

## Review

Sebastian Löhnner (2002) *Understanding Semantics*. London: Arnold Publications  
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### Overview

*Understanding semantics* by Sebastian Löhnner is an undergraduate textbook for students with little or no knowledge in linguistics. The central questions addressed are the following: (i) what are meanings of linguistic entities; are there different kinds of meaning; (ii) what is the relationship between the linguistic entity and the meaning(s); and (iii) what is semantic knowledge and how does it relate to other kinds of knowledge? Furthermore, the book allows a first contact with semantic theories from different provenances. In addition, the student will come in touch with phonological, morphological, syntactic and pragmatic issues that are important to the understanding of the meaning of words and sentences. But you will not find much discussion on topics that vexed generations of formal semanticists: the proper treatment of quantifiers, scopal issues, anaphora, intensional contexts and presuppositions and implicatures.

The book consists of ten chapters that fall into two main parts. Part I contains a mostly pre-theoretical approximation to the notion of linguistic meaning and in particular an introduction to the main issues of semantics: ambiguity, meaning relations, and predication. Obviously, the author is a defendant of the view that meaning is (at least) bipartite in nature. One part of the meaning of a word has psychological reality; i.e., meanings are entities in the mind (= concepts) – a view familiar from mentalistic theories of meaning and cognitive semantics. The other part of meaning is familiar from formal semantics and does not have psychological reality; i.e., meanings are (possibly abstract) entities in the world that the speaker refers to. Truth-conditional and referential meaning is essentially determined by conceptual meaning. In this respect, *Understanding Semantics* may be conceived as throwing a bridge between cognitive approaches to meaning and formal semantics. Part II presents and critically reviews three theoretical approaches to linguistic meaning: structuralist semantics, cognitive semantics and formal semantics (Montague). Every chapter comes with a list of key terms (check list), an exercise section and a list for further reading (referring mainly to other introductory texts and almost never to seminal papers of the field). The introduction also includes a (really short and Chomsky-free) list of references and an index.

The book is accompanied with a web site hosted by the author that contains information on the contents, and links to reviews and corrections/typos (<http://www.phil-fak.uni-duesseldorf.de/~loebner/und-sem/>).

### What the book is about

The first two chapters highlight different aspects of linguistic meaning in a broad sense. Chapters 3 to 5 discuss relations between these meanings. And chapter 6 deals with the composition of meanings.

Chapter 1 (Meanings and semantics, p. 3-18) in a first step introduces three levels of meaning from a non-theoretical point of view: (a) expression meaning (i.e., the meaning of words, units below the word level (e.g. tense markers), phrases or sentences independent of the context on any particular occasion of the expression's use), (b) utterance meaning (i.e., expression meaning in an actual context of an utterance) and (c) communicative meaning (i.e. the meaning of an utterance as a linguistic activity: e.g. requesting, ordering, asserting etc.). Whereas, in the view of the author, expression meaning and utterance meaning is part of

semantics, communication meaning is part of pragmatics and does not belong to the range of topics that have to be covered by an introduction to semantics.

In chapter 2 (Descriptive meaning, social meaning, expressive meaning, p. 19-38) the author goes more deeply into the question of what expression meaning is.

Most expressions are said to have descriptive content (or descriptive meaning). A speaker associates with an expression a certain description.<sup>1</sup> And this description is used to ‘pick out’ objects that satisfy the description: the potential referent(s). Descriptive contents are called concepts, i.e., mental representations (very much in the sense of cognitive semantics, although the author does not mention that at that point).<sup>2</sup> In other words, descriptive contents are assumed to be ‘in the head’ of the user. One wonders at this point how exactly the relation between the mental concepts and the entities in the world is established. This just happens.<sup>3</sup>

