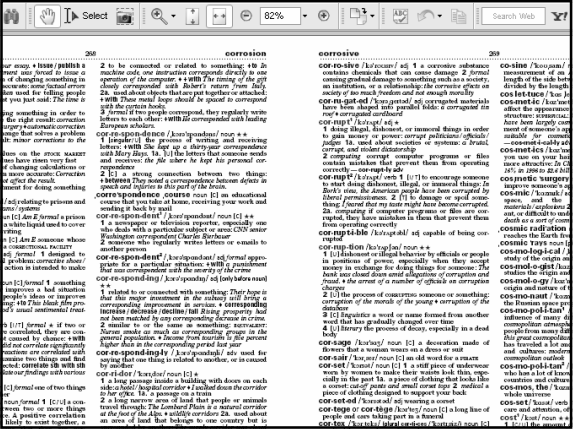# Ling 580E,F,I
# Lexical Ambiguity

Introduction and Overview

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# Lexical Ambiguity

- Why is there Lexical Ambiguity?
  - Quicky definition: Term X is ambiguous if it maps to two concepts, say $C_A$ and $C_B$
- Example: *bank* maps to $C_{financial\ institution}$ and $C_{sandbar}$
- Isn't this dysfunctional?
- Why not:
  - X maps to $C_A$
  - Y maps to $C_B$
- Wouldn't this be more functional?

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# Some Notions

- Lexical Ambiguity
  - Polysemy
    - Having or characterized by many meanings
    - Sometimes equated to Lexical Ambiguity
    - In lexicography: the *minor* meanings of a word
  - Homophony
    - The same pronunciation for words of different origins
    - Often used to refer to words that have wildly different meanings, *however that came about*.
    - In lexicography: the *major* meanings of the word

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# Some Notions

- Homophony
  - Similar sounding words.
  - Examples from English:
    1. aunt, ant
    2. two, to, too
    3. bat, bat
    4. lead, lead
  - 4 is actually a *homograph*, not a homophone
  - 3 is both a homograph and a homophone, in other words a *homonym*

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# Some Notions

- Polysemy
  - Polysemes are usually taken to be the same word, with subtle differences in meaning.
  - Which of the sense for *bank* in WordNet are polysemes, and which are homophones?
    - WordNet

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## Some Notions

- Synonymy
  - the semantic relation that holds between two words that can (in a given context) express the same meaning
  - Absolute synonymy is said by some to not exist
  - Terms that are near-synonyms, differing only in certain contexts, are called *plesionyms* (Hirst 1995)

## Some Notions

- Example plesionyms (from Hirst 1995):
  1. lie
  2. falsehood
  3. untruth
  4. fib
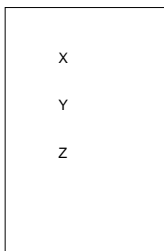  5. misrepresentation

## The Paths to Homophony

- How do polysemes come about?
  - May evolve from metaphoric uses.
  - Take *tiger*. (WordNet)

## The Paths to Homophony

- How do homophones come about?
  - Historical convergences:
    - [bæt]
      1. bat (as in mammal) from ME *bakke* for *flying rodent*,
      2. bat (as in baseball) from Celtic *bata* for *stick*
    - [naɪt]
      1. night – from Old High German
      2. knight – also from Old High German
  - Historical divergences
    - Metaphoric uses (polysemes) that gradually become different meanings
  - Borrowings and new words
    - gate

## Selecting a vocabulary

| Words | Concepts |
|-------|----------|
| X | $C_1$ |
| Y | $C_2$ |
| Z | $C_3$ |



Totals by Onsets and Nuclei

**Hmong Comparisons Normalized**



Ratio (w/o to whole space)



**German Comparisons 1 Normalized**



German Ratio (w/o to whole space)