INTD0112 Introduction to Linguistics

Lecture #3
Sept 14th , 2009

Announcements

- Homework #1 is now posted in both .pdf and .doc formats on the course website. It's due next Monday in class, or by 5pm by e-mail at the latest. Delay policy is as on the website:
  - 5% off if turned in after the deadline on the day it's due (that means prior to midnight).
  - 10% off if turned in on the next day after the deadline.
  - 20% off if turned in later than that.
  - Not accepted after I post the solutions (I know that's self-evident, but just in case)
- Make sure to spend a few minutes reading the ***guidelines*** to answering questions no assignments.

Questionnaire

- Thanks for filling in the questionnaire, with many interesting suggestions and comments. Here's a summary:

Topics of interest

- acquisition of language
- dialects
- how one actually tests hypotheses in linguistics
- Are there many commonalities between all human languages? How do languages originate, evolve, and split into new languages? How do grammar systems develop?

Topics of interest

- critical period for language learning
- how the brain works to process language and cases of aphasia
- universals of languages
- idiosyncrasies of different languages
- logical foundation of linguistics
- rules involving sentence structure and syntax

Topics of interest

- Philosophy of language
- development of language over the years
- accents and how they've developed
- Being able to guess the meaning of words in many languages using the roots of words from ancient languages
- the way language changes over time, specifically in how that affects translation of languages

Topics of interest

- Cognitive and more theoretical linguistics
- Creoles
- how and why languages change over time
- Development of various languages and their interrelatedness, and the source of language
- The origins of our language and how it has evolved, and language acquisition

Topics of interest

- the work of Chomsky and the controversy surrounding his theory
- relationship between language and thought
- to what degree language affects how we think and how we perceive the world
- Etymology
- Class discussion!

So, where are we?

- Human language is …

A guest?

- "Hi, Mr. Linguist. My name is Mr. D. Advocate and I'd like to sit in your class. Is that ok?"
- "Sure! Welcome to the class. So, where was I? Yes, …

So, where are we?

- Human language is special, particularly with regard to duality of patterning, displacement, creativity/discrete infinity.
- And we raised the question: Why is human language special?
- We discuss one common answer among linguists today, and evidence in its support.

So, why is human language special?

- The answer provided by linguists, and most notably by Noam Chomsky, to this question is: *Biology*.
- We learn and use language for the same reason birds fly and fish swim. We are genetically endowed with a species-specific "language faculty."

Mr. D. Advocate has a question

- Mr. D. Advocate interrupts: "*But if this was true, then animals cannot learn a human language, and from what I know some of them actually did, like Koko for example. How do you explain that?*"
- This is a very good question, actually. Let's go over some of these attempts to teach animals human language.

Primate studies

- 1930s: Gua
- 1950s: Viki
- Washoe and American Sign Language: 132 signs at five years of age. Creating novel combinations, e.g., WATER BIRD (for a swan).

Primate studies

- 1972: Koko, like Washoe, learned several hundred signs, and created new ones, e.g., FINGER BREACELET (for ring). Koko's website.

Nim Chimpsky

- Then came Nim Chimpsky in the late 1970s. Nim was trained by Herbert Terrace, and by four years of age, he had acquired 125 signs.
- Close examination of the videotapes of chimp and trainer, however, showed that there were many dissimilarities between Nim's and a human child's acquisition of language.

Nim Chimpsky

- Nim never initiated signing.
- Only 12% of his signs were spontaneous, whereas 40% were mere repetitions of the trainer's signs.
- Nim's signing was typically a request for food or social reward. He never asked questions.
- Nim did not seem to know any grammar. He rarely went beyond the two-word combinations, and when he did, the additional signs added no new information, e.g., *give orange me give eat orange me eat orange give me eat orange give me you*.

Nim Chimpsky

- Tapes of Washoe and Koko showed the same thing.
- Terrace thus concluded that these chimps never actually learned human language.
- Chimpanzee signing and symbol manipulation is more likely the result of response-reward association and/or trainers' cueing (aka dressage).

Moral of the Great Ape Debate

- Among linguists, the general belief is that animals' communication systems, while rich, sophisticated, and subtle, are *qualitatively* different from human language (notice this is contra McGregor).
- Biology just happened to have it this way.
- Yes, Mr. D. Advocate.
- "*Ok, but do we have arguments in favor of this 'biological basis of human language' view?*"
- Sure. Consider.

