



Introduction to Lexical Semantics

Theoretical Description of Lexical Semantics

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Theoretical Description of Lexical Semantics

OUTLINE OF LECTURE

INTRODUCTION

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Theoretical Description of Lexical Semantics

The term *semantics* comes from Ancient Greek: *sēmantikós*, with the meaning of significant. It is generally defined as the study of meaning in language, formal logics, and semiotics. It focuses on the relationship between signifiers — like words, phrases, signs and symbols — and what they stand for, their denotation.



1. Lexical Semantics as a Linguistic Discipline

1.1. The Subject of Lexical Semantics

***Lexical semantics** is defined as the study of word meaning, it is specifically concerned with the study of lexical (i.e. content) word meaning, as opposed to the meanings of grammatical (or function) words. This means that lexical semanticists is primarily interested in the open classes of nouns, verbs, adjectives, adverbs.*

***Lexical semantics** intersects with many other fields of linguistic inquiry, including lexicology, syntacs, pragmatics, etymology and others. Further related fields include philology, communication and semiotics.*

***Lexical Semantics** contrasts with syntacs, the study of the combinatorics of units of a language (without reference to their meaning), and pragmatics, the study of the relationships between the symbols of a language, their meaning, and the users of the language.*



1. Lexical Semantics as a Linguistic Discipline

1.2. Lexical Semantics and Linguistics Curricula

Lexical semantics fits into linguistics curricula in various ways. Some of the most common ways are:

- *as a sub-module in a semantics course (often lower-mid level)*
- *as part of a course on vocabulary / lexicology including morphology, etymology, lexicography as well as semantics (often lower-mid level)*
- *as a free-standing course (often upper level)*



1. Lexical Semantics as a Linguistic Discipline

1.2. Lexical Semantics and Linguistics Curricula

An outline of key topics in lexical semantics:

- 1. What is a lexicon? (notions related to lexicon, mental lexicon, lexis, lexical item, lexical entry, lexicon/grammar)*
- 2. What is a word? (notions related to the definitions of word/lexeme and word classes)*
- 3. What is meaning? (notions related to the aspects of meaning: denotation, connotation, social meaning, sense/reference, ambiguity/vagueness, polysemy/homonymy)*
- 4. What are meaning components? (notions related to componential and prototype approaches)*
- 5. What are the alternatives to classical theory? (notions related to modern componential approaches, conceptual semantics, natural semantic metalanguage)*
- 6. What are the semantic relations? (notions related to synonymy, antonymy, hyponymy, meronymy, semantic field analysis)*
- 7. Topics in verb meaning ontological categories*
- 8. Topics in noun meaning ontological categories*
- 9. Topics in adjective meaning ontological categories*

1. Lexical Semantics as a Linguistic Discipline

1.3. Lexical Semantics and Other Linguistic Disciplines

Linguistic Disciplines Lexical Semantics Intersects with:

Pragmatics – one of the first challenges in learning about lexical semantics is to be able to make the distinction between a word's contribution to the meaning of an utterance and the contributions of context (pragmatics). Pragmatic accounts have been proposed for many lexical semantic issues, such as polysemy (Blutner 1998) and semantic relations (Murphy 2003).

Morphology – one of the main questions of whether word class is semantically determined; the semantics of derivational morphemes and derived words also provides thinking ground (Kreidler 1998).

Psycholinguistics – most lexical semantic issues can be addressed from a psycholinguistic perspective, and psycholinguistic methods offer evidence concerning how words and meanings are organised in the mind (Aitchison 2002).

Anthropological linguistics, field linguistics, typology – cross-linguistic lexical comparison has a long history in anthropology, particularly with reference to kinship terms, biological classification and colour: Lexical-semantic typology (Talmy 1985) and contrastive lexical semantics (Weigand 1998).

Computational linguistics – much lexical semantic work nowadays is done in computational linguistics/natural language processing (NLP), including polysemy/ambiguity resolution and the development of semantic networks (Fellbaum 1998).

