-legged furry *brown* creature that can bark', it will not readily use the word for white dogs; the extension depends on the concept. Conversely, as the child comes to realize that even white four-legged creatures that bark can be referred to as *dogs*, the concept changes as well: it becomes less specific (or more general), until it reaches a state that is similar across the members of the speech community. **This shared concept, then, is the conventional meaning of the English word *dog*.**

Word meanings as shared concepts

In a specific conversation, when we hear a sentence like

(3) *Look at this cute little dog!*

the form *dog* activates our mental representation of a dog, our concept, and we interpret the word as pointing to a specific referent in the scene that matches this concept. The semiotic triangle for such a concrete use of a word then looks as in Fig. 2:

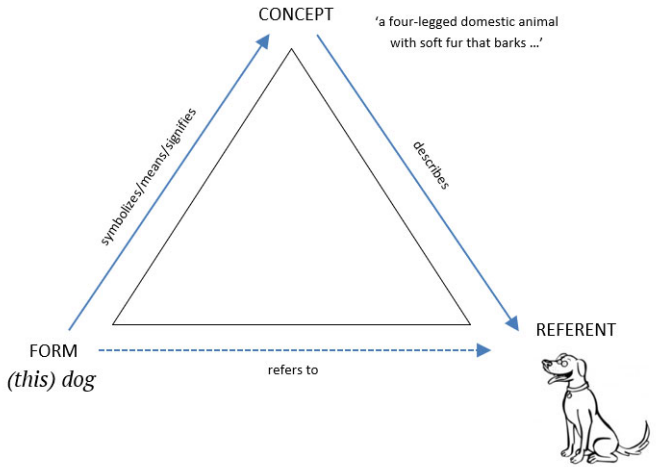


Figure 2 | *The semiotic triangle for a concrete word in use* (adapted from Löbner 2013: 25)

The child's discovery that a word's meaning is a concept rather than a specific referent can now even be taken a step further: it gradually learns to form concepts for *all* words that it hears, even if there is never any actual referent for them in the child's environment. Words like *Hi!*, *for*, *love* or *very* simply cannot have a referent (Who or what is *Hi*?),

but the child certainly figures out that these words, whenever they occur in specific situations and sentences, have a repeated function. On this basis, the child comes to create a meaning of these words, a concept that is again shared across the speech community. What emerges from this realization is an insight that we developed right at the beginning of *Introduction to Linguistics I*: words are signs, conventional form-meaning pairings, and we can now see that the meaning side of signs basically consists in a shared concept. In Chapter 2, we will have more to say about what these shared concepts look like for different words (and whether "shared" really means "identical" for everyone), but the important point for now is that not all words actually have referents. The semiotic triangle is thus a nice way of visualizing the difference between meaning and reference for those words that can have referents in the first place, and it shows us how children go from specific referents to forming concepts. But the part of the model that applies to all words is only the left-hand side of the triangle: *every* word "symbolizes" or "signifies" a certain concept, no matter whether it can ever have a referent.

Revision: Words as signs

The fact that meaning and reference are two distinct things also soon becomes apparent to children in another way. They will run into many situations in which the same referent is called by different names. A specific cuddly toy of theirs might be referred to in sentences like

(4) *Don't forget to take **your rabbit**.*

(5) *What's **Mr Hopper** doing under the sofa?*

(6) *I think you left **your cuddly toy** in the kitchen.*

(7) *Oh, here's **that fluffy little creature** again.*

Now, it should be fairly clear that the meanings of the words *rabbit, cuddly toy* or *creature* are very different, and yet they can be used to refer to the same thing in the world. (Put differently, these words have partially overlapping denotations.) This insight was first formulated systematically by a "local hero", Gottlob Frege (1848–1925), who was a student and professor at the University of Jena. In discussing similar examples as above, he famously distinguished between the **sense** and the reference of linguistic expressions. What he meant by 'sense' is basically the same as our 'shared concept' above. Therefore, the term 'sense' is also widely used in semantics to capture the conventional

Sense

meaning of a word, and this is how we are going to use it in this book as well.[2]

1.2.2 | Sense and reference: Some examples

Let us try to make the ideas of sense and reference more concrete by looking at different classes of words that we commonly find in English and other languages.

