

Speech organs

- 1 lips
- 2 teeth
- 3 alveolar ridge
- 4 hard palate
- 5 soft palate (*velum*)
- 6 uvula
- 7 pharynx
- 8 epiglottis
- 9 glottis – gap between vocal folds
- 10 larynx
- 11 tip/apex of the tongue
- 12 blade/lamina of the tongue
- 13 front of the tongue
- 14 back/dorsum of the tongue

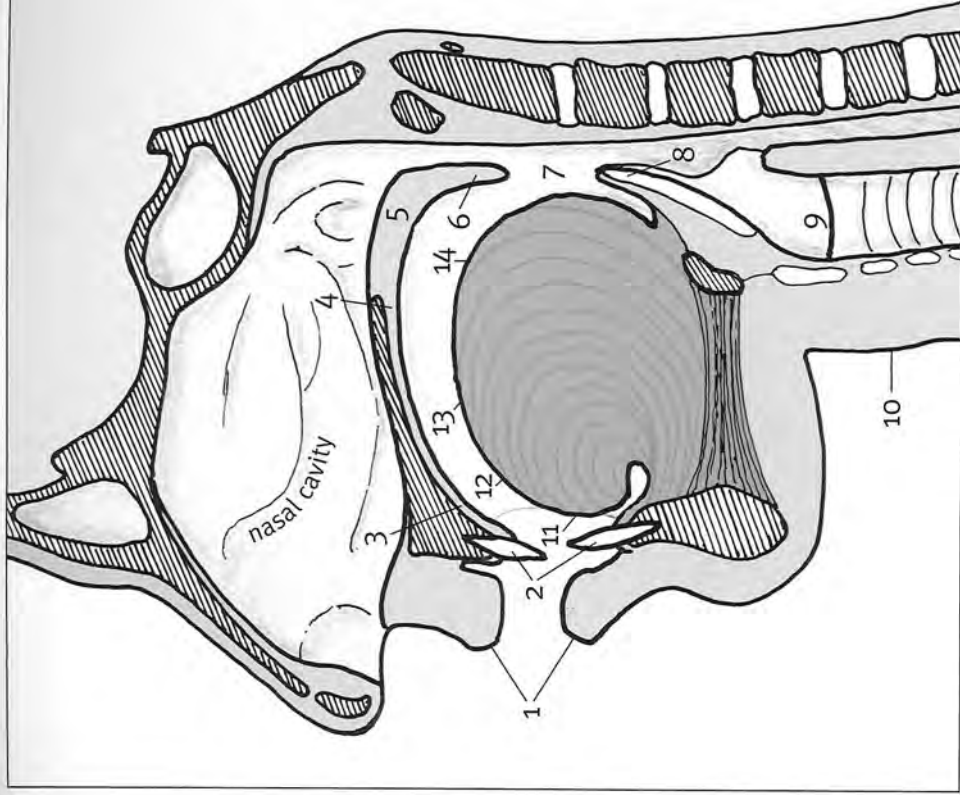


Figure II.1

BERND KORTMANN English Linguistics: Essentials

Anglistik · Amerikanistik

studium
kompakt

English
Edition

Cornelsen

Linguistics: Essentials

Die Hochschulreihe studium kompakt Anglistik • Amerikanistik wurde von den Verfasserinnen und Verfassern in Zusammenarbeit mit der Verlagsredaktion entwickelt.

Verfasser: Professor Dr. Bernd Kortmann
Verlagsredaktion: Dr. Blanca-Maria Rudhart
Layout: Gisela Hoffmann
Technische Umsetzung: Ingo Ostermaier
Umschlagsgestaltung: Bauer + Möhring grafikdesign, Berlin

Die Deutsche Bibliothek – CIP-Einheitsaufnahme:

Kortmann, Bernd:

studium kompakt Anglistik • Amerikanistik:

Linguistics: Essentials/Bernd Kortmann. –

1. Aufl. – Berlin: Cornelsen, 2005

ISBN 3-464-31162-7



<http://www.cornelsen.de>

1. Auflage, 1. Druck 2005

© 2005 Cornelsen Verlag, Berlin

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Druck: CS-Druck CornelsenStürtz, Berlin

ISBN 3-464-31162-7

Bestellnummer 311627



Gedruckt auf säurefreiem Papier,
umweltschonend hergestellt aus chlorfrei gebleichten Faserstoffen.

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Semantics (Greek *semainein* = to signify, mean) is the only branch of linguistics which is exclusively concerned with meaning. Semantics studies the meaning or meaning potential of various kinds of expressions: words, phrases, and sentences. This chapter is mainly confined to the study of word meaning (lexical semantics; lexicology). Research in lexical semantics addresses the following questions: (a) How to elucidate the concept of meaning, including the relation between meaning and external reality? (b) What are appropriate tools for analysing and describing meanings? (c) What kinds of semantic structures exist within the vocabulary (or: lexicon) of a language? These structures are uncovered by describing recurrent semantic relations between the words, more exactly *lexemes*, of a language (e.g. relations such as near-equivalence or contrasts in meaning). Lexical semantics proceeds from the assumption that words are symbols, i.e. signs expressing an arbitrary relation between a form

Introduction

lexicology

and its meaning(s). This relation is considered to be exclusively a matter of convention (cf. chapter 1.2.1 on the model of the linguistic sign proposed by Ferdinand de Saussure).

Studies in semantics usually start out from a given form and ask for its meaning, i.e. move from signifier (*signifiant*) to signified (*signifié*). This direction of research is also most relevant to non-linguists: Whenever we consult a dictionary, we are looking for an answer to the question: What is the meaning of X? The branch of semantics which adopts this approach is called “semasiology” (science of meanings), a concept which originally covered all of semantics. It was only in the 20th century that the term “semantics” (introduced by Michel Bréal) replaced the term “semasiology”.

The opposite way of studying meaning is called “onomasiology” (science of names; from Greek *onomazein* = to name). Onomasiology proceeds from a given meaning and asks for the kinds of forms that are used to express this meaning. Whenever we consult a dictionary of synonyms (thesaurus) such as *Roget’s Thesaurus of English Words and Phrases*, we are adopting an onomasiological approach: We want to find out which word(s) can be used for expressing a given concept. Take, for example, the concept – or lexical field (cf. VI.3) – of “killing” (German *töten*): *kill*, *murder*, *slay*, *slaughter*, *butcher*, *massacre*, and *assassinate* are words which can be used to translate the concept expressed by *töten*.

This lexical (or: semantic) field serves as a useful example for illustrating another crucial distinction, which ultimately derives from an important dichotomy proposed by Ferdinand de Saussure: The contrast between two distinct kinds of relations which every element in a language or, in fact, any kind of system enters into, viz. paradigmatic relations of choice and syntagmatic relations of combination. These relations are also relevant to semantics. Firstly, members of a particular lexical field can be replaced by other members of the field, especially if there are extensive similarities between the meanings of the relevant words (i.e. if these words are synonymous). The various semantic relations between lexical alternatives are the focus of paradigmatic semantics. Syntagmatic semantics, on the other hand, is concerned with questions such as the following: Which of the above-mentioned lexical alternatives is appropriate in a given sentence (e.g. *kill* as opposed to *murder* or *assassinate*)? *Kill* is the most general term; *murder* implies the intentional killing of a human being, *assas-*

sinate relates to the killing of an important person (usually a politician). For this reason, only (1) is acceptable, while (2) is odd:

- (1) President X was assassinated last night.
 (2) ? Many innocent villagers were assassinated last night.