1. Lexical Semantics as a Linguistic Discipline

1.4. Lexical Semantic Theories

Modern Theretical Approaches in Lexical Semantics:

1. *Cognitive Semantics*
(Evans and Green 2006, Croft and Cruse 2004)
2. *Conceptual Semantics*
(Jackendoff 1983, 2002)
3. *Frame Semantics*
(FrameNet website)
4. *Generative Lexicon*
(Pustejovsky 1995)
5. *Natural Semantic Metalanguage*
(Goddard 1998, Wierzbicka 1996)

1. Lexical Semantics as a Linguistic Discipline

1.5. Teaching through Student-led Research

A List of Tools Implemented in Students' Original Research:

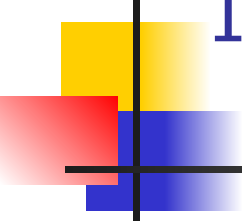
Introspection: Asking oneself how one uses language is the classic linguistic method, and it should be used throughout a lexical semantics course.

Field methods: To supplement introspection one may quiz native-speaker informants about the acceptability of a word in various contexts (or about the boundaries of the word's sense, etc.).

Dictionaries: Dictionary definitions can provide a good starting point for thinking about a word's meaning, the nature of polysemy and the relation between descriptive and prescriptive attitudes to language.

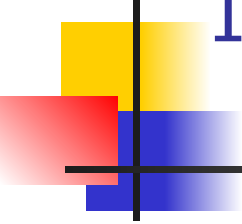
Corpora: Corpus linguistics offers a means to supplement and/or challenge introspective evidence.

Experiments: Most lexical semantics courses will not have the time/facilities to teach experimental methods, nor to teach students to use the types of software usually used in psycholinguistic experimentation. Some experiments, however, like some used by Eleanor Rosch (1978) to demonstrate prototype effects, can be carried out with pen and paper and extended to different words/categories.



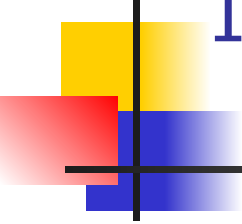
1. Lexical Semantics as a Linguistic Discipline

Questions on the Subject



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Questions on the Subject



2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

The Five Stages in the Development of Lexical Semantics:

- 1. Prestructuralist historical-philological semantics*
- 2. Structuralist semantics*
- 3. Generativist semantics*
- 4. Logical or Neostructuralist semantics*
- 5. Cognitive semantics*

2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

Peculiarities of Prestructuralist Historical-Philological Semantics:

- *the orientation of research is a diachronic one;*
- *change of meaning is narrowed down to change of word meaning;*
- *conception of meaning is associated with such psychological entities as thoughts and ideas*

2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

Peculiarities of Structuralist Semantics:

- *the study of meaning is not confined to the meaning of separate lexemes but, on the contrary, is concerned with semantic structures;*
- *the study is synchronic instead of diachronic;*
- *the study of semantics deals with language structures directly, regardless of the way they may be present in the individual's mind*

2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

Three Trends of Investigation in Structural Relations among Lexical Items:

- *relationship of semantic similarity that forms the bedrock of semantic field analysis and componential analysis*
(Trier, 1956)
- *paradigmatic lexical relations such as synonymy, antonymy and hyponymy*
(Lyons, 1963)
- *syntagmatic lexical relations being incorporated into generative grammar*
(Kats and Fodor, 1963)

2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

Peculiarities of Logical Semantics:

- *a shift of emphasis from lexical semantics to sentential semantics leading to the understanding that the meaning of the sentence is not equal to the combination of meanings of different words composing it*
- *the study of interpositional elements*
e.g. The book is on the table. vs
There is a book on the table.