The potential referent or the set of potential referents that are determined by a concept of a simple expression is called its denotation. Potential referents are individuals or things in the case of nouns and pronouns, events in the case of verbs, and times in the case of tense markers. Adjectives have a descriptive meaning but no referents of their own in this framework (p. 22), and neither do articles (p. 24). The author’s decision why nouns like *dog* do have referents (the set of potential dogs) and adjectives like *blue* do not (we could think of the set of potential blue things) remains however unexplained at this point of the argument. The deeper reason must lie in the modes of composition of noun meanings and meanings of attributive adjectives. Adjectives are (in the tradition of Montague) syntactic operators; see chapters 6 and 10. As far as quantifiers are concerned, the discussion in the book is restricted to the intuitive meaning of the indefinite and the definite article. Non-standardly, it is assumed that an indefinite NP refers to a particular (though not unique) thing in a given context of utterance (p. 23). Quantifiers like *every* and *no* and proper names are not discussed.

The meaning of a sentence is composed of the concepts related to the words that the sentence consists of (Chapter 6 is devoted to compositionality at the conceptual level). Thus, sentences express mental concepts, as well. At first sight, one might think of sentential concepts in this sense as mental pictures of some state-of-affairs. The mental picture corresponding to the sentence in (1a) could be paraphrased as in (1b), analogous to a more complicated example on p. 21.

- (1) a. It is raining.  
b. >the situation at the time of utterance is such that water is falling in drops from the clouds< (Merriam-Webster’s paraphrase of *rain*)

But what are the referents determined by a sentential concept? The descriptive meaning of a sentence is used (by the speaker) to ‘pick out’ those situations in which the description is met. Given some context of utterance, the referents are identified with the situations that the

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<sup>1</sup> In a first approximation to descriptive meaning one might think of descriptions as (mental) dictionary entries. They have “to be specific enough to distinguish it [the word] from all other words with different meanings” and “general enough to cover all cases in which the word may be used” (p.5). This view is basically a structuralist view.

<sup>2</sup> In chapter 3, answering the questions about the nature of concepts is outsourced to cognitive psychology (p. 40).

<sup>3</sup> Note that the descriptivist view (that may be attributed to Frege and Russell) was first criticized by Kripke (1972/1980) with respect to the meaning of proper names. Putnam (1975) extended the criticism of descriptivism to natural kind terms with his famous thought experiments on the meaning of *water*; see Reimer (2003) for an excellent overview of the concurring theories of reference.

sentence describes correctly. The sentence (1a) may be true or false in a particular situation depending on information provided by a context of utterance (in this case only the actual utterance time). If (1a) were uttered at 5 pm on the 5<sup>th</sup> of October 2002, the sentence would correctly describe situations, in which it is raining at 5 pm on the 5<sup>th</sup> of October. Note that the actual utterance situation may or may not belong to these situations. The situations that a sentential concept correctly describes given some context of utterance, i.e., the situations of which the description is true, are called “situations potentially referred to” in the author’s framework. In possible world semantics, this set of situations is usually identified with the proposition expressed by the sentence; see also the discussion in chapter 10 and e.g. Cresswell (1991). But Löbner uses the notion proposition as a synonym for the sentential concept, in accordance with Lyons’ semantics and therefore lacks a simple name for the set of situations.

What you will not find in these paragraphs is an introduction of the classical notions sense, extension, intension and natural kinds.

Social meaning regulates the proper choice of pronouns of address (in languages that differentiate formal and informal forms of pronouns); and expressive meaning captures meaning aspects of the speaker’s beliefs, attitudes and emotions. Meaning that includes all three dimensions of meaning (descriptive, social and expressive meaning) is called lexical meaning at the word level, grammatical meaning below the word level, and sentence-meaning at the sentence level). All dimensions are semantic in nature, according to Löbner (see Lyons 1995 for a similar view).

Chapter 3 (Meanings and readings, p. 39 - 56) introduces, in a first step, the notions of homonymy, polysemy, vagueness, and synonymy. All these notions are relations between lexical meanings and sentence-meanings, respectively, i.e., at the level of meaning that *includes* descriptive and non-descriptive meaning. This view has the consequence that synonymy, for example, is a relation that almost never occurs non-trivially in a natural language. In a second step, the author deals with ambiguity at the sentence level. He briefly discusses structural ambiguities and more extensively some cases of meaning shift: metonymy, metaphor and so-called differentiation, i.e., a specialization in meaning from a synchronic point of view.