There is thus an increase in the number of semantic restrictions on the types of direct objects which can be combined with the relevant verbs: *kill* has fewer restrictions than *murder*, which in turn has fewer restrictions than *assassinate*. Such restrictions on possible combinations of meanings, so-called “selection restrictions”, are sometimes very wide-ranging; in some cases, a given lexeme can only be combined with very few other lexemes. Extreme examples are provided by many words which are rarely used: It is often possible to predict which other lexemes such rare words occur with in a sentence. A popular example of such typical combinations of words, so-called “collocations”, are the various expressions for groups of animals in (3):

- (3) a { flock
gaggle
pack
pride
shoal } of { sheep/goats/birds
geese
wolves/hounds
lions
fish }

Syntagmatic semantics is not only concerned with possible combinations of particular words (such as those discussed for (1) to (3)), it also deals with the meaning of complex linguistic expressions (including sentences). The crucial principle that determines the structure of complex expressions is the principle of compositionality, which stipulates that the meaning of a complex expression in natural language depends on (and can be reconstructed from) the meaning of its parts and the syntactic relations holding between these parts. This important principle of sentence semantics is often called “Frege’s Principle” or the “Fregean Principle”, since it is commonly attributed to the German philosopher and mathematician Gottlob Frege (1848–1925). The principle of compositionality is held to ensure that we can understand the countless sentences we encounter every day, even though we have never heard them before. There are limits to compositionality, however. Consider, for example, idioms such as *to kick the bucket* or German *den Löffel abgeben*. Their meaning (here ‘to die’) cannot – or can only in part – be reconstructed from the

VI.1 Branches and boundaries of semantics

semasiology
(form → meaning)
versus
onomasiology
(meaning → form)

paradigmatic versus
syntagmatic semantics

selection restrictions

collocations

compositionality

meaning of their component parts; thus, for idioms the connection between form and meaning tends to be just as arbitrary and conventional as it is for most single words. But even where the principle of compositionality does apply, it does not guarantee that one really understands what the speaker or author means with a particular utterance, at least in those cases where the intended meaning goes beyond what is literally said (cf. chapter VII).

This distinction between what is said and what is meant, i.e. between (literal) sentence meaning and (intended) utterance meaning, is closely linked to the distinction between semantics and pragmatics, even though the correlation is not perfect (cf. the detailed discussion in chapter VII). Pragmatics studies language use (*parole*), focusing on both the linguistic and the non-linguistic context of utterances, as well as speakers' utterance-related intentions. Thus, a central – for many *the* central – aspect of pragmatics is its concern with principles that allow us, in a particular context, to infer what is meant from what is said. At the heart of pragmatics as defined above are questions such as: What does the speaker mean by uttering X? and Why are hearers usually able to recognize speakers' intention(s) without greater difficulty? In semantics, on the other hand, context is almost completely ignored, and speaker-intention is entirely left out of consideration. Thus, the division of tasks between semantics and pragmatics may roughly be characterized as follows: semantics deals with the meaning or the meaning potential of expressions out of context (with context-invariant, speaker-independent meaning), whereas pragmatics deals with the meaning of expressions (mainly utterances) in a particular context (with context-sensitive, speaker-dependent meaning).

What we typically have in mind when talking about word meanings are the meanings of lexemes that belong to one of the four lexical word classes (nouns, verbs, adjectives, adverbs). Lexical meaning contrasts with the grammatical meaning of function words (e.g. pronouns, prepositions, conjunctions; cf. chapter III.1 on auto- and synsemantic words). Grammatical meaning also includes the meaning of inflectional affixes and the semantic roles (e.g. agent, patient) associated with grammatical relations. The differences between grammatical and lexical meaning are only gradual. Grammatical meaning in general is abstract; just think of the meanings of case or tense morphemes, or of the marking of (in-) definiteness with the help of *a* and *the*. Lexical meaning, on the other hand, is frequently far more concrete. In this

respect, grammatical meaning contrasts particularly strongly with the lexical meaning of those nouns that denote concrete countable entities. Note, however, that the (lexical) meanings of abstract nouns such as *condition*, *cause*, or *concession* are no less abstract than the (grammatical) meanings of adverbial subordinators such as *if*, *because*, or *although*. The above examples of grammatical and lexical meanings can thus be located at opposite ends of a continuum from abstract to concrete concepts. The meanings of personal pronouns and spatial prepositions tend to be located even further towards the middle of such a continuum (and thus towards the transitional area between grammatical and lexical meaning).

Another essential difference between lexical and grammatical meaning relates to the fact that the number of grammatical meanings expressed in languages is comparatively small and – even from a cross-linguistic point of view – probably also finite, whereas there is an infinite number of potential lexical meanings. It is therefore much easier to provide an overview of the domain of grammatical meanings. Not surprisingly, regular processes of meaning change – both within a single language and across languages – have been identified primarily in the domain of grammatical meanings. Meaning changes in lexical words, on the other hand, are clearly more idiosyncratic, and cannot be captured with the help of a relatively small number of general principles of the type discovered for function words. Issues of historical (or: diachronic) semantics, however, will not be discussed in this chapter (but cf. chapter I.3.2).

In what follows, we will largely focus on lexical meaning, more precisely on the descriptive (or: cognitive) meaning of lexical words. Thus, special emphasis will be placed on the representative function of language (cf. the various functions of language described in chapter I), i.e. on those aspects of meaning that allow us to describe the world. Expressive and social meanings will not be dealt with in greater detail. The following examples have to suffice: (a) the exclusively expressive meaning of *gosh!*, and the differences between *father* and *daddy*, *policeman* and *cop(per)*, or *very* and *jolly* with regard to their expressive meaning; (b) the exclusively social meaning of welcome and farewell words such as *hello* and *goodbye*, forms of address like *sir* and *madam* with their social meaning component, and the differences between forms of address like *pal*, *mate*, and *love* (as used in grocer's shops in England: "What can I do for you, love?") with regard to their (expressive and) social meaning. Generally speaking, the interpersonal function of language is relegated to the sidelines of

semantics versus pragmatics

VI.2 Types and facets of meaning

lexical versus grammatical meaning

descriptive versus expressive versus social meaning

research in semantics: Semanticists rarely devote particular attention to those aspects of meaning that enable us to express feelings, points of view, and speaker judgments (i.e. expressive meaning), or which signal and establish social relationships (i.e. social meaning).

But what exactly is the descriptive meaning of a lexical word? To answer this question, we will turn to three central pairs of concepts used in semantics, which are more or less overlapping: *sense* – *reference*, *intension* – *extension*, and *connotation* – *denotation*. The first-mentioned terms in these three pairs (*sense*, *intension*, and *connotation*) relate to the conceptual side of meaning and to the problem how to provide a (language-internal) definition of meaning. By contrast, the three contrasting terms (*reference*, *extension*, *denotation*) relate to extra-linguistic reality, i.e. to the relation between language and the world. The term “reference”, for example, designates the relation between entities in the external world and the words which are used to pick out these entities (e.g. persons, objects, events, places, points in time, etc.). The “referent” is the entity referred to (picked out) by an expression in a particular context.

- (4) a. Take the bottle and put it in the dustbin.
b. He took a bottle and put it in a dustbin.
c. A bottle is not a dustbin.

Both (4a) and (4b) deal with a particular bottle and a particular dustbin. The only difference between (4a) and (4b) is that in (4a) the referents of *the bottle* and *the dustbin* are accessible to the hearer. In both cases, the referents of *the/a bottle* and *the/a dustbin* vary from utterance to utterance. Matters are different in the case of (4c): here, *a bottle* does not refer to a particular bottle, nor does *a dustbin* refer to a particular dustbin; both noun phrases are thus used in a non-referring sense. But even though both noun phrases in (4c) lack a referent, they still have an “extension”. The latter term designates the class of objects to which a linguistic expression can be applied, i.e. the class of its potential referents (in (4c) the class of all bottles and the class of all dustbins). A referent of a linguistic expression is always a member (or subset) of the class of objects that constitutes the word’s extension. The term “denotation” is frequently used synonymously with “extension”. Sometimes, however, “denotation” is understood in a broader sense which covers not only the relation between nouns or noun phrases and groups of individuals or objects, but also the relation between words belonging to other word classes and the

extra-linguistic phenomena they relate to. Thus verbs denote situations, adjectives denote properties of individuals and objects, and adverbs denote properties of situations.

The *sense* of an expression is its descriptive meaning, which – in contrast to *reference* – is independent of a particular utterance and the situational context in which the utterance was made. The distinction between “sense” and “reference” was introduced by the philosopher Gottlob Frege. It is not difficult to see why such a distinction is useful. For one thing, linguistic expressions with different meanings (senses) may very well have the same referent(s). Just think of the noun phrases *the Leader of the Labour Party* and *the Prime Minister of Great Britain*, which differ in sense, but not necessarily in reference: The phrase *the Leader of the Labour Party* may refer to the same person as the phrase *the Prime Minister of Great Britain*. Similar observations apply to *the capital of Prussia*, *the capital of the Third Reich*, and *the capital of Germany*; all of these phrases refer to Berlin. This example also illustrates that the referent of a linguistic expression may change, while its meaning remains the same: in 1992 Bonn was still *the capital of Germany*, today the capital of Germany is Berlin. The relevance of the sense-reference distinction is also brought home by words which lack a referent, but do have a sense. Cases in point are *unicorn* and *dragon*. The sense of a linguistic expression essentially consists of characteristic features which determine the class of entities it may be used to refer to, i.e. its extension. This bundle of semantic features (e.g. [+HUMAN, -ADULT, +FEMALE] for *girl*) is called the “intension” of a linguistic expression (more on this in sections VI.3.1 and VI.4). Note that so-called “connotations” are not part of the intension. Connotations are typically secondary meanings which can vary according to culture, region, social class, etc. and which are often restricted to particular contexts. This does not mean, however, that connotations are completely subjective associations which different speakers connect with expressions on the basis of entirely different personal experiences. Connotations can be generalized to a certain extent, they are part of the encyclopaedic meaning of a lexeme (as opposed to its dictionary meaning, that is its descriptive meaning, the much more rigid definition we find in dictionaries).