2. The History of Lexical Semantics

2.1. The Theoretical Scope of Lexical Semantics

Peculiarities of Cognitive Semantics:

- *the prototypical theory of categorical structure developed in psycholinguistics by Rosch;*
- *the decompositional theory based on the experimental data applied in differentiation of overlapping meanings;*
- *the research of cognitive models on the basis of metaphors research*



2. The History of Lexical Semantics

Questions on the Subject



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3. The Empirical Scope of Lexical Semantics

3.1. Semasiology vs Onomasiology

***Semasiology** considers the isolated word and the way its meanings are manifested; semasiology takes its starting point in the word as a form and studies the meanings that the word can occur with;*

***Onomasiology** looks at the designations of a particular concept; onomasiology takes its starting point in a concept and investigates different expressions the concept can be named by.*

3. The Empirical Scope of Lexical Semantics

3.2. Qualitative vs Quantitative Aspects of LS

*Within the framework of **semasiology** qualitative aspect of investigation involves the following questions: which meanings does a word have, and how are they semantically related? The outcome is an investigation into polysemy and the relationships of metonymy and metaphor. Quantitative aspect of lexical structure involves the question whether all the readings of an item carry the same structural weight. The outcome, obviously, is an investigation into prototypicality effect of various kinds.*

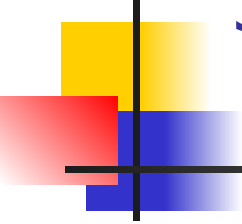
*Within the framework of **onomasiology** the qualitative aspect takes the following form: what kind of semantic relations hold between the lexical items in a lexicon? The outcome is an investigation into various kinds of lexical structuring: field relationships, antonymy, synonymy. The quantitative question takes the following onomasiological form: are there any differences in the probability that one word rather than another one will be chosen for designating things of reality.*

3. The Empirical Scope of Lexical Semantics

3.2. Qualitative vs Quantitative Aspects of LS

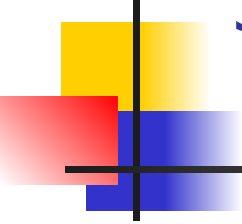
Correlation between Theoretical Approaches to the Lexical Semantics and Empirical Fields of Research

- *pre-structuralist tradition of diachronic semantics deals predominantly with the qualitative aspects of semasiology – with processes like metaphor and metonymy;*
- *structuralist semantics focuses on qualitative phenomena of an onomasiological kind, such as field relations and lexical relations like antonymy;*
- *cognitive semantics focuses on semasiological and onomasiological research based on the principle of prototype theory.*



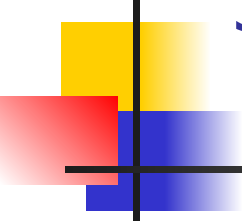
3. The Empirical Scope of Lexical Semantics

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4. Lexical Semantic Relations

4.1. The List of Major Semantic Relations

1. **Paraphrase:** *Philip purchased an automobile is a paraphrase of Philip bought a car.*
2. **Entailment, or implication:** *Alan lives in Toronto entails that Alan lives in Canada.*
3. **Inclusion:** *I like fruit includes I like apples.*
4. **Contradiction:** *I came in time contradicts I overslept.*
5. **Anomaly:** *He swallowed his dream. The rock giggled.*
6. **Lexical ambiguity:** *a large bill which may denote a large beak of a bird or a large check at a restaurant.*
7. **Denotation / connotation:** *Some air blowing through a window is called a draft when it is cold and undesired, but a breeze when it is cool and desired.*
8. **Polysemy:** *bug – insect, enthusiast, defect in a computer.*
9. **Homonymy:** *sound – noise, free from defect; swallow – to ingest, a type of a bird; band – a thin strip, a group of people.*
10. **Presupposition:** *Have another cup of tea presupposes that the addressee has already had a cup of tea.*

4. Lexical Semantic Relations

4.1. The List of Major Semantic Relations

The Classification of Homonyms Based on Pronunciation and Spelling Criteria:

- Homonyms are words of the same pronunciation and spelling, but of different meaning, e.g., sound (solid and strong, in good health, free from mistakes).
- Homophones are words of the same sound but of different spelling and meaning, e.g., buy, bye, by; piece, peace; scent, cent, sent; write, right, rite.
- Homographs are words different in sound and in meaning but accidentally identical in spelling, e.g., lead (v), lead (n); wind (n), wind (v); row (n), row (n).

