Lecture 5

LCD 306: Semantics & Pragmatics

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Outline

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Important Dates

- Exam one week from today! (24 Feb)

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Homework No. 3

Article

- 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?

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The Linguistic Act

- Communicating meaning using language

Language

- Saussurian definition of language
- Language = regulated manipulation of signs
  - signifier: Arbitrary
  - signified: mental object (type)
- The signified denotes a real object (token)

Reference

- Denotation
- Selection/Formation of a set of real world objects that share a property
- A set which contains one object is still a set

$$[[A]] = \{\text{א}, \text{ב}, \text{ג}\}$$

- The phrase "A" picks out a set of objects *aleph*, *beth*, and *gimel*.

Reference

[[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.

Relationship of Sets

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

Antonymy

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)

Antonymy

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}

Antonymy

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

Antonymy

If we have a world that contains only the entities {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".

[[tall]] = {Christen, Katherine}

[[short]] = {Janelle, Jay}

[[¬tall ∧¬short]] = {Karen, Daniel}

Synonymy

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

Synonymy

If we have a world that contains only the people {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"

[[woman]] = {Karen, Janelle, Katherine}

[[female]] = {Karen, Janelle, Katherine}

Synonymy

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

Synonymy

If we have a world that contains only the people {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"

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

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

Types of Honomymy

- Same "word" different senses and references
  - Homophony: Sounds the same, written different
    - "gym" [ʤĩːm]; a building to work out in
    - "Jim" [ʤĩːm]; a person with the first name Jim
  - Homography: Sounds different, written the same
    - "read" [ɹiːd]; present tense of "to read"
    - "read" [ɹɛːd]; past tense of "to read"
  - Polysemy: Sounds the same, written the same
    - "piece" [pʰiːs]; a part of something
    - "piece" [pʰiːs]; a gun

Homonymy

If we have a world that contains only the entities $\{\alpha, \aleph, \beta, \beth, \gamma, \gimel\}$, 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.

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

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

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

Polysemy

- Types of Polysemy
  - Meronymy
  - Holonymy
  - Polysemy

Types of 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

Meronymy

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

Hyponymy

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

Hyponymy

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}

Types of Polysemy

- 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

Holonymy

- 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”

Hypernymy

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'