The following sections deal with the two major approaches to the analysis of meaning: the first approach investigates recurrent semantic structures in the vocabulary (structural semantics: cf. section VI.3), the second examines the relations holding between word meanings and our conceptual system (cognitive semantics: cf. section VI.4).

sense (versus reference)

intension (versus extension)

connotation (versus denotation)

VI.3

Structural semantics: Meaning structures in the vocabulary

Even today, lexical semantics is still to a considerable extent committed to classical structuralist assumptions (cf. chapter I). One of the principles that has proved particularly influential is the idea of language as a complex system of relations: Every linguistic element is integrated in the system (*langue*) through a network of paradigmatic and syntagmatic relations; nothing happens outside of the system. Applied to semantics, this view implies that word meaning is to be treated as something relative, as a purely language-internal phenomenon. A word's meaning constitutes a node in a network of semantic relations. More precisely, the meaning of an expression is defined in part by what it has in common with other expressions, but above all by what distinguishes it from them (de Saussure speaks of the *signe différentiel*: the meaning of a word is what it is not). Thus, if we want to grasp the full meaning of a verb like *march*, we have to know how the manner of walking described by this expression differs from the manner of walking described by similar verbs like *pace* and *stride*. All of these terms are part of an extensive network of motion verbs. Some verbs that belong to this network, such as *amble*, *saunter*, and *stroll*, constitute a subclass of expressions which stand in a relation of oppositeness to *march*, *pace*, and *stride*. The latter verbs denote a quick, determined manner of walking, whereas the verbs in the former group denote a slow, aimless manner of walking. In sum, the principal goal of structural semantics is to show that the vocabulary of a language is a structured whole in which nothing happens in isolation and where various recurrent semantic structures can be identified. The two most important types of such structures (or: networks) are lexical fields and lexical (or: sense) relations.

3.1 Lexical fields

Lexical (or: semantic) fields are groups of words which cover different or partly overlapping areas within the same extralinguistic domain. Above we already encountered three examples of lexical fields: verbs of asking (*ask*, *inquire*, *interrogate*, *question*, *wonder*, etc.), verbs of walking (*walk*, *march*, *pace*, *amble*, *stroll*, *prance*, *sneak*, *stagger*, *swagger*, etc.), and verbs of killing (*kill*, *murder*, *assassinate*, etc.). Further examples include colour adjectives, adjectives relating to mental abilities (*intelligent*, *clever*, *smart*, *bright*, *brilliant*, *brainy*, *stupid*, *dumb*, *silly*, *thick*, *dense*, etc.), different types of footwear (*shoe*, *moccasin*, *clog*, *slipper*, *sandal*, *trainer*, *boot*, etc.), legwear (*trousers*, *dungarees*, *socks*, *stockings*, *tights*, *leggings*, etc.), teaching and research staff at universities (*professor*, *reader*, *lecturer*,

fellow, etc.), or temporal conjunctions (*when*, *as*, *while*, *after*, *since*, etc.); there is an infinite number of such lexical fields. The crucial idea motivating such groupings of lexemes by semantic similarities is the assumption that the meaning of a field member can only be fully determined and delimited with reference to its semantic neighbours. From a diachronic point of view, this means that any semantic change within a lexical field may affect all members of the lexical field as well as the intricate network of semantic relations holding between them. Such potential changes in lexical fields include the addition of a new word, the loss of a word, and a change in the meaning of one or more of their members.

In fact, the theory of lexical fields (*Wortfeldtheorie*), which was developed by the linguist Jost Trier in the 1930s, has its roots in the study of semantic change, and hence in diachronic (or: historical) semantics. However, it did not take long for the study of lexical fields to occupy a central place in synchronic word semantics, even if some aspects of Trier's account are in need of revision. Pertinent criticism has been leveled, for example, at his conception of lexical fields as mosaics, whose boundaries can be clearly delimited and which do not have any gaps or overlaps. This ideal hardly exists: (a) category boundaries are often fuzzy (cf. also section VI.4); as a result it may be difficult to determine which lexical field a word belongs to; (b) there are many examples of gaps in lexical fields (e.g. in English or German, adjectives are missing which – in analogy to *blind*, *deaf/taub*, or *mute/stumm* – denote the absence of the ability to smell or taste); (c) and, finally, in many cases there are more or less conspicuous meaning similarities (and thus overlaps) within a lexical field (e.g. *intelligent*, *clever*, *smart*). The suggestion to compare a lexical field to a piece of bread which is unevenly buttered (thicker in some places, thinner or not at all in other places) thus seems to be much more useful than the mosaic comparison. Much as the latter, however, this conception of lexical fields neglects the fact that field members are in most cases related to one another along more than merely two dimensions. For instance, *pace* may differ from *stroll* with regard to the dimensions 'speed' and 'purposefulness'; but these dimensions are no longer sufficient if we want to describe the difference between these two verbs and other members of the same lexical field (e.g. *stagger* or *trudge*). Here, we need further dimensions such as 'degree of body control' or 'degree of effort'. Componential analysis (or: feature analysis, semantic decomposition) has proved to be a very useful tool for describing semantic similarities and differences between

traditional versus modern
conceptions of semantic
fields

componential analysis

members of a lexical field. In analogy to the conception of phonemes as bundles of distinctive features (e.g. the phoneme /p/ as [+CONSONANT, -VOICED, -NASAL, +OCCLUSION, +PLOSIVE]; cf. chapter II.2.1), the meaning of a word is conceived of as a bundle of (ideally binary) semantic features or semes (e.g. *girl* [+HUMAN, -ADULT, +FEMALE] in contrast to *boy* [+HUMAN, -ADULT, -FEMALE], or *pace* [+QUICK, +PURPOSEFUL] in contrast to *stroll* [-QUICK, -PURPOSEFUL]). These features can roughly be equated with the dimensions that structure a lexical field, but wherever possible they should be chosen so as to allow a 'yes (+) / no (-)' characterization. The choice of relevant semantic features is to some extent arbitrary of course; singling out useful features is more difficult for some semantic areas than for others. In general, the method of semantic decomposition becomes more and more difficult to handle the more fine-grained the semantic analyses are supposed to be (just think of the lexical field of motion verbs). In addition, it is open to debate whether there really is a limited, universally valid inventory of semantic features relevant to the analysis of word meanings. It also remains unclear what role semantic features play in human categorization, i.e. whether semantic features are cognitively real (more on this in section VI.4).

By contrast, the psychological reality of lexical fields is indisputable. It can be shown that they are more than simply a convenient theoretical construct, and that they do indeed fulfil an important function in structuring the information stored in our mental lexicon. Word association tests with ordinary people and especially with people suffering from aphasia have clearly shown that there is a much stronger psychological link between members of the same lexical field than between members of different lexical fields. This is hardly surprising: within a lexical field there is a much stronger network of lexical (or: sense) relations. Such relations represent another important principle structuring our mental lexicon. Of particular importance are the kinds of relations which hold between *red – blue – green – yellow*, or *Monday – Tuesday – Wednesday*, etc. (relations of semantic incompatibility), and those relations that hold between word pairs like *man – woman*, *husband – wife*, *hot – cold*, *buy – sell* (relations of oppositeness of meaning) (cf. section VI.3.2). Much as these paradigmatic lexical relations and lexical fields, *collocations* play an important role in processing, storing, and retrieving lexical information. Examples of collocations include syntagmatic lexical relations which exist, for example, between adjectives like *blond*, *auburn*, *curly*, *wavy*, or *unruly* on the one hand, and *hair* on the other (cf. also section VI.1).

3.2 Sense relations

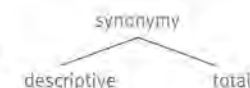
Sense relations (or: lexical relations) are semantic relations between words. The five relations discussed in this section have in common that they systematically occur in an infinite number of word pairs or word groups (especially of course in lexical fields), and that they are all paradigmatic relations, thus representing possibilities of choice between lexical alternatives (e.g. *leggings* in contrast to *trousers*, *tights*, or *stockings*).

