

Outline

- 1** Administrativa
 - Miscellany
 - Homework

- 2** Sense and Reference
 - Reference and Sets

Lecture 5

LCD 306: Semantics & Pragmatics

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Miscellany

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- Exam one week from today! (24 Feb)

- 1 Administrativa
 - Miscellany
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- Groups of 4
- Experimental Semantics or Pragmatics article
 - 1 Who are the authors?
 - 2 How do the authors define the language they are working on?
 - 3 What is their research question?
 - 4 What did they do for their experiment? Outline the experimental design.
 - 5 If you were to replicate this study, how would you go about it? Would you have to modify it in any way to be able to run the experiment this semester?

- 1 Administrativa
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- 2 Sense and Reference
 - Reference and Sets

- [[dogs]] = {Virgil, Sundae, Fudgie, Dalmie,...}
- The phrase “the dogs” picks out a set which contains all the real world dogs.
- [[The president of the Unites States in 2014]] = {Barack Obama}
- The phrase “the president of the United States in 2014” picks out a set which contain Barack Obama.

- Antonyms
 - Different non-overlapping sets
- Synonyms
 - Overlapping sets
- Homonyms
 - Same lexical item different senses
 - Polysemy
 - Supersets (Hyponymy) and subsets (Hypernymy)

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$, A and B are mutually exclusive antonyms if the set of entities denoted by A are not in the set of entities denoted by B, and all entities belong to one of these two sets.

$$[[A]] = \{\alpha, \beta, \gamma, \delta\}$$

$$[[B]] = \{\epsilon, \zeta, \eta, \theta\}$$

- Refers to sets that are not overlapping
- Can be mutually exclusive (contradictory)

If we have a world that contains only the entities {Karen, Christen, Janelle, Jay, Daniel, Katherine}, “American” and “Not American” are mutually exclusive antonyms if the set of entities denoted by “American” are not in the set of entities denoted by “Not American”, and all entities belong to one of these two sets.

$$[[American]] = \{Christen, Janelle, Jay, Daniel \}$$

$$[[Not American]] = \{Karen, Katherine\}$$

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$, A and B are not mutually exclusive antonyms if the set of entities denoted by A are not in the set of entities denoted by B, and there are some entities which belong to some other set(s).

$$[[A]] = \{\alpha, \beta, \gamma\}$$

$$[[B]] = \{\epsilon, \zeta, \eta\}$$

$$[[\neg A \wedge \neg B]] = \{\delta, \theta\}$$

- Refers to sets that are not overlapping
- Can be opposites, but not being a member of one doesn't entail membership in the other category. There can be entities that don't fall in one or the other

If we have a world that contains only the entities $\{\text{Karen, Christen, Janelle, Jay, Daniel, Katherine}\}$, "tall" and "short" are not mutually exclusive antonyms if the set of entities denoted by "tall" are not in the set of entities denoted by "short", and there are some entities which belong to some other set(s), such as "not tall and not short".

$$[[\text{tall}]] = \{\text{Christen, Katherine}\}$$

$$[[\text{short}]] = \{\text{Janelle, Jay}\}$$

$$[[\neg \text{tall} \wedge \neg \text{short}]] = \{\text{Karen, Daniel}\}$$

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta\}$, A and B are **perfect** synonyms if the set of entities denoted by A is the same as the set of entities denoted by B.

$$[[A]] = \{\alpha, \beta\}$$

$$[[B]] = \{\alpha, \beta\}$$

- Sets that contain exactly the same objects

If we have a world that contains only the people $\{\text{Karen, Christen, Janelle, Jay, Daniel, Katherine}\}$, "woman" and "female" are **perfect** synonyms if the set of entities denoted by "woman" is the same as the set of entities denoted by "females"

$$[[\text{woman}]] = \{\text{Karen, Janelle, Katherine}\}$$

$$[[\text{female}]] = \{\text{Karen, Janelle, Katherine}\}$$

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta\}$, A and B are “close enough” synonyms if the set of entities denoted by A contains some of the same entities denoted by B.

