

Sense Relations

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LING 405

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What we'll discuss...

- Chapter 6: synonym, antonym, hyponym, meronym
- For next week

Chapter 6

Synonyms

- What are synonyms?

“two words are synonymous (for a specific sense of each word) if substituting one word for the other does not change the meaning of a sentence.” (p. 108)

- John *frightened* the *children*.
- John *scared* the *kids*.
- Which words are synonymous in the above two sentences?

frightened and *scared*

children and *kids*

Synonyms

- Can we find two words that are perfect synonyms? I.e. wherever you can use one, you can also use the other, with absolutely no change in meaning?
- What is expressive meaning?
- “many other, normal words have expressive meaning [...] they express how the speaker feels about the referent” (from week 2 slides). We thus contrasted *father vs. dad, eat vs. devour, etc.*
- Perfect synonymy – where two words mean and express the exact same thing – is extremely rare. Perhaps nonexistent.

“fill the bucket”
“fill the pail”

“kick the bucket”
“kick the pail”

“a big house”
“a large house”

“the big house”
“the large house”

“my big sister”
“my large sister”

“a small dog”
“a little dog”

“my small brother”
“my little brother”

Gonna
Going to

I'm going to eat a sandwich.
I'm gonna eat a sandwich.

I'm going to France.
*I'm gonna France.

I'm gonna go to France.

Even contractions aren't
always synonymous
with the phrases that
they abbreviate.

I am
I'm

I'm here.
I am here.
I'm sorry.
I am sorry.

Yes, I am.
*Yes, I'm.

Antonyms

- What are antonyms?

“Antonyms are commonly defined as words with ‘opposite’ meaning” (p.109)

- What does ‘opposite’ mean?

“When we say that *big* is the opposite of *small*, or that *dead* is the opposite of *alive*, we mean first that the two terms can have similar collocations. [...] Second, we mean that the two terms express a value of the same property or attribute. *Big* and *small* both express degrees of size, while *dead* and *alive* both express degrees of vitality. So two words which are antonyms actually share most of their components of meaning, and differ only with respect to the value of one particular feature.” (p.109)

- Opposites are two sides of the same coin, so to speak.
- There are many different kinds of antonyms.



Simple Antonyms

- What are simple antonyms/complementary pairs?
“Complementary pairs such as *open/shut*, *alive/dead*, [...] *on/off*, etc. exhaust the range of possibilities, for things that they can collocate with.” (p.109)
- No middle ground between them; they are binary.
“the gradable use of simple antonyms is typically possible only in certain figurative or semi-idiomatic expressions.” (p.110)
- The referent must be either one or the other; it cannot be both, and it cannot be neither.
- What is this relationship between sentences called?
Contradictory!
- What are some other examples of simple antonyms?

“The light is on.”

“The light is off.”

“The door is open.”

“The door is shut.”

“The man is alive.”

“The man is dead.”

Gradable (Scalar) Antonyms

- What are gradable (scalar) antonyms?

“A defining property of gradable (or scalar) antonyms is that replacing one member of such a pair with the other produces sentences which are contrary” (p.110)

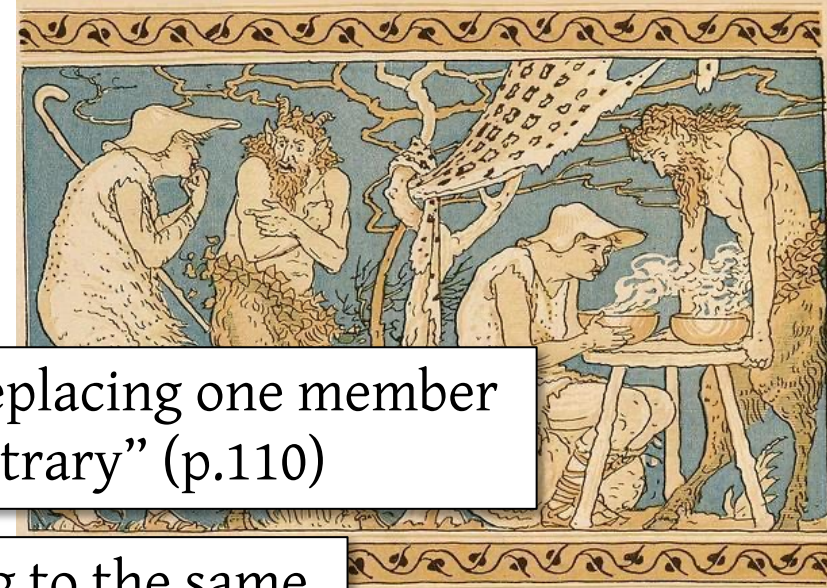
“they name opposite ends of a single scale and therefore belong to the same semantic domain” (p.111)

- What does it mean for two sentences to be contrary?