Chapter 4 (Meaning and Logic, p. 57 - 84) examines meaning relations between sentences more closely and introduces contradiction, contrariety, equivalence and entailment relations as truth-conditionally based relations (the main concern of logic) and the logical properties such as contingency, logical truth and logical falsehood.

The relations are claimed to be relations between the denotations of the sentences in the sense of chapter 2; see p. 60. (i.e., relations between sets of situations that fit the descriptions associated with the sentences, given some context of utterance). But, in fact, Löbner uses a slightly different notion of truth conditions in chapter 4 from the one introduced in chapter 2 – if I reconstructed his remarks correctly.

According to chapter 2, the description associated with a sentence ‘picks out’ hypothetical situations given some context of utterance. The truth conditions of a sentence then may be stated as follows: a sentence is true in a situation *s* if and only if this situation *s* is correctly described by the description associated with the sentence, given the relevant contextual features that fix the reference of indexical expressions. This version of the truth conditions of a sentence may be called the standard view. It was criticized most prominently in Kaplan (1977).

According to chapter 4, the description associated with the sentence ‘picks out’ only potential contexts of utterance, i.e., hypothetical situations in which the sentence is potentially uttered. The truth conditions of a sentence then might boil down to the following: a sentence is true in a given situation *s* if and only if *s* is a context of utterance of the sentence and if the description correctly describes *s*, given the relevant contextual features that fix the reference of indexical expressions.

Considering the notorious sentence in (2), discussed by Kaplan, might help to understand the different notions:

(2) I am here now.

Under the first, the standard understanding of truth conditions, (2) might be true in some situations but not in others.<sup>4</sup> If Cécile utters (2) in Zurich at 5pm on October 2002 the sentence has the same truth as the sentence *Cécile is in Zurich at 5 pm October 2002*. The sentence is contingent. Still the sentence has a touch of triviality. However utters it, utters a true sentence in the situation of utterance. This intuition may be captured by the second understanding. Under the second understanding of truth conditions, the description of the sentence in (2) ‘picks out’ those utterance situations in which the speaker of the sentence is at the place of the utterance at the time of the utterance. And this description is true of all possible utterance situations of (2). A sentence that is true in all possible contexts of utterance is a logical truth (p. 62). This view, however, turns out to be problematic if we consider embedded sentences, as exemplified in (3).

(3) Necessarily, I am here now.

I comment on the truth conditions of this sentence following again Kaplan: the embedded sentence is a logical truth according to the understanding in chapter 4. If (2) is a logical truth then (3) must be one, as well, contrary to our intuitions. It is not a logical truth that the speaker of (3) is in the place where she is at the time of utterance.<sup>5</sup>

This is a merely technical point that might be irrelevant for a lot of students and teachers that are using the book. But I think the author should have motivated or at least mentioned the different varieties of truth conditions explicitly for the sake of precision. Note that the two varieties of truth conditions do not make a difference as long as we only consider unembedded sentences (as Löbner does in this textbook).

Problematic is, however, that Löbner defines logical relations in terms of quantification over possible occasions of utterances of the sentences related, although implicitly.

For example, he uses the following definition for logical entailment: “A logically entails B if (and only if) necessarily, if A is true, B is true” (p. 64). If we make the quantification explicit we might end up with a definition of the consequence relation as follows: logical entailment holds between two sentences A and B if (and only if) B is true in every potential utterance situation (= context of utterance) in which A is true.<sup>6</sup>

How can two utterances A and B be true of one and the same utterance situation? This is only possible if we assume that utterance situations may supply long enough intervals, large

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<sup>4</sup> It is supposed that a sentence (or what it expresses) is either true or false in a context of utterance/a hypothetical situation. The author calls this principle the “principle of polarity”. Note that almost everybody else calls it the “principle of bivalence” or the “principle of two-valuedness”.