So rich knowledge, such a poor stimulus

- For one thing, our knowledge of language is largely unconscious. We just happen to know so much about our language even without knowing why.
- Let's consider some examples.

Stuff that you know, even though you don't know that you know it.

So, how did you know it?

Mr. D. Advocate: "*huh*?"

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- You know that "klirb" and "rnig" are not English words, but you also know that "klirb" could potentially be an English word (maybe a name of a new kind of edible CDs), whereas "rnig" can never be part of the English lexicon.
- So, how do we come to know this?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- And consider your pronunciation of the plural *-s* in the following words:

  cats

  dogs

  kisses
- You might not have noticed that before, but the *-s* is actually pronounced differently in each case. You know that, even though it's something you were never taught.

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- And while you can "eat a turkey sandwich" or just "eat", you can only "devour a turkey sandwich", but not just "devour," even though "eat" and "devour" involve the same kind of "chewing" activity on an edible object, differing only in the "intensity" of the activity.

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- You also know that while you can "vacation in France" or "summer in Paris", you cannot "*midnight on College Street" or "*noon at Ross dining hall."

  (Note that a star is linguists' convention to indicate that a language form is bad.)

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- Consider:

  I took my shirt off.

  I took off my shirt.

- But:

  I took it off.

  *I took off it.

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- We know:
  If "John gave money to the children", then we can also say that "John gave the children money."
- But we also know:
  If "John donated money to the children", we cannot say that "*John donated the children money."

  So, how do we know that?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- And how about the following two sentences? What does each mean to you?

  Anne hit the man with an umbrella.

  Visiting relatives can be a nuisance.

- So, how do we know all this?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- Consider:

  John hurt himself. (himself = John)

  John hurt him. (him ≠ John)
- But now consider:

  John said that Bill hurt himself.

  (himself = Bill, but ≠ John)
- Now consider further:

  John said that Bill hurt him.

  (him ≠ Bill, but may = John)

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- We know:

  Who did John say that Mary saw?

  Who did John say __ Mary saw?

  So, maybe the word "that" is optional.
- But now consider:

  Who did John say __ saw Mary?

  *Who did John say that saw Mary?

  So, what's the deal?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- We know this is good:

  Who did you see Mary with?

- But we also know this is bad:

  *Who did you see Mary and?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- And it gets interesting:

  Who did Mary meet at the party?

  Who did John say that Mary met at the party?

  Who did Sarah believe that John said that Mary met at the party?

  Who do you think that Sarah believed that John said that Mary met at the party?

  …..
- Where do we stop?

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- But compare with these now:

  *Who do you believe the claim that Mary met?

  *Which book did Mary talk to the author who wrote?

  *Who did Mary talk to John without meeting?

- So, why are these bad? You probably don't know why, but there's no doubt that you "know" they're bad.

Stuff that you know, even though you don't know that you know it. So, how did you know it?

- You know all of this (and more) because it is part of your "unconscious" native knowledge of English. And your grammaticality judgments are based on your linguistic "intuitions", not on what you were taught in school. It's part of your linguistic "***competence,***" (contrast with ***performance***, which we explained in class).

So rich knowledge, such a poor stimulus

- In other words, every one of us acquires a "system" of linguistic knowledge in our childhood that allows us to know what is possible and what is not possible in our native language. And we acquire it so effortlessly, in such a short time (typically five years), and without any need for formal instruction.

So rich knowledge, such a poor stimulus

- This is the so-called ***Plato's paradox***:

  "How does a system of knowledge with such complexity and abstractness arise in the mind when the stimulus bearing on that system is so impoverished?"

The biological basis for language

- Chomsky's answer: It must be that part of our linguistic knowledge is "built-in". In other words, we must be born endowed with an innate faculty to learn language, a faculty that allows us to construct rich and complex systems of knowledge on the basis of poor and noisy input data.

The biological basis for language

- This is the so-called "***poverty of the stimulus***" argument for the biological basis for language:

  If we come to acquire certain types of knowledge which cannot be attributed to the linguistic environment or "nurture", then this knowledge has to come from "nature;" it has to be genetically given.

Language and intelligence

- Mr. D. Advocate: "*But why can't our ability to learn language be part of our general intelligence as human beings?*"
- Good question, but I'm afraid we ran out of time today. We discuss this and other questions on Wednesday.

Next class agenda

- More discussion of the biological basis for human language.
- Phonetics: The sounds of language. Read the relevant sections in Chap 2, pp. 27-39.