The concept of "synonymy" is used to describe semantic equivalence or rather extensive semantic similarity between two or more lexemes. The term is typically used in reference to the "descriptive" meaning of words (hence the term "descriptive" or "cognitive synonymy"). Synonyms thus have the same semantic features. However, most synonyms differ with regard to their conditions of use: Descriptive synonyms may be interchangeable in many, but not all, contexts. In (5a), for example, it is impossible to replace *deep* by its synonym *profound*; matters are different in (5b):

- (5) a. This river is very deep.
b. The incident made a deep impression on me.

Descriptive synonyms may differ with regard to their connotations (*dog – mongrel*, *cock – rooster*, *worker – employee*, *baby – neonate*), with regard to stylistic level or register (*begin – commence*, *buy – purchase*, *intoxicated – drunk – pissed*), with regard to regional or social variety (e.g. differences between American and British English), or with regard to their collocations (e.g. *a big/large house*, but *Big/ ?Large Brother is watching you*). Cases of total synonymy, i.e. of interchangeability in all contexts (e.g. *Apfelsine – Orange* in German), are very rare. It is not difficult to see why. A linguistic system which has (many) total synonyms would be uneconomic. Why should a language have two (or more) lexemes with absolutely identical usage conditions? In fact, total synonymy between two words is always only temporary: either one of the synonymous lexemes is lost, or the two items will be semantically differentiated, developing different usage conditions.

Synonymy contrasts with antonymy, a term covering various types of semantic opposites (oppositeness). We speak of "complementary" or "binary antonyms" (or: "complementaries") if there is an either-or relationship between the two terms of a pair of semantic opposites, i.e. if the two antonyms exhaust all possible options in a particular



opposites

complementary antonymy

antonymy

conceptual domain (e.g. *male – female, asleep – awake, dead – alive, live – die, pass – fail*). In these cases, the meaning of one lexeme is equivalent to the negation of the other lexeme. Complementary antonymy is commonly contrasted with gradable antonymy, where the two expressions involved merely constitute opposite poles of a continuum. Alternative terms for gradable antonyms include “contraries”, or simply “antonyms”. (Note, however, that the term “antonymy” can also be used in the wider sense of ‘oppositeness’.) Examples of gradable antonyms are *hot – cold* (notice the various intermediate stages like *warm – tepid – cool*); *broad – narrow, large – small*, and *old – young* (cf. also pairs of nouns like *beginning – end, war – peace*). The great majority of gradable antonyms are pairs of adjectives. Some of these pairs display a certain asymmetry in the sense that one of the two contrasting lexemes can appear in more contexts than the other. Thus, if we want to know a person’s age (*How ___ are you?*) or the length of an object (*How ___ is it?*), we use *old* or *long*, respectively, rather than *young* or *short*. The members of pairs like *old – young, long – short* differ in markedness: the term with the wider range of uses is called *unmarked* (*old, long*), the one with a more limited range *marked* (*young, short*). Relational opposites (or: converses) represent a further type of antonyms, which describe the same situation from different perspectives (e.g. *teacher – pupil* in sentences like *John is Mary’s teacher* versus *Mary is John’s pupil*). Further examples of relational opposites include pairs of deverbal nouns in *-er* and *-ee* (e.g. *employer – employee, examiner – examinee, interviewer – interviewee*), comparative forms of adjectives (*older – younger, longer – shorter*), pairs of verbs like *give – take, buy – sell, rent – let*, or pairs of prepositions like *above – below*. The fourth type of antonymy, *directional oppositeness*, does not involve different perspectives on the same situation, but rather a change of direction (especially *motion* in different directions). Examples of directional opposites (or: reversives) include *open – shut, push – pull, rise – fall, come – go, leave – return, (turn) right – (turn) left, tie – untie, and button – unbutton*.

directional oppositeness

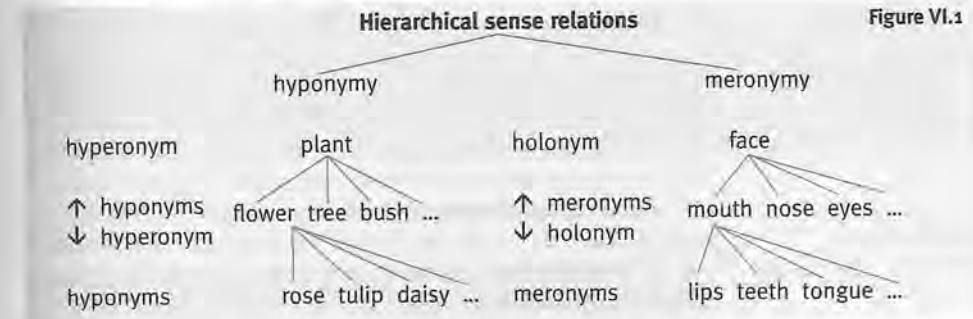


Let us now turn to sense relations which involve hierarchies in the vocabulary, i.e. super- and subordination. The term “hyponym” refers to words like *rose, tulip, daisy*, and *lily*, which stand in a relationship of subordination to a more general expression like *flower*. Conversely, the generic term *flower* is the superordinate or hyperonym (or: hypernym) of *rose, tulip, daisy*, and *lily*. Hyponyms have all semantic features of the hyperonym plus some additional ones, which distin-

guish them from the hyperonym on the one hand, and from other hyponyms situated on the same hierarchical level on the other (consider, for example, the features distinguishing *rose* and *daisy*, or *daisy* and *lily*). Hyponyms relating to the same hierarchical level are called co-hyponyms or heteronyms. Interestingly, what is probably the oldest method of defining meanings is based on the concept of hyponymy: According to this approach we should first identify the superordinate category (the so-called “*genus proximum*”, i.e. the hyperonym), and then single out the specific properties (*differentia specifica*) which distinguish the lexeme to be defined from its hyperonym (e.g. *daisy* “a flower which is very common, small, and white with a yellow centre”). It follows from the relationship of inclusion between the intension of the hyponym and that of the hyperonym (i.e. the intension of the former including the intension of the latter), that there is a relationship of inclusion on the level of extension as well: the extension of the hyperonym includes the extension of the hyponym (the set of roses is a subset of the set of flowers.)

Alternative terms for “co-hyponymy”, the relationship between hyponyms situated at the same hierarchical level, are “heteronymy” and “incompatibility”. This captures the fact that in most cases co-hyponyms/heteronyms are semantically incompatible in a given context (either *This is a rose* is true in a particular context, or *This is a tulip* is true, but not both).

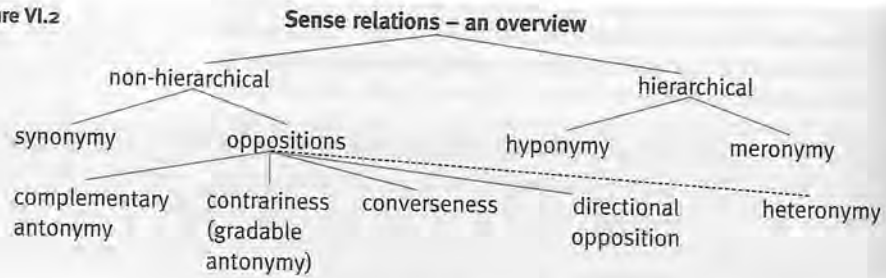
heteronymy (or: incompatibility)



Heteronyms are not always incompatible, however: e.g. *novel* and *paperback* are hyponyms of *book* and heteronyms of each other, but they are not incompatible (*This is a novel* and *This is a paperback* may both be true descriptions of the same object). Sometimes incompatibility is also described as a fifth type of antonymy.

Finally, *meronymy* refers to part-whole relationships (e.g. *finger-hand*, *toe-foot*, *mouth/nose/eye-face*, *door/window/roof-house*). Such meronymic relationships hold between words on different hierarchical levels. Thus, *door* is a meronym of *house* (the holonym), but the word also has its own meronyms (e.g. *handle* and *lock*). Meronymy, as opposed to hyponymy, is not necessarily a transitive relationship. Thus, if A is a hyponym of B, and B a hyponym of C, then A is always a hyponym of C (e.g. for A = *bobtail*, B = *dog*, and C = *animal*). By contrast, meronymic relations need not be transitive (e.g. for A = *hole*, B = *button*, and C = *shirt*), though there do exist examples of transitive meronymic relationships (e.g. A = *lips*, B = *mouth*, and C = *face*). Meronymy and hyponymy involve completely different types of hierarchies. Hyponymy involves a relationship of inclusion between classes: the extension of the hyponym is included in that of the hyperonym. The hierarchical relationships involved in meronymies are of a completely different type, relating to individual referents of meronymic terms (a finger is part of a hand, a hand part of an arm, etc.); this has nothing to do with a relationship between different classes.