Revision: Content and function words

Recall from *Introduction to Linguistics (I)* that we distinguished **content words** and **function words**. Content words, as their name implies, express the major content of a message (e.g. *dog, eat, bone*), while function words are used to relate the content words of a sentence to one another and adapt them to the specific grammatical context. By adding *the, has* and *a* (and using a specific inflection on the main verb) we thus get a full message like

(8) *The dog has eaten a bone.*

As you will remember, content words come from the word classes of nouns (including pronouns!), verbs, adjectives and adverbs.[3] What types of referents do words of these classes typically have? To begin with, we can say that nouns and pronouns denote entities (German 'Ding, Wesen, Gebilde') in the world, which is an umbrella term for living beings (people and their names, plants, animals), imaginary beings (*fairies*, *ghosts*, etc.), physical objects, events (*explosion*), substances (*sugar*), abstract concepts (*love, success*), etc. about which something can be said. Verbs denote actions (e.g. *run, eat, wash*) or states (e.g. *seem, know, like*) in which such entities are involved.

Adjectives, strictly speaking, "never have a referent of their own, but they always describe the referent" of a noun in the sentence in which they occur (Löbner 2013: 22). Thus, *green* itself does not really have a referent – it expresses a property of a given referent. Adverbs can refer to a time or place within a given message (e.g. *yesterday, outside*), but many adverbs also behave like adjectives in that they do not

[2] Some linguists do make a difference between the two terms: They use 'sense' for the semantic meaning of *all* words, while 'concept' captures the semantic meaning of only those words that can have referents. We will not bother about this kind of distinction and instead use 'concept' and 'sense' interchangeably.

[3] The distinction between 'content words' and 'function words' is related, but not identical, to the difference between 'open' and 'closed' word classes from *IntroLing1*. In English, function words come from closed word classes, and content words generally come from open words classes. But pronouns constitute an important exception: they are content words according to what we said above, yet they form a closed class.

have a referent themselves but rather describe the referent of other elements in the sentence, most typically that of the verb. In this function, they are thus used to express how a situation was performed (e.g. *quickly, clearly, well*).

Function words come from word classes such as determiners, prepositions, conjunctions and auxiliaries. The sense of such function words is usually more abstract than that of content words, and they do not normally have referents themselves. For example, while a determiner like *the* or a preposition like *on* definitely symbolizes a particular concept and thus has a certain sense, it does not have any referent. The sense of such words is basically what they contribute to the meaning of the phrase or the sentence in which they occur. The definite article *the*, for instance, indicates that the referent of the noun it relates to is uniquely identifiable in the given communicative situation; that is, I cannot use the phrase *the dog* unless the particular dog has been uniquely established between the interlocutors before. Therefore, the sense of *the* is quite abstract, of course, when compared to the meaning of a content word, but it would be wrong to assume that grammatical words do not have any meaning.

With this in mind, let us now return to sentence (8) from above to show how we can characterize the sense and the types of referents of the linguistic expressions it contains (Table 1):

Expression (type)	**Sense** (rough approximation)	**Referent** (type)
the __ (article)	the referent of the noun that follows is uniquely determined in the given communicative situation	---
dog (noun)	a four-legged domestic animal with soft fur that can bark	entity
eat (verb)	put food into the mouth and chew and swallow it	action
has __*-en* (tense construction)	the event encoded by the verb took place at an indefinite time before the moment of speech	situation and utterance time
a __ (article)	the specific referent of the noun that follows is judged to be irrelevant by the speaker	---
bone	the hard substance that forms the skeleton of an animal's body	entity

Table 1
Sense and referents of the linguistic expressions in (8)
(adapted from Löbner 2013: 23)

We will not delve into all kinds of other function words here, and you are *not* expected to perform such an analysis (as in Table 1) yourself. The table was merely supposed to give you a first flavour of how

the sense of different types of words can be characterized (in broad terms), and of why the meaning of words cannot simply be reduced to "the things they refer to" – all words and grammatical constructions have some kind of meaning (i.e. a sense), but they do not all "stand for" or "refer to" something in the world.

