

# **Natural Language Semantics**

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# Preface

*Natural Language Semantics* discusses fundamental concepts for linguistic semantics, combining theoretical exegesis of several methods of inquiry with some detailed semantic analysis. It aims to equip the reader with the basic tools and skills needed to progress to original research in semantics. The intended readership is undergraduate and graduate students of linguistics and relevant areas of psychology, philosophy, anthropology, sociology, communications, language studies, and education. Pilot usage has shown that students find the material challenging but manageable. Basic familiarity with linguistics is assumed, because terms such as *syntax*, *morphology*, *phoneme*, *sentence*, *noun phrase*, *NP*, *verb*, *VP* are used but not explained. “Symbols and conventions” (p. xv) lists all symbols used in the book. In every chapter, definitions of terms and concepts, and also important assumptions, are highlighted and numbered for ready reference. Key words (words that refer to key concepts) are presented in SMALL CAPITALS when introduced, and then listed at the end of the chapter along with a summary of the main points made. Most sections end with exercises to aid, complement, and test learning and understanding to that point. Answers to many exercises are available on-line by application to the author; email [keith.allan@arts.monash.edu.au](mailto:keith.allan@arts.monash.edu.au). Suggestions for further reading are indicated in the text by a superscript number in square brackets: <sup>[0]</sup>. The book’s “Index” identifies in bold font the location of definitions and explications of terms.

The underlying philosophy of *Natural Language Semantics* is that semantics is about meaning in human languages and linguistic meaning is cognitively and functionally motivated. Human language is not a code in which auditory or visual signals are converted on a one-to-one basis into cognitive structures – or vice versa. Instead, when used normally, language provides a set of underspecified clues that need to be expanded by semantic and pragmatic inferences based on knowledge of the lexicon and grammar but heavily reliant upon encyclopedic knowledge and awareness of the conventions for language use. Human beings use language as an essential means of cementing social bonding and displaying it to others, at both individual and community levels. Expressing meaning through language is deeply influenced by the social-interactive functions of language – demonstrated in the pervasive importance of the cooperative principle, common ground, and implicature. Semantic theory must explain how this is achieved by giving a demonstrably rational account of the structure of the meaningful categories and constructions of human language, their properties, interrelations, and motivations. *Natural Language Semantics* takes up the challenge to elucidate paths to that goal.

Chapters 1–2 introduce fundamental assumptions about meaning in language. Chapter 1 explains compositionality, inference, the functions of a theory, and criteria for choosing a metalanguage to use in semantic analysis. The importance of context in fixing meaning is briefly examined, leading to discussion of the speech event and the conventions of cooperative behaviour in language interaction. The most significant category of context is a model of the world-and-time spoken of, through which the speaker refers to things

outside of language. In order to understand language, a hearer must be able to reconstruct this model from his or her own resources. Speaker meaning and hearer meaning is examined in Chapter 2 which focuses on the relating of 'dictionary meanings' to the world-and-time spoken of.

Chapters 3–5 are on lexicological semantics. Listemes – the words and other language expressions listed in the lexicon (= dictionary) are the principal building blocks for meaning. Chapter 3 argues that whereas information about listemes is listed in the lexicon, information about the things a listeme denotes is entered into the encyclopedia of which the lexicon is a part. The sources and stylistic characteristics of listemes and the effects of form on word meaning are the topics of Chapters 4–5. Chapter 4 identifies which kinds of morphological items are listemes; it also explains the various types of sound symbolism. Chapter 5 focuses on the semantic significance of connotation, a topic that receives minimal attention in most books on semantics.

Chapters 6–7 explain formal semantic tools in the course of beginning a semantics for clauses and sentences. Chapter 6 introduces propositional logic as a mechanical procedure for evaluating truth. This naturally leads first to discussion of entailment, then to conventional and conversational implicature: all are used extensively in the rest of the book. Conversational implicature is pragmatic inference, important in the interpretation of utterance meaning and to recognizing the speaker's presuppositions – also examined in this chapter. Chapter 7 adopts the language of mathematics in assembling tools such as predicate logic, meaning postulates, set theory, functions, and lambda expressions as rigorous means for analysing the internal semantic composition of clauses and sentences. These tools are necessary for the formal semantic specification of a lexicon entry – left aside in Chapter 3 for want of such instruments. They are extensively used in subsequent chapters.

Chapters 8–10 review cognitive and functional approaches to semantics, and lexical semantics in particular. Chapter 8 examines semantic frames, semantic fields, and analysis in terms of semantic components or primitives. It appraises semantic primitives, what a semantic description is meant to achieve, and who or what a semantic specification is designed for. An important finding in Chapter 8, amply confirmed later in the book, is that the semantic specifications for a listeme are sometimes incomplete without an accompanying statement of the standard conversational implicature. It is evident that semantic properties and relations are constrained and informed by the categories and relations that we humans experience in the world around us, and conceive of in abstract fields such as knowledge and moral or ethical behaviour. In short, semantic categories depend on human cognitive awareness. In Chapter 9, the relation between word, percept, and thing spoken of is explored within a language and across languages to reveal the influence of human perceptions and experience in determining semantic categories, properties, and relations. Chapter 10 evaluates prototype and stereotype semantics, and defines the links between linguistic labels, the things they can be used to refer to, and how reference is achieved.

Although ill-advised, the pressured teacher could end here. The last four chapters of *Natural Language Semantics* demonstrate the application of formal methods of semantic analysis to an extensive corpus of data that confirms the cognitive and functional motivations for semantic composition.

Chapters 11–12 investigate the internal semantics of clauses. Chapter 11 addresses the semantics of mood, tense, modality, and thematic roles in the semantic frames of clause predicates. Pursuing a rigorous componential analysis of clause predicates, Chapter 12 reviews and compares Jackendoff's 'lexical conceptual structures' of verbs, and the 'logical structures' of predicates in Van Valin's role and reference grammar.

Chapter 13 turns from the semantics of predicates to the internal semantics of NPs, focusing on countability, quantifiers, and (in)definiteness in English. These NP categories, together with extensionality and anaphora (Chapter 2), naming (Chapter 3), gender marking and nominal classification (Chapter 9), are what help the hearer determine whether to update the information on some entity already spoken of or to detect a new one (Chapter 13). The book ends with a section that uses insights from earlier chapters to make an exhaustive analysis of all the constituents of a simple classificatory sentence.

*Natural Language Semantics* ends with an "Epilogue" that looks back on what has been achieved and forward to the future of linguistic semantics.

No introductory book on semantics can encompass everything that an author would like to include. There is hardly a topic touched upon which has not given rise to an extensive literature and almost as many points of view as there are authors. References cited in the text or as "Notes on further reading" can fill out the semantic sketches given here. There are also annotations in "References". Handy sources of summary information are to be found in encyclopedias such as the *Encyclopedia of Languages and Linguistics* 1994 and the *International Encyclopaedia of Linguistics* 2001 [1992]. The most recent views are to be found in scholarly journals such as *Cognition*, *Cognitive Linguistics*, *Journal of Linguistics*, *Journal of Pragmatics*, *Journal of Semantics*, *Language*, *Language Sciences*, *Linguistics and Philosophy*, *Linguistic Inquiry*, *Natural Language Semantics*, *Pragmatics and Cognition*, to mention just a few. No topic in semantics is self-contained, and the sequence of chapters in this book is largely determined by the need to know about one topic in order to understand the next. Even so, in the interests of continuity and easing the learning burden, some new concepts have to be mentioned before being properly examined. In general, the later chapters contain more reliable information on a given topic than the earlier ones do.

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