Figure VI.2



3.3 Lexical ambiguity: Polysemy and homonymy

Lexemes with only one descriptive meaning are called “monosemous”. Many lexemes, however, have several descriptive meanings and are thus (a) members of more than one lexical field, and (b) nodes in a network of sense relations that is even more complex than the network of semantic relations contracted by monosemous lexemes. Such ambiguous words can be divided into two major types: polysemous and homonymous items (homonyms). The different meanings of polysemous lexemes are commonly felt to be related. Typically, one of these senses has developed from the other sense via metaphorical or metonymical processes (e.g. *mouth* ‘mouth (part of the body) / river

mouth / cave entry’, or *wing* ‘wing of a bird / of a building / of a car / of an airplane / political party wing’). By contrast, with homonyms it is synchronically, and in many cases also diachronically, impossible to establish a connection between the different meanings (e.g. *race* ‘a sports event / a human race’, or *mole* ‘animal / dark spot on a person’s skin’). In the case of polysemy we can speak of a single lexeme having several meanings, whereas in the case of homonymy we speak of different lexemes that happen to have the same form. Dictionaries often reflect this distinction: a polysemous word has only one entry (with various meanings that are numbered consecutively), whereas a homonym has several entries (e.g. *mole*¹, *mole*², *mole*³).

Homonyms can be differentiated more precisely with the help of two criteria: (a) medium-independent versus medium-dependent formal identity; (b) complete identity vs. differences in grammatical properties. In some cases, homonyms are identical in both spelling and pronunciation, and thus qualify as ‘true’ homonyms, or homonyms in the narrow sense. In many others, however, they are identical in spelling only, but differ in pronunciation, or vice versa. Homophones are lexemes which are identical in pronunciation, but differ in spelling (*see – sea*, *sight – site*, *flower – flour*), while homographs are identical in spelling, but differ in pronunciation (*lead* /led/ ‘kind of metal’ versus /li:d/ ‘piece of leather attached to dogs’ collars’, *bass* /beis/ in music versus /bæs/ ‘type of fish’). The second criterion for distinguishing different types of homonyms applies equally to true homonyms, homophones, and homographs. It can be formulated as follows: Are the homonyms under consideration identical with regard to their grammatical properties (in particular their word-class and inflectional morphology)? If yes, we are dealing with total homonymy, total homophony, and total homography, respectively (cf. all examples above); if no, we are dealing with partial homonymy (*bear* N – *bear* V), partial homophony (*rite – write*), or partial homography (*tear* N – *tear* V).

types of homonymy

polysemy versus homonymy

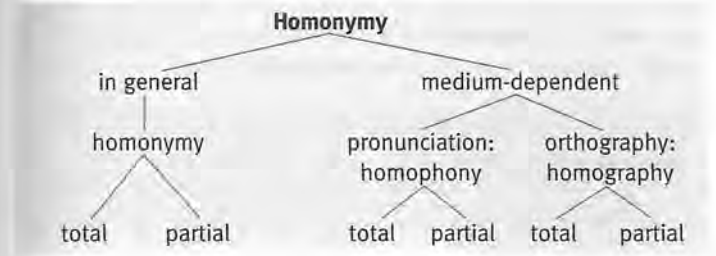


Figure VI.3

It is frequently impossible to give a clear answer to the question whether an ambiguous word is an example of polysemy or homonymy – which once again illustrates the fact that there are no sharp dividing lines in language. Even if we consult etymological information (e.g. with the help of the *Oxford English Dictionary*, short: *OED*), which should be avoided in synchronic analyses of meaning, it remains unclear how far back we should go in the history of a word, and of what use this method really is. Take, for example, the two senses of *pupil* ('student' and 'centre of the eye'). Even if we know that both meanings derive from the same Latin origin (*pupilla* = 'orphan, ward' and *pupula* = 'pupil, eye' are both derived from *pupa* = little girl, doll), which could count as evidence of polysemy, the two senses are so far apart in Present-Day English that we tend to classify *pupil* 'student' and *pupil* 'part of the eye' as homonyms. In general, however, polysemy is considerably more frequent than homonymy. This is not surprising from a psychological and economical perspective. Polysemy is a product of our metaphorical and metonymical creativity and allows us to describe – in a motivated way – something new with the help of something already known. In this way, polysemy adds to the flexibility and adaptability of the vocabulary of a language without increasing the number of lexemes. A language which makes extensive use of polysemy keeps the memory load to a minimum, because fewer words have to be stored in our minds than would be the case if we had to learn a separate word for every concept. Wherever possible, ambiguous words will be classified as cases of polysemy rather than homonymy. This tendency is particularly pronounced in cognitive semantics (cf. section VI.4).

Polysemous and homonymous terms have one conspicuous feature in common: A given context usually forces us to select one particular meaning of these words. An exception to this rule are puns, which are based on the fact that two meanings of a word or word-form are activated at the same time. Examples include the newspaper heading *Wait watchers* (which alludes to the organisation *Weight Watchers*), the announcement in (6a) which informs us that a shoe shop will be opening soon, or the panda joke in (6b):

- (6) a. Soon we'll take the wait off your feet.
 b. A panda walks into a bar, sits down and orders a sandwich. He eats the sandwich, pulls out a gun and shoots the waiter dead. As the panda stands up to go, the

bartender shouts, "Hey! Where are you going? You just shot my waiter and you didn't pay for your sandwich! Who do you think you are?"

The panda yells back at the bartender, "Hey man, I'm a PANDA! Look it up!"

The bartender opens his dictionary and sees the following definition for panda:

"A tree-dwelling marsupial of Asian origin, characterized by distinct black and white colouring. Eats shoots and leaves."

Usually, however, only one particular meaning of an ambiguous word fits a given context. Ambiguous words are disambiguated by contextual selection of one of their (descriptive) meanings. A common test for ambiguity are cases where two different contexts are relevant to the interpretation of a word; these contexts require the activation of different meanings of the word and therefore, when occurring in the same sentence, lead to a bizarre or unacceptable sentence meaning (in rhetoric, the term "zeugma" is used for cases such as (7a)). A second test, the so-called "identity test" in (7b), also shows very clearly that *expire* is ambiguous:

- (7) a. ? John and his driving license expired last week.
 b. ? John expired last week; so did his driving license.

Such tests, then, allow us to determine whether a word is ambiguous or merely vague. Vague terms are unspecified for certain semantic features (e.g. *monarch* is unspecified for sex: *Her father / His mother was a monarch*). For this reason, they display a certain flexibility in their use. What is crucial, however, is that this flexibility does not lead to the assignment of more than one meaning. It is therefore characteristic of vagueness that we are not compelled by a particular context to decide between two or more meanings (thus there is no need for disambiguation by contextual selection). At most, a particular context leads to a more precise specification of the word's meaning (e.g. by emphasizing or suppressing a feature). This type of specification is called "contextual modulation" of meanings (cf. e.g. *window* in (8a–c):

ambiguity versus vagueness

"maximizing" polysemy

ambiguity in puns

- (8) a. Joan opened/shut/repared the window. (neutral)
 b. Joan painted the window. (frame)
 c. Joan cleaned/broke/looked through the window. (glass panel)
 d. While painting the window, Joan broke it.

As shown in (8d), such modulations can be combined in a sentence without leading to a zeugma. In sum, the distinction between vagueness and ambiguity is of great importance when it comes to determining whether a word has merely one meaning or whether it has several meanings: A word which is vague has one meaning only, while words that are ambiguous have several meanings.

VI.4 Cognitive semantics: Prototypes and metaphors

categorization

Cognitive semantics has developed in the 1980s on the basis of findings in cognitive psychology. Scholars working in this area of research have challenged many time-honoured assumptions familiar from structuralist semantics. The chief difference between the two approaches is that structural semantics defines and analyzes meaning from a purely language-internal perspective (i.e. on the basis of semantic networks connecting lexemes), whereas cognitive semantics explains meaning primarily in terms of categorization (i.e. the grouping of similar phenomena into one class). In cognitive semantics, meaning is considered to be inextricably linked to human cognition, to the way we perceive the world and group phenomena into conceptual categories. Language and cognition are taken to be inseparable: the structure of linguistic categories is held to reflect the structure of conceptual categories (e.g. in the sense that the meaning of a word is the cognitive category connected with it).