1.2.3 | Complex expressions and compositionality

At the beginning of this chapter, we said that semantics is the study of the conventional meanings of linguistic expressions. You already know that linguistic expressions can vary in their size. The smallest linguistic expression that bears a conventional meaning is, of course, an individual morpheme (see *Introduction to Linguistics (I)*, Ch. 4). Such morphemes can be bound (as in (9)) or free (as in (10)), and free morphemes are the smallest kind of word:

(9) Bound morphemes: *un-*, plural *-s*, *-ment*, *-ly, -ing, -ness*

(10) Free morphemes: *tree, run, small, down, she, the, on, if, and, not*

Simple versus complex linguistic expressions

We might call the "atomic" elements in (9) and (10) **simple** linguistic expressions. At the other end of the scale, our sentence in (8) above is clearly a **complex** linguistic expression: it combines multiple words into a single sentence, and we can characterize the semantic meaning of the entire sentence (but you will have to wait for that until Chapter 6).

In between morphemes and entire sentences, we also find medium-sized linguistic expressions; some of these are illustrated in (11):

(11) a. *dog food, backbone, actor, hopelessness, waited*

b. *(a) game of chess, play tennis, without doubt*

In (11a), we are dealing with single words that consist of multiple morphemes. You will remember that *dog food* and *backbone* are examples of what we called 'compound' words, while *actor* and *hopelessness* are 'derivations'. *waited*, by contrast, is simply a word-form of the lexeme WAIT which combines the meaning of WAIT with that of the preterite inflection. But as these are two morphemes, *waited* is also a complex linguistic expression. In (11b), we see combinations of words into phrases, such as a noun phrase, a verb phrase and a prepositional phrase. All of these are complex linguistic expressions, too, because they consist of multiple meaningful elements.

Because almost all utterances that we make involve complex expressions, notably whole sentences, it is important that we can figure out the meaning of these complex expressions based on the meanings of

their constituting elements and the specific way in which these are combined. A compound such as *dog food*, for example, is typically composed in such a way that the last (i.e. right-hand) member provides the basic concept one is talking about, while the left-hand member serves to specify that concept: DOG FOOD is a particular kind of FOOD. Knowing that compounds usually work in this way provides us with an immediate strategy to compute new compounds like *selfie stick, watermelon sugar* or *van life* and to work out what they might mean. Similarly, the meaning of the phrases in (11b) is understood to be a direct product of the words they contain and the conventional way in which these are combined. By knowing the meanings of *play* and *tennis*, and by knowing the typical structure of verb phrases, one can easily derive the meaning of *play tennis*.

Compositionality

What we have just seen at work is the so-called principle of **compositionality**, which goes back to Gottlob Frege's work as well. Complex linguistic expressions are said to be **compositional** if their meaning can be derived from the meaning of its components and the structural pattern by which these are combined. As we said above, the principle of compositionality is important because it ensures that "we are usually able to understand the meaning of a [complex expression] without any conscious effort" (Löbner 2013: 7), and it is absolutely vital for understanding complex linguistic expressions which we have never heard or seen in exactly this way before.

Non-compositional expressions

However, in any language, there are also numerous expressions whose meanings are more than just the sum of the meanings of their parts. These expressions are **non-compositional**. Compare the expressions in (11) above with the ones in (12):

(12) a. *redneck, pickpocket, cutthroat*

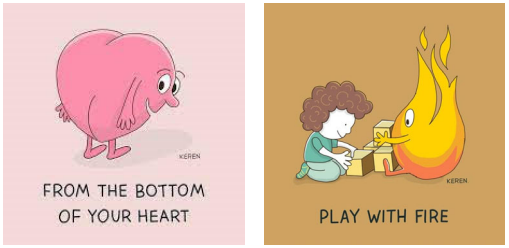
b. *bite the bullet, with flying colours, make ends meet, hit the road, be all thumbs, a Greek gift, kick the bucket, pop the question, make someone's day*