<sup>5</sup> I assume accordingly that a sentence modalized with *necessarily* is true in an utterance situation if and only if the unmodalized (embedded) sentence – in this case example (2) – is true in every context of utterance.

<sup>6</sup> The graphical presentation (p. 64f) of the logical relations is a little misleading to my taste since it heavily reminds us of truth tables that define truth-functional operators like “implication”, “conjunction” etc. Under the heading “sentential logic” the meaning of conjunction (and negation) is defined. Obviously these meanings are truth-functional entities that operate on utterance meanings (p. 73).

places, large groups of speakers and addressees that include more than one token of an utterance. Otherwise logical entailment may never hold because there are no two utterance situations that are exactly identical! See Zimmermann (1997) for a comprehensive discussion of the advantages and disadvantages of an “utterance-based approach” to sentence meaning in truth-conditional semantics and the references there.

Chapter 5 (Meaning relations, p. 85 – 98) takes up meaning relations (hyponymy and various kinds of opposites) at the level of lexical meaning and so-called lexical fields. Hyponymy, for example, is defined as follows: an expression A is a hyponym of an expression B if two conditions are satisfied: a) the meaning of B is part of the meaning of A and b) the denotation of A is included in the denotation of B<sup>7</sup>. “Part of” is an intuitive basic notion of meta-language and means obviously that the expression B occurs in the description of expression A. That fact that we need both conditions is a consequence of the view that cognitive semantics and logical semantics are conceived as complementary rather than competing theories for the explanation of linguistic meaning.<sup>8</sup> I wondered what happens with expressions that do have a descriptive content in this framework but no proper denotation (e.g. *blue* – *light blue*)? How is the hyponymy definition applied in such cases?

Chapter 6 (Predication, p. 99 – 122) is devoted to the composition of meaningful expressions out of simple expressions. In this chapter, we get to know how most concepts may be modeled in this approach and how they are combined. Predicate logic has a central role in this chapter. Adjectives, verbs, nouns, and adverbs may be predicate terms, i.e. expressions with a predicate as meaning.<sup>9</sup> And predicates are thought to express open propositions (p. 101).<sup>10</sup> So, all expressions from those syntactic categories take arguments. But they differ with respect to the referential status of the arguments in a given situation of an utterance. A (indefinite) noun phrase, e.g., is assumed to deliver a description of an individual referent in a given context of utterance (if it is not in predicative use).<sup>11</sup> Verbs on the other hand take a referential event argument and some number of non-referential arguments depending on their valency. The identification of a non-referential verbal argument and a referential nominal argument, for example, is determined by two processes: a) “linking” by means of thematic roles that insures that the complements are applied in the correct order, and b) “fusion” (in the tradition of Jackendoff) conceived here as logical conjunction of the predications, provided that selectional restrictions imposed by a predicate on its arguments are met. Chapter 6 concludes the first part of the book, i.e., the presentation of the pre-theoretical

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<sup>7</sup> See the definition of hyponymy on p. 85. For the set-theoretic inclusion of denotations Löbner uses the term subordination.

<sup>8</sup> The example that motivates the fact that hyponymy between two expressions is something more complex than an inclusion relation between the denotations of those expressions is however not well chosen in my view. Löbner notes that the relation between the word for ›x’s husband‹ and the word for ›son of x’s mother-in-law‹ is not a hyponymy although a denotation-based notion of hyponymy would predict that. The lexical item that expresses the first concept is *husband*; but which word expresses the second concept in English? Hyponymy is a relation between words in the first place (p. 85) and not concepts.

<sup>9</sup> I wondered how this view is related to the mentalist concept of the descriptive meaning in chapter 2, however.

<sup>10</sup> There is some discussion in the literature in formal semantics on the proper representation of meaning and meaning composition, in particular whether predicates may be better modeled as relations or as open propositions; see the recent tradition in discourse representation theory (Kamp and Reyle 1998).