Categorization essentially involves the perception or construction of similarities between otherwise different entities. Prototypes and metaphors play a central role in this process: Prototypes are typically regarded as the reference points against which the entities to be categorized are compared. The concept of metaphor, on the other hand, is relevant to answering the following questions: What processes allow us to perceive or construct similarities? Are these similarities objectively given or subjectively created?

4.1 Prototypes

Before we categorize a given animal as a duck (rather than a goose), a given drinking vessel as a cup (rather than a mug), a given activity as running (rather than walking), and a given car as new (rather than used), we compare the entity or activity that needs to be categorized with what we know about poultry, cups, running, and the age of cars, respectively. This raises an important question: How is this knowledge organized? According to the traditional view, categorization is achieved by means of so-called “necessary and sufficient conditions”: An object counts as an X just in case it possesses all the features which define an X. Necessary conditions (or: criteria) are features which are indispensable for an entity to qualify as a member of a given category. The term “sufficient conditions” is used when these features are jointly sufficient for assigning the entity to a certain category (i.e. when all of the various necessary criteria apply). This model of categorization implies that categories have clear-cut boundaries. The traditional account of categorization lies at the heart of feature (or: componential) semantics (cf. chapter VI.3.1), which is sometimes rather dismissively referred to as “checklist semantics”. Componential semantics can be traced back as far as Aristotle’s theory of concepts. Cognitive semantics, more precisely prototype semantics, rejects the classical view of categorization, at least for the majority of concepts: categorization in everyday life – less so in the domain of science – is much more flexible and fuzzy than is suggested by traditional componential semantics. Some ducks have no wings, others cannot quack, even though they have all other properties associated with ducks, and are therefore spontaneously categorized as ducks. Why? Because they do, after all, come very close to our idea of an ‘ideal’ (or: prototypical) duck, or at least correspond much more to the prototype of a duck than to the prototype of a rivaling category (e.g. a goose). Thus, we can assign an entity to a category if it shares at least some central features with the category prototype, and (in most cases) looks physically similar to it.

Prototype semantics assumes that all knowledge which is accessed in a particular situation is relevant to the process of categorization. For this reason, we cannot strictly separate ‘dictionary’ or expert knowledge (knowledge of what is essential, pertaining to what speakers know in virtue of their command of a language) from encyclopaedic knowledge (additional knowledge pertaining to what speakers know in virtue of their acquaintance with the world). For example, there may be situations in which what is crucial to cate-

prototype semantics
versus feature semantics

prototypes as cognitive
reference points

gorizing an animal as a duck is the encyclopaedic knowledge that during their search for food ducks hold their head under water and raise their tail in the air (cf. the German nursery rhyme *Alle meine Entchen*).

The above examples show that categories have an internal structure, which implies that they are not homogeneous: not all category members are equally good representatives of the category; rather there are different degrees of representativeness. Categories have a core consisting of the best representatives (the prototypes), which serve as reference points in the process of categorization, and which are surrounded by increasingly peripheral areas of members that are more and more different from the prototype(s). There is yet another important difference between the conception of categorization entertained in prototype semantics and the view adopted in traditional (including componential) semantics: Cognitive semantics emphasizes that category boundaries are often not clear-cut (fuzziness of category boundaries). Therefore, it is frequently not possible to give a clear answer to the question whether or not an entity belongs to a category. There are grey areas of transition between neighbouring categories where we are incapable of unambiguously assigning an entity to one category rather than another. Different speakers may thus assign the same entity to different categories; even individual speakers may classify the same entity differently on different occasions.

Many findings associated with the psychological theory of prototypes, which underlies prototype semantics, involve the notion of family resemblances. This concept was developed by the philosopher Ludwig Wittgenstein. Wittgenstein used the example of games to show that a category can be held together by nothing more than a complex web of overlapping and crisscrossing similarities among its members, comparable to the various similarities displayed by different members of a family. The analogy between categories and families is based on the fact that family members usually resemble each other with respect to various 'criss-crossing' similarities: Some members have a similar nose, others the same skin, yet others the same eyes, etc. Similar observations can be made with respect to the individual members of the category *game*. Some games are amusing; some involve winning and losing; yet others require particular skills, etc. In such cases, establishing necessary conditions is difficult if not impossible. There need not even be a single feature which is shared by all category members. As a consequence, prototype theory discards the

idea that category membership is determined by necessary conditions. It also rejects the assumption that categorization should be construed as a comparison between the entity to be categorized and the prototypes (cognitive reference points) of a category. This does not mean, however, that the concept "prototype" is given up; prototypes of a category are characterized by a high degree of family resemblances.

In cognitive psychology, the model of category structure based on family resemblances has superseded the 'standard model' of prototype theory dominant in the 1970s. By contrast, in cognitive (more exactly: prototype) semantics the family resemblance model has so far been largely neglected, presumably because of its implications for classical prototype theory (after all, taking family resemblances seriously would effectively force us to abolish the traditional model). Here, the classical prototype model of the 1970s is still widely used, and the concept of family resemblances is presented as being in harmony with the classical model. Some scholars suggest that the family resemblance model is particularly suitable for explaining superordinate categories, such as Wittgenstein's GAME, OF ANIMAL, PLANT, FURNITURE, and CONTAINER, while the classical prototype model is particularly illuminating for those kinds of categories that are situated at the psychologically most basic level (so-called "basic-level categories" like DUCK, DOG, CAT, FLOWER, TABLE, BAG). These categories are psychologically basic in the sense that they contain the most information in relation to the cognitive cost of storing them. Their basicness is reflected in quite a number of facts: Basic-level categories are acquired very early by children, they are rapidly recognized and represent the default choice in spontaneous categorization ("Look, a ...!"). The basic level is also the highest level of classification where a single image can represent the entire category.

The connection between lexical semantics and what has been said above about categories should be obvious. According to prototype semantics, the meaning of a word like *duck* is the cognitive category that is associated with it. As a consequence, word meanings contain all of the above-mentioned properties of cognitive categories: we can distinguish central and more peripheral meanings of a lexeme; word meanings are not rigid, there are often gradual transitions between word meanings (recall the notion of contextual modulation discussed above; e.g. the different uses of *window* in *He painted the window* and *He smashed the window*). Prototype semantics is thus a 'more-or-less semantics', which – due to its integrative approach that rejects

internal heterogeneity of categories

fuzziness of category boundaries

family resemblances

basic-level categories

significance of prototype semantics for lexical semantics

the traditional distinctions between dictionary and encyclopaedic knowledge, and between meaning and cognitive categories – is much closer to psychological reality than traditional feature semantics (or ‘all-or-nothing’ semantics) in structuralist lexicology. This does not, however, diminish the usefulness of feature semantics for the description and comparison of word meanings, especially for identifying semantic structures like lexical fields and sense relations. We do not even have to completely abandon the feature approach as a theory of how meanings are mentally represented: Neither the “standard version” of prototype theory nor the more recent family resemblance model can do without a feature-based classification. It is just that the features relevant for categorization are those belonging to the prototypes of a category; moreover, there is no list of necessary features that needs to be checked for successfully assigning entities to a particular category. Ultimately, prototype and feature semantics complement each other, in the sense that feature semantics receives a sounder psychological basis.

4.2 Metaphors

The term “metaphor” (Greek *metaphora* = a transfer from *meta* = over, across + *pherein* = to carry, bear, with the noun *metaphora* already in its modern meaning) traditionally refers to a figure of speech which is based on a relationship of similarity or analogy between two terms from different cognitive domains. This similarity, which may be objectively given or merely subjective, is typically held to enable metaphors to ‘transport’ one or more properties of a (usually relatively concrete) source domain (or: vehicle) to a target domain (or: tenor), which is typically more abstract. The similarities involved in metaphorical mappings are often called the “*tertium comparationis*” (or: “ground”). Typical examples of metaphors are animal metaphors (*Smith is a pig / fox / rat / ass / stallion*), synaesthetic metaphors (extensions from one field of sensory perception to another, e.g. in *loud colours, soft / warm / sharp voice*), and so-called anthropomorphic metaphors (transfers from the human domain, especially human body parts, to all sorts of non-human domains, e.g. *leg of a table, arm of a river, face / hands of a clock, foot of a mountain, mouth of a river*).