Both can't be true BUT both may be false OR one may be true and one false

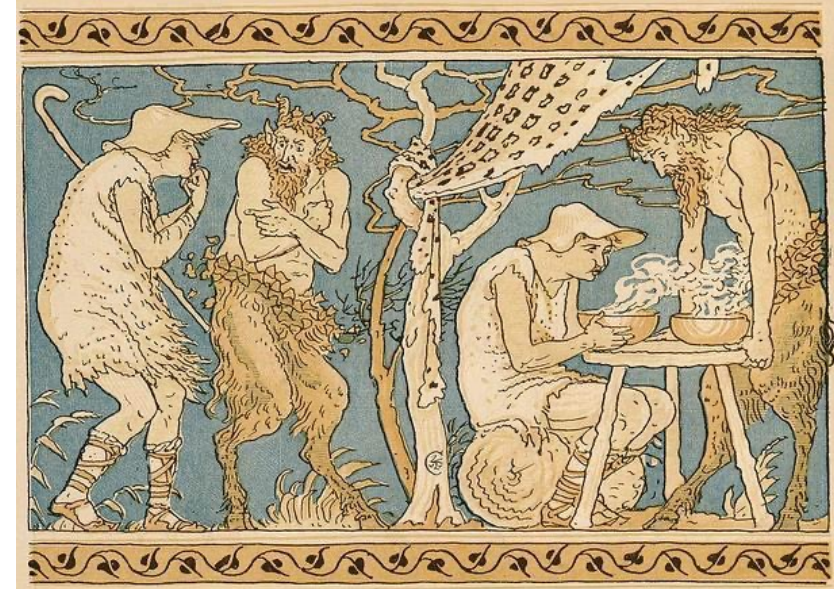
The porridge is hot.

The porridge is cold.



Gradable (Scalar) Antonyms

- There are usually intermediate terms. What are some intermediate terms between *hot* and *cold*?
- They usually name relative values, and are often vague. Does anyone know Aesop's story of the satyr and the traveller?
- Comparative terms (*colder*, *hotter*) are normal, but they'd be weird for simple antonyms (*more off*, *more on*).
- Comparative forms make a converse pair (*x is colder than y = y is hotter than x*)
- One member of the pair is seen as primary.



“How old are you?”

“How young are you?”

“How tall are you?”

“How short are you?”

Converse Pairs

- What is a converse pair?

“Converse pairs involve words that name an asymmetric relation between two entities, e.g. *parent-child*, *above-below*, *employer-employee*. [...] The two members of a converse pair express the same basic relation, with the positions of the two arguments reversed.” (p.112)

What are the converse pairs in the below sentences?

- x owns $y = y$ belongs to x
- x is above $y = y$ is below x
- x is the parent of $y = y$ is the child of x
- x is longer than $y = y$ is shorter than x

What is the relationship between these sentences?

Paraphrase, or semantically equivalent.

Reverse Pairs

- What is a reverse pair?

“Two words (normally verbs) are called reverses if they ‘denote motion or change in opposite directions’...” (p.112)

- push/pull
- come/go
- fill/empty
- heat/cool
- strengthen/weaken



Hyponymy

- What are hyponyms and hyperonyms?

“When two words stand in a generic-specific relationship, we refer to the more specific term (e.g. *moose*) as the hyponym and to the more generic term (e.g. *mammal*) as the superordinate or hyperonym.” (p.113)

- A simple positive statement involving the hyponym entails the same statement with the hyperonym.

Seabiscuit was a stallion.

Seabiscuit was a horse.

Fred stole my bicycle.

Fred took my bicycle.

John assassinated the mayor.

John killed the mayor.

Arthur looks like a squirrel.

Arthur looks like a rodent.

The pot is made of copper.

The pot is made of metal.

What are the hyponyms and hyperonyms in these sentences?

Taxonomy

- Taxonomy is a certain kind of hyponymous relationship that involves classification.
- If it's natural to say "An X is a kind of Y," there is a taxonomic relationship between X and Y.



"A squirrel is a kind of rodent."

