



# Semantics

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LING 101 SSII

# Overview

- Homeworks
- Introduction to Semantics
- Word Meaning
- Word Meaning Relations
- Semantic Feature Theory
- Prototype Theory

# Review

- Complementizer Phrase
- Embedded clauses
- Deep Structure
- Surface Structure
- Inversion
- *Do* – Insertion
- WH-Movement

# Homeworks

## Phrase Structure

- p. 199, Ex. 3, (a) – (e)
- p. 199, Ex. 4, (a), (c), (e)

## Constituency Tests

- p. 200, Ex. 6
- p. 200, Ex. 7

## Sentence Structure

- p.200, Ex. 5, (b), (d), (f)

## Embedded Clauses

- p. 201, Ex. 9, (a) and (c)

## Questions:

- p. 201, Ex. 10, (e) and (f)
- p. 201, Ex. 11, (a), (b), and (d)

# Semantics

- **Semantics** is the study of the correlation between language and meaning.
- What is the meaning of a morpheme or word?
- What is the meaning of a **sentence**?
- How can we compute the meanings of these units from the meanings of the parts?
- How does using language in context change meaning?
- How can we describe meaning?
- These are all questions which are addressed in semantics. Today we will focus on word and meaning in particular.

# Word Meaning

- We have already proposed some things about the meanings of morphemes and words:
  - Morpheme meaning -- stored in the lexical entry of the morpheme
  - Complex word meaning – built from the meaning of the component morphemes
  - Complex words with idiosyncratic meanings store those meanings in lexical entries.
- Is there a general theory of word/morpheme meaning?  
What do “definitions in the mental lexicon consist of?”

# Word Meaning

- Does the word meaning stored in the lexicon consist of:
  - A mental picture?
    - Can this be made to work for all words?
    - What about *obligation* or *promise*?
  - The set (collection) of all things in the world that the word **denotes** (refers to)?
    - This is part of meaning (called **extension**), but not all...
    - Something like *unicorn* or *infinity* has no extension, but it still has meaning.

# Word Meaning

- Try this: The meaning of word (or phrase) X is the **intension** of X – the **set of qualities or properties** that something would have to have in the real world to qualify as belonging to the extension of X
  - **Be careful:** The intension of some expression is not just any roundabout way of describing the referent of that expression!

# Word Meaning Practice

- The **extension** picks out the actual thing (or set of things) in the real world
- The **intension** is what you need to know to understand the concept (think of it as the dictionary definition)
  - **Careful**: the intension is NOT just a roundabout way of saying something.

Word	Extension	Intension
Cat		
Sing		
The UNC men's basketball coach		
The capital of France		
Unicorn		

# Word Meaning

- We have already discussed in class that there is a correlation between words, morphemes, and meaning.
- Since languages encode such wide variety of meanings into words, we can describe some words in relation to each other based on their meanings.

# Word Meaning

- **Synonymy**
  - When two words share “the same meaning in some or all contexts” (*CL*, p. 204)
    - brilliant      genius
    - superb      excellent
- **Antonymy**
  - When two words share opposite meanings in some or all contexts.
    - on      off
    - up      down

# Word Meaning

- Homophony

- When two words sound the same (i.e. have the same surface structure), but have different meanings.

- eight            ate

- their            they're            there

- Polysemy

- When one word has more than one related meaning.

# Lexicalization

- **Lexicalization**
  - The process of encoding concepts into a variety of words. (CL p. 216)
- This is highlighted by the fact that languages differ in how they chose to encode concepts
  - Separate words: *very quick*
  - One word: *swift*
- Famous example of the Inuktitut lexicalization of snow (CL, p. 216)



# Semantic Features

- Intension = set of qualities or properties...
  - How do we model “qualities or properties”?
- Two approaches, which capture different aspects of meaning
  - **Semantic features** – we’ll explore this
  - Prototypes and graded set membership
    - (See *CL*, Ch. 6, sec. 2.1 if you’re interested)
    - A robin is a better example of the concept BIRD than an ostrich is
    - Sometimes it’s hard to draw the line at where TALL begins

# Semantic Features

- **Semantic features:** A universal (?) set of properties that break down the meaning (intension) of an element into atom-like units
  - *man* → [+human, +male, +adult...]
  - *boy* → [+human, +male, -adult...]
- Is there any evidence for **semantic features** in the behavior of native speakers?
  - How would we analyze **synonyms** and **antonyms** in terms of semantic features?
  - Do semantic features influence **pronoun choice**?

# Semantic Features

- Note that semantic features are proposed because they classify words, morphemes, or linguistic expressions in a way that accounts for the language behavior of native speakers.
- So, we are **not** claiming that these features are intrinsic to objects or situations in the world, but that they reflect the way linguistic expressions are coded and stored.

# Semantic Features

- **Subcategorization** – requirements placed by a head on its complements
- Sometimes, subcategorization patterns can be shown to correlate with semantic features
  - *throw/toss/kick/fling* [<sub>NP</sub> *the boy*] [<sub>NP</sub> *the package*] (these verbs allow two NP complements)
  - *Push/pull/lift/haul* [<sub>NP</sub> *the boy*] [<sub>NP</sub> *the package*] (these verbs do not allow two NP complements)
- What is the consistent meaning difference?

# Semantic Features

- Heads can also place restrictions on the semantic features of their complements
- Verbs can even do this for the subject of their sentence
- Are these examples acceptable?
  - *The child wants to be big*
  - *The puppy wants to be big*
  - *The rock wants to be big*
  
  - *The clown frightened the child*
  - *The clown frightened the puppy*
  - *The clown frightened the rock*
  - *The storm frightened the child*

# Homeworks

- Writing Assignment 6
- Homework:
  - p. 240, Exercise 1, (a) – (d)
  - p. 241, Exercise 4
  - p. 241, Exercise 5

# Have a good day!