Metaphors are traditionally neglected in lexical semantics, though they do play a role in historical semantics and in syntagmatic semantics. Historical semanticists view metaphor as an important cause of semantic change (cf. chapter IX). In syntagmatic semantics, metaphors have been explained in terms of selection restrictions. For example, in

sentences like *Smith was a rat* or *He picked one hole after the other in my argument*, selection restrictions are violated (*semantic incongruence*): in the first example [+HUMAN] clashes with [-HUMAN], in the second [+CONCRETE] (*pick a hole*) with [-CONCRETE] (*into an argument*). In cognitive semantics, metaphors are seen in a completely different light: Metaphor is not considered a purely linguistic phenomenon, but a fundamental cognitive process which enables us to grasp the world and organize our knowledge. Metaphors pervade everyday language and are crucial to human thought processes; they are not simply dispensable ornamental accessories. Many metaphors are likely to go unnoticed by ordinary speakers. This is not surprising, however. We are often no longer aware of many metaphors simply because they are firmly anchored in human cognition and have become part and parcel of ordinary language.

How do cognitive semanticists arrive at this conception of metaphors? This question can be answered by having a closer look at the process of categorization, i.e. of comparing new things to already familiar ones. At the heart of this process lies the search for similarities or analogies. It is easier to understand and describe the world if we can grasp new concepts with the help of already existing categories. In some cases this may involve extending these categories. However, such a strategy of understanding unknown concepts in terms of familiar ones has the advantage that (a) the categories we need for grasping the world are not unnecessarily multiplied, and (b) that classifications are not arbitrary, but motivated by similarities between those entities that are new and those that are already familiar. Such similarities do not have to be objectively given; (some) similarities underlying (some) metaphors are predominantly constructed by speakers. It is language users who determine the ground of comparison (*tertium comparationis*). Some metaphors strike us as novel and original even after we have encountered them many times. Cases in point are ‘poetic metaphors’ found in classical rhetoric and literary works, e.g. *My life had stood – a loaded gun in corners ...* (Emily Dickinson). Cognitive semantics is not primarily concerned with this type of metaphor, focusing instead for the most part on ‘everyday metaphors’, i.e. conventional metaphors which are not isolated but rather part of entire systems of metaphors. It is commonly assumed that these metaphorical systems allow us to structure particular areas of experience. Let us take a look at some examples of relevant metaphors (9) and systems of metaphors (10). The arrows in the following examples represent the link between source and target domains,

prototype and structural semantics complement each other

vehicle – tenor – tertium comparationis

different status in lexical and cognitive semantics

metaphor as a basic cognitive process

highlighting one of the fundamental properties of metaphors, namely their asymmetry or unidirectionality (at the most general level: concrete → abstract, spatial → non-spatial). The above-noted emphasis on the conceptual nature of metaphors in cognitive linguistics is reflected in the distinction between metaphorical concepts and metaphorical expressions. According to cognitive linguists, metaphorical concepts such as ARGUMENT IS WAR take priority over concrete metaphorical expressions like *attack* (a claim) or *shoot down* (an argument). Every metaphorical expression can be subsumed under one or several metaphorical concepts. In fact, we can use such metaphorical expressions only because the corresponding metaphorical concepts are part of our conceptual system. Conceptual metaphors are usually indicated by capital letters.

- (9) a. LIGHT → THOUGHT/KNOWLEDGE/INTELLECT
illuminating/obscure ideas, a murky discussion, a bright person, a clear argument, make ideas transparent; I see 'I understand'
- b. WAR/PHYSICAL ARGUMENT → VERBAL ARGUMENT
his criticisms were right on target, shoot down an argument, attack a weak point in someone's argument
- c. MONEY → LANGUAGE
coin new words, owe someone an answer, richness in expressions
- (10) UP – DOWN → PERSONAL WELL-BEING (e.g. HAPPINESS, HEALTH, POWER, STATUS)
- a. HAPPINESS/GOOD IS UP, BAD (LUCK) IS DOWN
feel up/down, be in high/low spirits, fall into a depression
- b. HEALTH IS UP, ILLNESS/DEATH IS DOWN
be in top shape, be at the peak of health, fall ill, drop dead
- c. CONTROL/INFLUENCE IS UP, LACK OF CONTROL/INFLUENCE IS DOWN
be in high command, at the height of power, on top of the situation, fall from power, be under control
- d. HIGH STATUS IS UP, LOW STATUS IS DOWN
rise to the top, be at the peak of your career, be at the bottom of the social hierarchy, fall in status

It is a basic assumption in cognitive semantics that such metaphors are more or less constantly used for structuring abstract concepts in terms of concrete (especially spatial) ones.

Like metaphor, metonymy (Greek *metonymia* = a change of name) is a classical figure of speech which has been assigned a completely new status in cognitive semantics. Consider the examples in (11) and (12):

- (11) a. PRODUCER FOR THE PRODUCT: He owns a Picasso and two Rembrandts.
b. OBJECT/INSTRUMENT FOR OBJECT/USER OF INSTRUMENT: The buses are on strike.
c. PLACE FOR INSTITUTION: The White House is planning to attack Iraq.
d. INSTITUTION FOR THE PEOPLE IN CHARGE: The university will reject this proposal.
e. PLACE FOR RESPONSIBLE PEOPLE: Table 10 want their bill.
- (12) PART FOR THE WHOLE (*pars pro toto*)
a. He's a good hand at gardening.
b. There are not enough good heads in this company.
c. I don't see any new faces – nothing seems to have changed.

Metonymy is also considered to be a central cognitive process which enables us to 'get a better grasp' on the world. The main difference between metaphor and metonymy is this: Metonymies do not involve a transfer from one cognitive domain to another; they are rather based on an objectively existing connection between two 'contiguous' phenomena, such that one phenomenon stands for the other. Thus, metonymies are not based on a relationship of similarity, but on contiguity; the phenomena or entities concerned are part of the same situation or, more generally, the same conceptual structure. Picasso does not resemble his pictures, buses do not resemble bus drivers, and table 10 does not resemble the restaurant guests that sit at that table. But there is certainly a direct connection between painters and their paintings, bus drivers and the buses they drive, or the plate and the dish that is served on it (just compare the standard encouragement for finishing off one's meal used in German especially when addressing children: *Jetzt iss schön den Teller auf!* lit. "Eat up the plate"). Various types of such connections are illustrated in (11) and (12); those in (12) form a separate group which in classical rhetoric is called *synecdoche*, a term which covers part-whole and whole-part relations (as in German *Zünd doch mal bitte den Weihnachtsbaum an!* lit. "Please light the Christmas tree").

The two central concepts of cognitive semantics – prototypes and metaphors – are both relevant to investigating polysemy at the level of word meaning. It is not difficult to see why prototypes are crucial to explaining polysemy: Polysemous expressions can be described as prototype categories in that they can have one or more central meanings (the prototypes), each of which can have increasingly peripheral sub-senses, and all of which are connected by different kinds of family resemblances. This can be illustrated with the help of prepositions, which are notoriously polysemous. For instance, there are countless ways in which *over* can be used as a preposition, but we can single out three central meanings: place ('above') in (13), place ('above') in connection with path ('across') in (14), and a covering sense in (15):

- (13) a. The lamp hangs over the table.
b. The painting is over the mantelpiece.
- (14) a. The plane flew over the house.
b. John walked over the hill.
c. John lives over the hill.
- (15) a. The board is over the hole.
b. The guards were posted all over the hill.
c. There was a veil over her face.

Each of these three groups of central meanings has a prototypical core (the one in the (a)-examples) and other meanings that can be systematically derived from the central meaning (e.g. *over* in (15c), which involves a vertical rather than a horizontal axis). One of the above three (groups of) prototypical senses, notably the one in (14a), has a more central position than the others, and is thus even 'more prototypical' than the other two prototypes in (13) and (15). In many cases, the connections between the different meanings are established by metaphors. Metaphorical transfer both accounts for the synchronic relations between different senses of a word, and offers a diachronic explanation how one sense develops from another. There is thus a close connection between polysemy and metaphor as a central cognitive mechanism for grasping and classifying new entities with the help of familiar ones, and abstract things with the help of concrete ones. In this context, polysemy is deliberately construed in a wide sense, i.e. a polysemous word may have senses belonging to

different word classes (e.g. *over* as a preposition, adverb, and part of a compound).