The Classification of Homonyms Based on Part-of-Speech Criterion:

- Full lexical homonyms are words which represent the same category of part of speech and have the same paradigm, e.g., match, match.
- Partial homonyms are subdivided into three subgroups: Simple lexico-grammatical partial homonyms are words which belong to the same category of parts of speech. Their paradigms have one identical form, but it's never the same form, e.g., to found, found (to find). Complex lexico-grammatical partial homonyms are words of different categories of parts of speech which have one identical form in their paradigms, e.g., one, won; maid, made; rose, rose. Partial lexical homonyms are words of the same category of parts of speech which are identical only in their corresponding forms, e.g., to lie (lay, lain); to lie (lied, lied); can (could); to can (canned, canned).

4. Lexical Semantic Relations

4.1. The List of Major Semantic Relations

Sources of Homonymy:

Phonetic change - words undergo changes in the course of their historical development. As a result of such changes, two or more words which were originally pronounced differently may develop identical sound forms and become homonymous, e.g., *night*, *knight* in OE were not homonymous, as the initial [k] was pronounced, in ME the initial [k] is not pronounced.

Borrowings – a borrowed word in the final stage of its phonetic adaptation may duplicate in form either a native word or another borrowing, e.g., *write* - native; *right* - native; *rite* - Latin.

Word-building (conversion, shortening, sound-imitation) – conversion homonyms: e.g., *comb* - to comb, *pale* - to pale, *aupair* — to aupair; shortening homonyms: e.g., *fan* - enthusiastic admirer of some kind of sport or of an actor, singer, etc; *fan* (Latin borrowing) - an implement for waving lightly to produce a cool current of air; sound-imitation homonyms: e.g., *bang* - a loud, sudden, explosive noise; *bang* - a fringe of hair.

4. Lexical Semantic Relations

4.1. The List of Major Semantic Relations

Four Fundamental Types of Semantic Relations:

- Relations of proximity* - partial similarity in meaning, e.g. *eautiful* – extremely good-looking, much more so than most women; *pretty* – good-looking in an ordinary way but not really beautiful or sexually exciting; *attractive* – good-looking, especially in a way that makes you feel sexually interested.
- Relations of opposition* - the exclusion of the meaning of one word by another, e.g. *black* – *white*, *single* – *married*, *early* – *late*.
- Relations of inclusion* - the meaning of one word contains the semantic features constituting the meaning of the other word, e.g. *fruit* – *apple*, *plum*, *pear*, *cherry*, *apricots*, *pine-apple*, etc.
- Relations of equivalence* - full similarity of meaning of two or more words, e.g. *Mary lives in London* is semantically equivalent to *Mary lives in the capital of Great Britain*.

4. Lexical Semantic Relations

4.2. Hierarchical Relations in Semantics

Major Types of Hierarchical Relations:

Taxonomy, or hyponymy, relations associate an entity of a certain type (hyponym) to another entity of a more general type (hyperonym). For example: fish includes pike trout bass herring salmon; salmon, in its turn includes Chinook Spring Coho King Sockeye.

Meronymy relations describe the part-whole relation. For example: handle / cup, phonology / linguistics; tree / forest, student / class; slice / bread, centimeter / meter.

