Semantics +
Language Preservation

December 5, 2012
Updates

• Semantics/pragmatics homework is due today.
  • (Now would be a good time to turn it in.)
• Ideally, homework #5 will be graded by Friday.
  • If you definitely want it back by then, let me know!
• Remember the final exam:
  • EEEL 161
  • Monday, December 17th, 3:30-5:30 pm
• Don’t be late for the exam!
Big Picture

• Today’s plan:
  • Wrap up some semantic loose ends.
  • Some thoughts on language death, language preservation, and maybe even language resurrection.

• As linguists, we want to know what competent speakers of a language need to know in order to produce meaningful utterances in that language.
  • = the semantic features of a language

• There are language-specific and language-universal semantic features.
  • Whatever is language-universal may be attributed to our innate mental endowment for both language and thought.
Other Language Differences

• Every language has nouns, but different languages can develop different types of nouns
• English: count and mass nouns
• Count nouns can be enumerated or pluralized
  • two potatoes, many potatoes, *much potato
  • three chairs, many chairs, *much chair
• Mass nouns cannot be enumerated or pluralized
  • *two rices, *many rice, much rice
  • *three furnitures, *many furniture, much furniture
• shoes vs. footwear; coins vs. change
Italian

• Some mass nouns in English are count nouns in Italian.
• Ivano ha mangiato molti spaghetti ieri sera.
  “Ivano ate many spaghettis last evening.”
• Piero ha comprato un mobile.
  “Piero bought a furniture.”
• Luisella ha pettinato i suoi capelli.
  “Luisella combed her hairs.”
Collective Nouns

• American English:
  • The Minnesota Vikings are winning the game.
  • Minnesota is winning the game.

• British English:
  • Manchester United are winning the game.

• Windows is shutting down.
Women, Fire and Dangerous Things

• Dyirbal (Australia) has four types of nouns
  • Each noun must be preceded by a word marker
  1. /baji/: human males; animals
  2. /balan/: human females; water; fire; dangerous things
  3. /balam/: nonflesh food (fruit, vegetables, honey, wine)
  4. /bala/: everything else

• This system applied to new items, too:
  • Matches became a member of category 2
  • Cigarettes became a member of category 3
Compositional Rehash

• Previously, I introduced the *correspondence* theory of truth:

  1. Propositions can be true or false.
  2. Truth is the correspondence of propositions to facts.

• A valid objection: subjective vs. objective truth.
  • Subjective: “It’s chilly outside.”
  • Objective fact: “The Kings won the Stanley Cup in 2012.”

• Possible fix: subjective truths may be true from only one person’s perspective;
  • Objective truths are true from all possible perspectives.
Sapir-Whorf Hypothesis

• In the early twentieth century, the linguists Edward Sapir and Benjamin Whorf proposed the following (controversial) hypothesis:
  • A person’s conception of reality is dependent upon the language they speak.

• Edward Sapir (1929):

  “Human beings do not live in the objective world alone, nor in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society…we see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation.”
Sapir-Whorf Hypothesis

• Benjamin Whorf (1956):

“The background linguistic system (in other words, the grammar) of each language is not merely the reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual’s mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade…We dissect nature along lines laid down by our native languages.”

• Intriguing thoughts, but…

  • Hard to prove in reality.

• One interesting piece of evidence:

  • Differences in the way that languages organize the color spectrum.
Reference: Basic Color Terms

Color names for the spectrum of light in English

Note:

Hungarian distinguishes between *piros* “light red” and *voros* “dark red”

Russian distinguishes between *sinij* “dark blue” and *goluboj* “light blue”
Color names for the spectrum of light in **Shona**
(spoken in Zimbabwe)

Note: *cipswuka* applies to “orange”, “red” and “purple”
Reference: Color Terms

Color names for the spectrum of light in **Bassa**

(spoken in the Ivory Coast)
Patterns of Color Terms

• Brent Berlin and Paul Kay (1969) catalogued the color terms of 98 different languages.

• They presented speakers of different languages with an array of 329 color chips.

• Task:
  • for each color word in the speaker’s language, circle all the chips that it applies to
  • Also: circle the chip that is the best example of that color
Color Matching Results

• Every language has at least two basic color terms
  • basically: dark ("black") and light ("white")
  • Bassa is a two-color language
• Languages with three color terms add red
• Languages with four color terms add green or yellow
• Fifth color term: either green or yellow
• Sixth color term: blue
• Seventh color term: brown
• The rest: purple, pink, orange or gray
Semantic Priming

• Beyond semantic features, the meanings of words can be related to each other in very subtle ways.

• Ex: When we hear one word, it can make us (subconsciously) think of other words with related meanings.

(1) Example of part of a semantic association network.
Word Association Data (2012)

• hug - friend primes:
  love (4), happy (3), bother, companion, dog, hug, kiss, smile, there

• fountain - friend primes:
  water (3), birds, “f”, fountain, girls, goldfish, help, Lord of the Rings, mean girls, pen, pennies, sitting, soda, walk

• hug - splash primes:
  water (4), pool (2), swimming (2), cannonball, dolphin, fish, shirt, splash, tank, waterfall, waterpark
Semantic Priming Effects

• Lexical Decision
  • it is easier to determine that “doctor” is a word if you’ve just seen the word “nurse” than if you’ve just seen the word “butter”

• Word Naming
  • you can read a word out loud more quickly after you’ve read a semantically related word

• Subliminal perception
Word Nets

For more word connections, check out:
http://wordnet.princeton.edu/
Non-Compositional Meaning

- Sometimes, phrases or sentences have meanings which cannot be constructed from the literal meanings of their parts.
- He had to eat crow.
- She put her foot in her mouth.
- Bite your tongue!
- Break a leg!
- They let their hair down.
- I’ve been meaning to give you a piece of my mind.
- Don’t put the cart before the horse.
Idioms

• Syntactic transformations of idioms do not preserve their meaning.