It is not only for ambiguous expressions, however, that cognitive semanticists have shown that the link between *signifié* and *signifiant* is more motivated than suggested by traditional structural semantics. The assumption that this link is far less arbitrary than is commonly conceded has led to further insights that put into perspective two central structuralist ideas: (a) linguistic categories provide speakers with the cognitive categories that enable them to grasp the world (extreme determinism); (b) therefore, the conceptual system of a language has to be analysed on its own terms. The second of these structuralist assumptions is inextricably linked to the hypothesis that languages are autonomous systems and cut up the same conceptual domain in different ways. For this reason, every language is held to create its own view of the world (extreme relativism). Cognitive semanticists challenge this position (also known as the linguistic relativity principle or the Sapir-Whorf hypothesis), arguing that the basic categorization and metaphorization processes are the same or at least very similar for all people – at least among the members of the same cultural community, but in many cases also across cultures. Consequently, the differences concerning the ways in which members of different speech communities categorize the world are limited. A well-known example illustrating this fact are colour terms. Comparative analyses of basic colour terms in different languages have shown that languages may indeed differ as to where they set the boundaries between neighbouring categories (here primary colours). Crucially, however, speakers of different languages agree on what constitutes the centre of the respective colour categories, i.e. on what constitutes the 'best' red, green, blue, etc. The perception and processing of reality is thus not primarily a matter of the native language one happens to speak. Linguistic categories do not determine our cognitive categories. Quite to the contrary, they reflect the structure of our conceptual system.

further differences
between cognitive and
structural semantics

Sapir-Whorf hypothesis

Checklist Semantics – key terms and concepts

ambiguity ↔ vagueness	fuzziness of category	condition
antonymy (complementary antonymy; contrariness; converseness; directional opposition; heteronymy)	boundaries	paradigmatic ↔ syntagmatic semantics
arbitrariness	heterogeneity of categories	polysemy
asymmetry	heteronymy / incompatibility / co-hyponymy	prototype
basic-level category	hierarchical sense relations (hyponymy; meronymy)	prototype semantics ↔ feature semantics
categorization	historical / diachronic semantics	Sapir-Whorf-hypothesis / principle of linguistic relativity
cognitive semantics	holonym	selection restrictions
collocations	homonymy (total ↔ partial; homography, homophony)	semantic feature
componential analysis	hyponymy ↔ hyperonymy	semantics ↔ pragmatics
conditions of use	idiom	semasiology ↔ onomasiology
connotation ↔ denotation	intension ↔ extension	sense ↔ reference
contextual modulation	lexical ↔ grammatical meaning	sense/lexical relations
contextual selection	lexical/semantic fields	sentence meaning
conventionality	lexical semantics / lexicology	sentence semantics
degrees of representativeness	lexicology ↔ lexicography	<i>signe différentiel</i>
descriptive / cognitive ↔ expressive ↔ social meaning	markedness	source domain, vehicle ↔ target domain, tenor
disambiguation	mental lexicon	structural semantics
encyclopaedic meaning ↔ dictionary meaning	metaphor	synonymy (descriptive / cognitive ↔ total)
family resemblance	metaphorical extension	utterance meaning
	motivation	
	necessary ↔ sufficient	

Exercises

- Which of the following uses of *mean* are relevant in a discussion of what semantics is concerned with and how it differs from pragmatics?
 - This face means trouble.
 - What does *soliloquy* mean?
 - If you're not there by six, I'll be gone. And I mean it.
 - You're meant to take off your shoes in a mosque.
 - Sorry, I don't quite understand. What exactly do you mean?
 - Do you mean to say you can't come?
 - His work means everything to him.

- I never meant her to read this letter.
- Smoke means fire.

- Fill in the chart below with + or – as appropriate:
 - establishes a link between language and the world
 - independent of a particular utterance
 - involves a set of possible referents
 - to be found in a dictionary definition
 - lists defining properties

	sense	reference	intension	extension	denotation	connotation
a.						
b.						
c.						
d.						
e.						

- Sketch the complex semantic network the verb *see* forms part of, using the following examples: *see – hear – feel, see – know – understand, see – look at – watch, see – visit – meet, see – imagine, see – sea*
 - Take the case of *see* as a starting point and sketch the conditions under which a lexeme can belong to more than one semantic field.
- Identify the lexical relations holding between the following pairs of words: *frame – window, expand – contract, mole – spy, fill – empty, (go) in – (go) out, fail – succeed, hyponym – hypernym, picture – painting, zero – love, semantics – linguistics, freedom – liberty, after – before, book – index*
- What is funny about the headline *Where's the party?* (Subtitle: *How to get young people to vote for their politicians*).
 - Explain the linguistic basis of the panda joke in (6b).
- Explain the role of the context in drawing a distinction between (a) semantics and pragmatics, (b) vagueness and ambiguity, (c) total and cognitive synonymy.
- What is structural about structural semantics?
 - What are the major differences between structural and cognitive semantics?

- 8 Which of the following statements are true, which are false?
- Compiling a semantic field and identifying the sense relations among the field members are both instances of adopting an onomasiological procedure.
 - Semantic fields are two-dimensional and have neither gaps nor words with overlapping or identical senses.
 - Polysemous lexemes cannot belong to more than one semantic field.
 - Homonymy and semantic change are two sides of the same coin.
 - Oppositeness plays an important role in the organization of our mental lexicon.
 - Hyponymy involves the inclusion of semantic features of the higher categories.
 - Semantics is exclusively concerned with the descriptive meaning of content words.
 - Prototype categories (e.g. bird, dog, cup, toy) always have fuzzy boundaries.
 - Componential analysis and prototype theory do not exclude each other.
 - Categorization always involves metaphor.
- 9 Comment on the following excerpt from the language column by William Safire in the International Herald Tribune (5 January 1998):
- ... now, however, we must come to grips with the Adverb That Ate the Language last year. When the casino tycoon Donald Trump wanted to help defeat Governor Christie Whitman of New Jersey in her re-election bid, he announced, 'I was *totally* a good friend to her, and she showed *totally* no loyalty.'
- Last month, when the White House aide Lanny Davis announced he was quitting the job of scandal spinmeister, we recalled his pronouncement: The ads that both the Democrats and Republicans aired were *totally* legal.
- ...
- Here are a few variations for today's totalists. *Entirely* has a connotation equally sweeping but not as harsh; *fully* is not as emphatic; *perfectly* is somewhat defensive; *thoroughly* has a nonsense quality, but goes to depth rather than width; *wholly* is useful in print, but its homonym *holy* makes it confusing in oratory.
- Keep your eye on *utterly* in 1998."
- 10 Compare different dictionaries concerning their policies of (a) what they make the basis for ordering the senses of (polysemous) words, (b) drawing a distinction between polysemy and homonymy, and (c) making use of semantic fields.
- 11 a. Three of the following uses of *over* are metaphorical. Identify these three and associate them with the following tenor-vehicle relationships: LIFE IS A JOURNEY, AN ACTIVITY IS A CONTAINER, CONTROL IS UP.
- He rolled the log over.
 - The power line stretches over the yard.
 - The rebels overthrew the government.
 - The city clouded over.
 - Sam still hasn't got over his divorce.
 - Don't overdo it.
- b. Find reasons why of the prototypical senses of *over* in (13) to (15) it is the 'above and across' sense that is typically regarded as the most basic one.
- 12 Path schemata typically allow a focus on the endpoint, as in (A2):
- He walked across the street. (path)
 - He lives across the street. (endpoint)
- a. Illustrate this phenomenon for *over* and comment in the light of the sentences in (B) on the limits of meaning extension for *over* and the advantages of including crosslinguistic data in studies of polysemy.
- He walked over the street.
 - *He lives over the street.
 - Er wohnt (gerade) über die Straße.
- b. Consider the use of *across* in (A2) and the use of *über* in (B3). Is it metaphorical or rather metonymic extension that is responsible for the development of these two senses?

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VII Pragmatics: The study of meaning in context

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Pragmatics (from Greek *pragma* = deed, act) is the newcomer among the major branches of linguistics. Its precise definition and status within linguistic theory is still being debated, however: Is it a linguistic subdiscipline like, for example, phonology, morphology and syntax, or is it a new, interdisciplinary approach which is concerned with all kinds of linguistic structures?

We can roughly distinguish between a broad and a narrow definition of pragmatics. In semiotics, pragmatics is traditionally defined as a subdiscipline of semiotics which is concerned with the relationship between signs and their users (cf. chapter I). The roots of pragmatics as the study of language use or linguistic performance lie in this (primarily) European tradition of research in semiotics. The pragmatic approach is usually contrasted with the structuralist approach, which is solely concerned with language systems in a vacuum, as it were (i.e. with the *langue* or the linguistic competence of a member of a certain

Introduction

VII.1 Competing definitions: Perspective or component?

broad definition