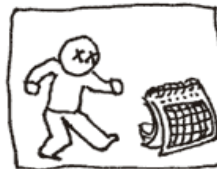


*"Our language is funny –
a fat chance and
a slim chance
are the same thing."*

-- J. Gustav White

"To kick the bucket"
Similar idioms for death in
other languages, according to
various internets:



"To kick the
Calendar"
(Polish)



"To clap a pair
of slippers"
(Czech)



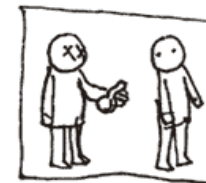
"To break one's
Pipe"
(French)



"To throw the
spoon to the corner"
(Finnish)



"To put the spoon
down"
(Latvian)



"To give away
the spoon"
(German)



"To stick the
spoon into the
roof"
(Afrikans)



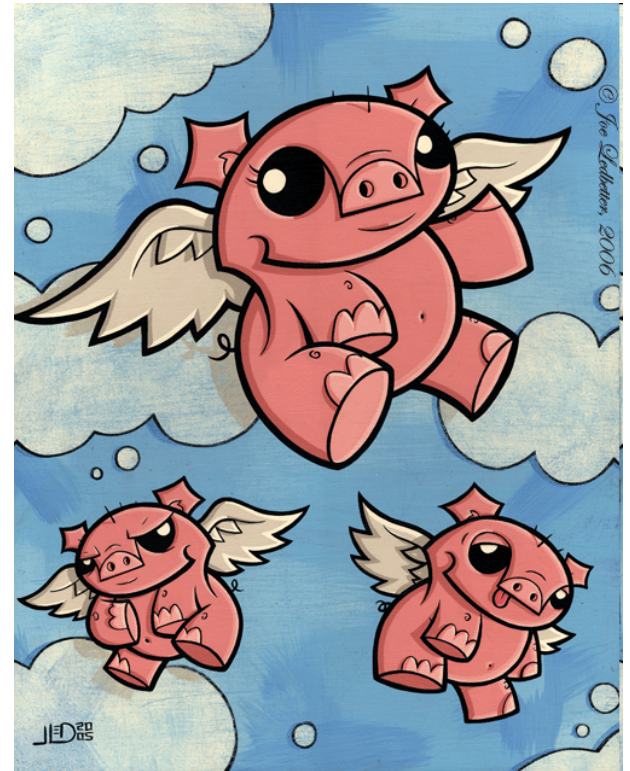
"Guys, what is
with all the spoons"
(Draivish)

Semantics 2: Compositional Semantics

Today

- Conclude lexical semantics
 - Lexical decomposition
- Compositional semantics
 - Principle of Compositionality
 - Exceptions to Compositionality
 - Entailment

Readings: 6.3-6.4





Question

- What type of semantic relationship does this pair of words have?: coffee / beverage
- a) Hypernym - hyponym
- b) Hyponym – hypernym
- c) Complementary antonyms
- d) Gradable antonyms
- e) Converse antonyms



Question

- What type of semantic relationship does this pair of words have?: coffee / beverage
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Lexical decomposition

- Analyzing a word's meaning by breaking it down into its semantic components or *features*

uncle, nephew, father, son = MALE, KINSHIP

ewe, vixen, mare, hen, doe = FEMALE, ANIMAL

puppy, kitten, chick, calf, foal = ANIMAL, YOUNG

NOTE: Antonyms differ in just *one* semantic feature;

Hyponyms of a hypernym share semantic feature(s)

Evidence for semantic relations between words

□ Slips of the tongue (i.e., performance errors)

Intended utterance

bridge of the nose

he got hot under the collar

my thesis is too long

Actual utterance

bridge of the neck

he got hot under the belt

my thesis is too short

→ Evidence that speakers store words in mental lexicons according to semantic properties.



Evidence for semantic relations between words

- **Aphasia:** language impairment resulting from acquired brain damage
 - Can lead to naming impairments more or less restricted to semantic categories (e.g., fruits/vegetables, animals, tools)



Compositional semantics

- The study of how meanings of words combine to create larger units of meaning

The lion chased the tiger ≠ The tiger chased the lion.

i.e., the whole does not equal sum of its parts

She saw the man with the binoculars.

i.e., syntactic organization is relevant for sentence meaning



Compositional semantics

□ **The Principle of Compositionality:**

The meaning of a sentence is determined by the meaning of its words in conjunction with the way they are syntactically combined.



Exceptions to Compositionality

- **Anomaly:** When phrases are well-formed syntactically but not semantically (i.e., they ‘don’t make sense’)
 - *Colorless green ideas sleep furiously.*
 - *The square root of my chair is thirty-five.*

Exceptions to Compositionality

- **Metaphor:** the use of an expression to refer to something it does not literally denote in order to suggest a similarity

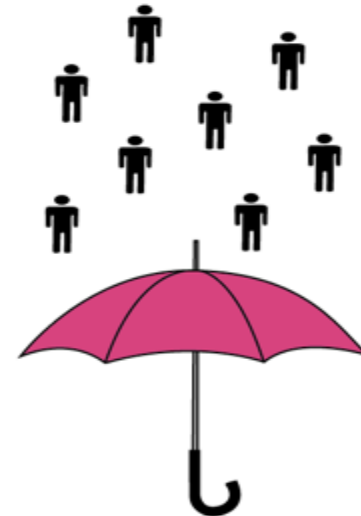
*He is a
pig.*



*She is a walking
dictionary.*



It's raining men.





Exceptions to Compositionality

- **Idioms:** Phrases with fixed meanings *not* composed of literal meanings of the words
 - *Kick the bucket* = ‘to die’
(**The bucket was kicked by John.*)
 - *When pigs fly* = ‘it will never occur’
(**She suspected pigs might actually fly tomorrow.*)
 - *Break a leg* = ‘good luck’
(**Last night at the show, her leg definitely broke.*)

Idioms in other languages

Language	literal meaning	noncompositional meaning
Witsuwit'en	's/he likes your smell'	's/he is used to you'
Czech	'to walk around hot porridge'	'to avoid coming to the main point'
Russian	'to hang noodles on one's ears'	'to tell lies'
Korean	'your belly button is bigger than your belly'	'the remedy costs more than it's worth'
Sekani	'it wagged its tail'	'it died'
Turkish	'stop ironing my head'	'enough already'



Semantic relations between sentences

- **Entailment:** The relationship between two sentences (A and B) where the truth of one (A) guarantees the truth of the other (B)

A: Smerdyakov killed Fyodor.

B: Fyodor is dead.

= “A entails B”

A: Clifford is a beagle.

B: Clifford is a dog.

A: Johnny drives a small car.

B: Johnny drives a car.



Semantic relations between sentences

- **Mutual entailment (or Paraphrase):** When A entails B *and* vice versa (A and B entail each other)

A: The lion chased the tiger.

B: The tiger was chased by the lion.

A: Jamie is older than Adam.

B: Adam is younger than Jamie.

A: June loaned some money to May.

B: May borrowed some money from June.



Question

- What is the entailment relation between these 2 sentences? A: Gertie is eating an apple. B: Gertie is eating fruit.
- a) A entails B
 - b) B entails A
 - c) They are paraphrases
 - d) No entailment



Question

- What is the entailment relation between these 2 sentences? A: Gertie is eating an apple. B: Gertie is eating fruit.
 - a) **A entails B**
 - b) B entails A
 - c) They are paraphrases
 - d) No entailment