4. Lexical Semantic Relations

4.2. Hierarchical Relations in Semantics

Major Types of Meronymy Relations:

- *component / integral object: there is a clear structural and functional relation between the whole and its parts, e.g. handle / cup, phonology / linguistics;*
- *member / set or group: parts do not necessarily have a structural or functional relation with respect to the whole, parts are distinct to each other, e.g. tree / forest, student / class;*
- *portion / mass; there is a complete similarity between the parts and between the parts and the whole; parts do not have any specific function a priori with respect to the whole, e.g. slice / bread, centimeter / meter;*
- *object / material: this type of relation describes the materials from which an object is constructed or created, e.g. alcohol / wine, steel / car;*
- *sub-activity / activity or process: describes different sub-activities that form an activity in a structured way, for example in a temporally organized way, e.g. give exams / teach;*
- *precise place / area: parts do not really contribute to the whole in a functional way, this type of relations expresses spatiality, e.g. Alps / Europe.*

4. Lexical Semantic Relations

4.2. Hierarchical Relations in Semantics

Major Types of Non-branching Hierarchies:

- *a continuous hierarchy* where boundaries between elements are somewhat fuzzy: e.g. frozen – cold – mild – hot; small – average – large;
- *a non-continuous hierarchy or non-gradable hierarchy*, which in general is not based on any measurable property: e.g. sentence – phrase – word – morpheme;
- *a non-continuous and gradable hierarchy*, organized according to a given dimension: e.g. meter – centimeter.

4. Lexical Semantic Relations

4.3. Non-Hierarchical Relations in Semantics

***Synonyms** are only such words as may be defined wholly, or almost wholly, in the same terms. Usually they are distinguished from one another by an added implication or connotation, or they may differ in their idiomatic use or in their application*

***Antonyms or opposites** are words which have most semantic characteristics in common but differ in a significant way on at least one essential semantic dimension. In other words, antonyms are usually defined as a class of words grouped together on the basis of the semantic relations of opposition.*

4. Lexical Semantic Relations

4.3. Non-Hierarchical Relations in Semantics

The Classification of Synonyms:

Stylistic synonymy implies no interchangeability in context because the underlying situations are different, e.g. children – infants, dad – father. Stylistic synonyms are similar in the denotational aspect of meaning, but different in the pragmatic (and connotational) aspect. Substituting one stylistic synonym for another results in an inadequate presentation of the situation of communication.

Ideographic synonymy presents a still lower degree of semantic proximity and is observed when the connotational and the pragmatic aspects are similar, but there are certain differences in the denotational aspect of meaning of two words, e.g. forest – wood, apartment – flat, shape – form. Though ideographic synonyms correspond to one and the same referential area, i. e. denote the same thing or a set of closely related things, they are different in the denotational aspect of their meanings and their interchange would result in a slight change of the phrase they are used in.

Ideographic-stylistic synonymy is characterized by the lowest degree of semantic proximity. This type of synonyms includes synonyms which differ both in the denotational and the connotational and/or the pragmatic aspects of meaning, e.g. ask – inquire, expect – anticipate. If the synonyms in question have the same patterns of grammatical and lexical valency, they can still hardly be considered interchangeable in context.

4. Lexical Semantic Relations

4.3. Non-Hierarchical Relations in Semantics

The Classification of Antonyms, or Opposites:

Contradictories represent the type of semantic relations which are mutually opposed, they deny one another: dead – alive, single – married. Contradictories form a privative binary opposition, to use one of the words is to contradict the other: not dead = alive, not single = married.

Contraries are antonyms that can be arranged into a series according to the increasing difference in one of their qualities. The most distant elements of this series will be classified as contrary notions. Contraries are gradable antonyms: cold – hot and cool – warm which are intermediate members.

Incompatibles are antonyms which are characterized by the relations of exclusion. For example, to say morning is to say not afternoon, not evening, not night. Incompatibles differ from contradictories as incompatibles are members of the multiple-term sets while contradictories are members of two-term sets. A relation of incompatibility may be also observed between colour terms since the choice of red, for example, entails the exclusion of black, blue, yellow, etc.



4. Lexical Semantic Relations

Questions on the Subject



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