<sup>11</sup> I wondered at this point what meaning an indefinite gets in a so-called opaque context like *Mary seeks a unicorn*. A unicorn is for sure not referential in such contexts nevertheless it is possible to utter such a sentence in contexts where there is no unicorn.

approach to meaning. The remaining four chapters contain the review and discussion of different more technical approaches to meaning in the literature.

Chapter 7 (Meaning Components, p. 125 – 152) discusses and critically reviews different approaches to decomposition: (a) binary features in the structuralist tradition, (b) Dowty's meaning components in formal semantics, (c) Jackendoff's conceptual primitives and (d) Wierzbicka's semantic primes.

Chapter 8 (Meaning and language comparison, p. 153 – 170) addresses the intertranslatability of expressions of different languages in the light of the Sapir-Whorf hypothesis. Different language systems are said to reflect different ways of thinking and a particular view of the world. One section is devoted to Berlin and Kay's hypothesis that says that the system of basic color terms forms evolutionary stages.

Chapter 9 (Meaning and cognition, p. 171 – 210) discusses different models of categorization, i.e., the mental act of classifying things in the world into sets with common properties. Löbner motivates prototype theory and discusses its basic notions: prototypes, fuzzy boundaries of categories, similarity of members of a category to the prototype, and the graded structure of categories. Furthermore, he presents psychological experiments that led researchers to the introduction of those notions. Löbner criticizes the applications of prototype theoretical notions to semantics and argues that categorization is a matter of a yes-or-no membership of a thing, and that linguistic expressions are often vague in meaning (i.e., the membership depends on contextual factors). Moreover, he scrutinizes the boundaries of genuine semantic knowledge and cultural knowledge more closely and opts for a notion of linguistic meaning free of subjective, cultural associations while maintaining its status as a mental entity.

Chapter 10 (Sentence meaning and formal semantics, p. 211 – 250) introduces step by step the basic semantic notions of model-theoretic semantics and possible worlds on the basis of Montague's work and discusses the limits of this version of formal semantics avoiding the usual technicalities by introducing a new notation for lambda-abstraction and lambda-conversion, respectively.

These remarks conclude the survey over the contents of the textbook.

## **Evaluation**

The author presents in an impressive manner prevalent views of contemporary semantics.

The book is informally written and easy to read. Sometimes one would have wished, however, for a less light treatment of some of the topics: the discussion of the meaning of definite descriptions, for example, does not involve the notion of presupposition.

The book confronts the student not only with some of the theoretical apparatus of different theories and the results of related empirical studies. The author also delivers some prime examples for a critical approach to semantic theories. The critique of formal approaches to semantics, however, is – for my taste being a formally oriented semanticist – not entirely justified. On the one hand, formal semantics developed strategies to overcome the shortcomings of Montagovian version of formal semantics in recent years; see the research on so-called structured propositions by Cresswell (1985) and others where they argued for more fine-grained meanings than propositions, for example, or Zimmermann (1997) for a treatment of the compositional meaning of forms of courtesy in terms of formal semantics. On the other hand, the textbook completely ignores the interesting questions of formal semantics: the meaning of quantifiers, anaphora and structural ambiguities, and the problem of disambiguating natural language expressions by means of logical forms. That formal semantics cannot solve important problems of intuitive meaning does not prove that a mentalistic semantics is on the right track. It would have been interesting to know *why* the author prefers one philosophical viewpoint to another and to see a little more discussion about the familiar counterarguments against a mentalistic theory of language comprehension.

Unfortunately, two major reference books did not make their way into the reference list: (i) Shalom Lappin's *Handbook of Contemporary Semantic Theory* and (ii) von Stechow & Wunderlich's handbook on contemporary research on major issues in semantics.

Overall, *Understanding semantics* serves well as a textbook to those that don't have to acquire the formal tools for the reasoning about meaning in terms of formal semantics. It is meant for students that would like to get a glance on what semantics is about, more in the tradition of semiotics. The book is neither a reference book nor a research book, but it offers an insight into the fascinating world of semantic knowledge.

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