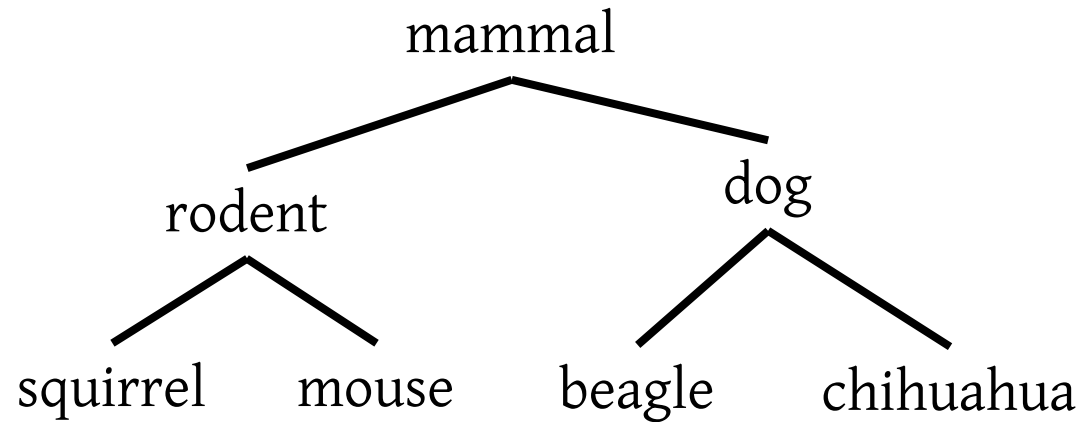
"A beagle is a kind of dog."

"A rodent is a kind of mammal."

"A dog is a kind of mammal."

"A mouse is a kind of rodent."

"A chihuahua is a kind of dog."



mouse and *squirrel* are taxonomic sisters

What other taxonomic sisters are in this tree?

Taxonomy

- Taxonomy often involves **natural kinds**. It can be hard to paraphrase natural kinds by naming their hyperonym plus a modifier.



Stallion means a male horse.

Stallion is a hyponym; horse is hyperonym.
They aren't in a taxonomic relationship.

Beagle means a ___ dog.

Beagle is a hyponym; dog is hyperonym.
They are in a taxonomic relationship.

Squirrel means a ___ rodent.

Squirrel is a hyponym; rodent is hyperonym.
They are in a taxonomic relationship.

Taxonymy

- Linguistic taxonymy is distinct from scientific taxonymy.

example, the authoritative *Kamus Dewan* (a Malay dictionary published by the national language bureau in Kuala Lumpur) gives the following definition for *labah-labah* 'spider':

(21) *labah-labah: sejenis serangga yang berkaki lapan*
'spider: a kind of insect that has eight legs'

This definition provides evidence that in Malay, *labah-labah* 'spider' is a taxonym of *serangga* 'insect', even though standard zoological classifications do not classify spiders as insects. (Thought question: does this mean that *serangga* is not an accurate translation equivalent for the English word *insect*?)

Similar examples can be found in many different languages. For example, in Tuvaluan (a Polynesian language), the words for 'turtle' and 'dolphin/whale' are taxonyms of *ika* 'fish'.⁷ The fact that turtles, dolphins and whales are not zoologically classified as fish is irrelevant to our analysis of the lexical structure of Tuvaluan.

Taxonomy

- Linguistic taxonomy is distinct from scientific taxonomy.

A ‘Big Fish’

Jonah 1:17 states (King James Version throughout):

Now the Lord had prepared a great fish to swallow up Jonah. And Jonah was in the belly of the fish three days and three nights.

The story is often referred to as “Jonah and the whale” (thanks to the English translation of the New Testament references as *whale*). The Hebrew here for “great fish,” however, is more generic—and even the original Greek word in the New Testament could refer to a generic sea creature. Thus, it could refer to any kind of fish, shark or whale.

From *Watch Jerusalem*.

Meronymy

- What is meronymy?

“A meronymy is a pair of words expressing a part-whole relationship. The word naming the part is called the meronym.” (p.115)

- *Eye* is a meronym of *face*, *finger* is a meronym of *hand*, etc.
- What are some other meronyms of *face*?
- What are some other meronyms of *hand*?

Discussion! (p.118)

Antonyms.^a Below is a list of incompatible pairs. (i) Classify each pair into one of the following types of relation: SIMPLE ANTONYMS, GRADABLE ANTONYMS, REVERSES, CONVERSES, or TAXONOMIC SISTERS. (ii) For each pair, provide at least one type of linguistic evidence (e.g. example sentences) that supports your decision, and where possible mention other types of evidence that would lend additional support.

a. *legal* *illegal*

b. *fat* *thin*

c. *raise* *lower*

d. *wine* *beer*

e. *lend to* *borrow from*

f. *lucky* *unlucky*

g. *married* *unmarried*

For next time...

- Finish reading chapter 6.
- Do the next writing assignment:

Identify the meaning relations for the following pairs of words, and provide linguistic evidence that supports your identification. For example, if given the pair *tall* and *short*, you would say that they were gradable antonyms, and the evidence might be providing two sentences, “John is tall,” and “John is short,” and saying that, since these two sentences are contrary, that supports *tall* and *short* being gradable antonyms.

- a. sharp dull
- b. two too
- c. arm leg
- d. silver metal
- e. insert extract

Possible relations include:

- simple antonyms
- gradable antonyms
- reverses
- converses
- taxonomic sisters
- hyponym–hyperonym
- meronym
- homonyms
- synonyms