• That old man gave me a dirty book.
  → That old man gave a dirty book to me.

• That old man gave me a dirty look.
  → ?That old man gave a dirty look to me.

• The meaning of idioms simply has to be learned on a case-by-case basis…
  • and is probably stored in something like the mental lexicon.
Idioms across languages

• That dog’s bark is worse than its bite.
  • Spanish: The dog that barks, doesn’t bite.

• It’s a small world.
  • German: How small the world is.

• Burn your bridges/cross the Rubicon.
  • Chinese: Break the woks and sink the boats.

• That’s dumb luck.
  • German: The dumbest farmers have the thickest potatoes.
Presuppositions

• The meaning of particular expressions also depends on something called presuppositions.

• Consider statements like:

  Santa Claus is asleep right now.

  John stopped beating his wife.

• In order to make sense of these statements, we have to pre-suppose that:

  Santa Claus exists.

  John was beating his wife.

• A presupposition is a necessary condition for a statement to be either true or false.
Sneaky

• Presuppositions are often used in advertising:
  “Have you had your daily vitamins?”
  “I used to think it was my fault that Windows didn’t work properly.”

• And in court:
  “How did you know that the defendant bought a knife?”

• Presupposition can be used to assert ideas without stating them explicitly.
Our conception of what might be universal among languages has recently been challenged by the linguist Daniel Everett. He has worked for many years with the Piraha people of the Amazon basin. Everett claims that the Piraha have:

- No numbers, no colors, no art, no religion, no sense of the distant future or past, and **no recursion** in their syntax!

Everett thinks that Piraha culture effectively trumps Universal Grammar:

- they refuse to talk about things for which they have no direct evidence
What Does It All Mean?

• Everett’s claims are controversial.
  
  • ⇒ Some people claim he is denigrating the cognitive abilities of the Piraha.

• This implies racism…
  
  • So he has actually been prevented from working with the Piraha any further!

• This makes it difficult to verify many of his claims, and thus the controversy lives on.

• For what it’s worth, even without all of those things in our mental lives that we normally take for granted…
  
  • The Piraha are apparently are a very happy people.
Language Death

• Language death occurs when a language is:
  • no longer acquired as a native language
  • and is no longer used by native speakers

• Many languages have died throughout history.
  • e.g., Cornish, Etruscan
  • not: Latin, Sanskrit, etc.

• Also: dialect death
Types of Language Death

• Sudden language death
  • All the speakers of a language die or are killed.
  • Ex: Tasmanian, Nicoleno (California)

• Radical language death
  • All the existing speakers stop speaking the language
  • “Language suicide”

• Gradual language death
  • Number of speakers slowly declines

• Bottom-to-top language death
  • Language survives in specific contexts (Latin, Ge’ez)
Endangered Languages

• In the present day, many languages are in danger of dying out.

• There are approximately 6,000 (give or take a thousand) languages spoken in the world.

• Check out: www.ethnologue.com

• Distribution:

  Europe           4%
  Americas         15%
  Africa           31%
  Asia + Pacific   50%
  (Indonesia + Papua New Guinea: 25%)
Endangered Languages

• Languages with less than 20,000 speakers are technically considered “endangered”

• Note also: Breton (France)
  • 1.4 million speakers in 1905
  • 250,000 speakers today

• Languages may become endangered because of government policies

• Also because of:
  • Extent to which language is used at home
  • Economic motivations
  • Decline in number of younger speakers
The Rich Get Richer

• 9 major languages are the native language of over 40% of the world’s population.
  • Top 10: Mandarin, English, Spanish, Bengali, Hindi, Portuguese, Russian, Japanese, German, Wu

• 4% (240) of the world’s languages are spoken by 96% of the world’s population

• 52% of languages are spoken by fewer than 10,000

• 50% of languages are not being transmitted to children
  • In particular: Australian and Amerindian languages
  • These languages are expected to be lost in this century
Many linguists attempt to stem the tide of language death.

- They disseminate grammatical information on dead or near-dead languages
- Develop instructional texts and educational programs
- Develop technical vocabulary
- Make audio or video recordings of the language in use
- Basic idea: collect as much linguistic data as possible on dying languages
  - ...in order to develop language descriptions

Linguists at the U of C work on endangered aboriginal languages, such as Blackfoot, Sarcee, and Dogrib.
Language Resurrection

• It is possible to bring a dead language back to life.
  • Ex: Modern Hebrew
• Latin (sort of)
• Also: Australian language Dharug
  • http://news.bbc.co.uk/2/hi/asia-pacific/7992565.stm
• And: Celtic languages
  • Welsh, Scots Gaelic, Manx…even Cornish!
  • http://www.cornish-language.org/skwardya/