The compounds in (12a) are non-compositional because their meaning clearly goes beyond the meaning of its components, and they are put together in a different way than the typical compounds we saw earlier: A PICKPOCKET is not a kind of pocket, but a thief (i.e. someone who picks things from people's pockets, bags, etc.). Simply going by the regular rules of forming compounds, one has no chance to compute this meaning effortlessly or automatically. The same applies to the other compounds in (12a), and even more so to the phrases in (12b). Knowing the meaning of *bite* and *bullet*, and the general structure of

verb phrases, is simply not enough to understand that this phrase means 'to force yourself to do something unpleasant or difficult'. Similarly, if one were to interpret the phrase *hit the road* on the basis of the meaning of its component parts and how they are put together, one would arrive at the conclusion that someone must be really mad at a particular road and beats it up as a result. But that is not, of course, what the phrase means ('to set out on a journey'). Such non-compositional phrases have a special name: **idioms** (German 'Redewendung'). The cartoons below show what happens if we mistake idioms as compositional expressions (Fig. 3):

Idioms = non-compositional phrases

Figure 3 | *Idioms taken literally*[4]



As the meaning of idioms cannot simply be derived from the meaning of their parts, they need to be learned and stored in our minds holistically. In this respect, idiomatic phrases basically behave like simple words: They typically symbolize a single concept; they just happen to be composed of multiple words in a non-compositional way. Thus, *kick the bucket* is the multi-word equivalent of *die*, and we simply have to store this expression as a whole (just like *die*) because we cannot interpret it based on the meanings of *kick* and *bucket*.[5]

It is important to note that non-compositional expressions are not a marginal phenomenon in language, but actually quite widespread. For this reason, a more realistic assessment is probably that we construct the meaning of sentences simultaneously by computing them according to the principle of compositionality *and* by retrieving a large number of fixed or semi-fixed expressions directly from long-term memory.

[4] Graphs taken from <https://thelanguagenerds.com/2020/20-clever-and-funny-illustrations-showing-the-literal-meanings-of-idioms/>.

[5] Idioms are often confused with proverbs (German 'Sprichwort'). Proverbs are sentences like *Rome wasn't built in a day*, *The early bird catches the worm* or *You can't make an omelette without breaking eggs*. In contrast to typical idioms, these are entire sentences, not phrases, and they can be computed in a fully compositional way. It is true, however, that there is more to their interpretation than just their literal meaning.

SUMMARY

In this chapter, we have laid some important foundations for the study of linguistic meaning. We have developed the idea that **semantics** is the study of meanings that are **conventionally** associated with **linguistic expressions**. When these expressions are words (or fixed phrases like idioms), their study is called **lexical semantics**. The lexical meaning of a word or an idiom is a tacit, conventionally shared **concept**, which is also known as a word's **sense**. For many content words, their associated concept determines the set of their possible **referents** (= the word's **denotation** or **extension**), and the act of picking out a referent on a specific occasion of use is called **reference**. The relationship between a word's form, its sense and its (potential) referents is captured by the **semiotic triangle**. Function words do not usually have referents, but they do have grammatical meaning and hence also a certain sense. Finally, we saw that the sense of **complex linguistic expressions** can either be **compositional** (when it can be derived from the sense of the component parts and the pattern by which these are put together) or **non-compositional** (when their sense cannot be computed in this way, as in **idioms**, for example).

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The present chapter was greatly inspired by two fabulous introductions to lexical semantics:

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Ogden, Charles K. and Ivor A. Richards. 1946 [1923]. *The meaning of meaning.* 8th edn. New York: Harcourt, Brace and World.

Reading suggestions

A more detailed treatment of the semiotic triangle can be found in:

Riemer, Nick. 2010. *Introducing semantics*. Cambridge: Cambridge University Press. Ch. 1 [pp. 13–19].