$$[[A]] = \{\alpha, \beta, \gamma\}$$

$$[[B]] = \{\alpha, \beta, \delta\}$$

- Sets that contain mostly the same objects

If we have a world that contains only the people $\{\text{Karen, Christen, Janelle, Jay, Daniel, Katherine}\}$, “Linguist” and “Speech Scientist” are **close enough** synonyms if the set of entities denoted by “Linguist” is almost the same as the set of entities denoted by “Speech Scientist”

$$[[\text{Linguist}]] = \{\text{Karen, Christen, Daniel}\}$$

$$[[\text{Speech Scientist}]] = \{\text{Karen, Christen, Daniel, Katherine}\}$$

- Same “word” different senses and references
 - Homophony: Sounds the same, written different
 - “gym” [dʒɪm]; a building to work out in
 - “Jim” [dʒɪm]; a person with the first name Jim
 - Homography: Sounds different, written the same
 - “read” [ri:d]; present tense of “to read”
 - “read” [ɹe:d]; past tense of “to read”
 - Polysemy: Sounds the same, written the same
 - “piece” [pi:ɪs]; a part of something
 - “piece” [pi:ɪs]; a gun

If we have a world that contains only the entities $\{\alpha, \aleph, \beta, \beth, \gamma, \beth\}$, A_1 and A_2 are homonyms if they are pronounced/written the same and if the set of entities denoted by A_1 contains different entities denoted by A_2 .

$$[[A_1]] = \{\alpha, \beta, \gamma\}$$

$$[[A_2]] = \{\aleph, \beth, \beth\}$$

- Sometimes the same lexical item is used but has different senses and different references (sets)

- Types of Polysemy
 - Meronymy
 - Holonymy
 - Polysemy

- Meronymy
 - *Pars pro toto* – Part for the whole
 - A is used to refer to B and A is a part of B
 - Hyponymy
 - Downward taxonomic shift
 - Use a subset to refer to the superset
 - Impossible for A to be A without also being B

- Using a part to refer to the whole
 - Calling someone “big ears” or “orejón”
 - Referring to your car as you “wheels”

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$, A is a hyponym if the set of entities in A are contained within the set of entities that are contained in B, yet the label A is used to refer to the set of B

$$[[A]] = \{\alpha, \beta, \gamma\}$$

$$[[B]] = \{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$$

- A subset to refer to a superset

If we have a world that contains only the entities {chihuahuas, rat terriers, German shepards, wolves, coyotes, jackals}, “dogs” is a hyponym if the set of entities denoted by “dogs” are contained within the set of entities that are denoted by “canines”, yet the word “dogs” is used to refer to the set of “canines”, including non-dog canines.

[[canines]] = {chihuahuas, rat terriers, German shepards, wolves, coyotes, jackals}

[[dogs]] = {chihuahuas, rat terriers, German shepards}

- Holonymy
 - *Totum pro parte* – Whole for the part
 - C is used to refer to D and D is a part of C
 - Hypernymy
 - Use a superset to refer to the subset
 - Upward taxonomic shift
 - Impossible for D to be D without also being C

- Using the whole to refer to a part
 - Using the word “tree” to refer to “leaves in the phrase “trees are turning red”
 - Using the word “the remote controller” to refer to the “battery” in the phrase “the remote controller is dead”

If we have a world that contains only the entities $\{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$, A is a hypernym if the set of entities in B are contained within the set of entities that are contained in A, yet the label A is used to refer to the set of B

[[A]] = $\{\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta\}$

[[B]] = $\{\alpha, \beta, \gamma\}$

- A superset to refer to a subset

Hypernymy

If we have a world that contains only the entities {chihuahuas, rat terriers, German shepards, wolves, coyotes, jackals}, “canines” is a hypernym if the set of entities in “dogs” are contained within the set of entities that are contained in “canines”, yet the label “canines” is used to refer to the set of just “dogs”

[[canines]] = {chihuahuas, rat terriers, German shepards, wolves, coyotes, jackals}

[[dogs]] = {chihuahuas, rat terriers, German shepards}

Types of Polysemy

■ Polysemy

- A cover term
- Everything else that doesn't fit squarely or neatly into 'meronymy', or 'holonymy'