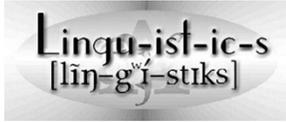


LNGT0101 Introduction to Linguistics



Lecture #3
Sept 19th, 2011

Announcements

- I put a number of linguistics-related videos on reserve at the Davis Family Library:
 - *The Human Language Series* (three parts on VHS)
 - *The Writing Code* (3 DVDs)
 - *The Linguists* (one DVD)
- [Project Nim](#)

Announcements

- Homework #1 is now posted in both .doc and .pdf formats on the course website. It's due Monday September 26 by e-mail no later than 8pm; however, if you plan to submit a handwritten copy, then you do have to turn it in here in class that day.
- Delay policy applies as on the class 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 on assignments.

Questionnaire

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

Topics of interest

- Want to know more about how language works.
- Would like to discover the tools to analyze language.
- The concept of language and how they work
- How something really fundamental to our existence, language, actually functions
- How the mind is involved with communication systems
- Animal languages

Topics of interest

- Know more about theoretical linguistics, namely morphology and grammars
- The make-up of a language, its evolution, what parts of the brain are involved, what parts of the mouth, etc.
- Morphology and the cognitive system of language
- Phonology; the IPA system; Semantics and pronunciation
- The structure of language and how the structure compares across various languages
- Comparative linguistics

Topics of interest

- Dialectology; regional dialects
- Dialects and how they intermingle with “mainstream” languages
- The connection between language and culture
- Does speaking a certain language affect the way that a person thinks/acts?
- Multilingualism and the ways in which peoples’ minds switch from language to language

Topics of interest

- The evolution and disappearance of languages
- Where languages grew from, a sort of family tree but for languages
- The modification of language over time and how such modifications differ from one another in various regions
- The history of language, particularly of Romance languages
- The evolution of language and, in general, how languages can be categorized

Topics of interest

- Comparing morphologies/syntax of different languages, studying the way languages influence one another, such as in “sprachbunds,” word-borrowing, etc.
- Cover major language families and where they came from, what unites languages within them and differentiates them from other languages
- Hope to learn about the structure, grammar, and organization of modern languages, as well as about those small obscure languages nestled into little valleys
- Native American Languages

Topics of interest

- Language retention (e.g. is there a limit to how many languages a person can learn?)
- Speech pathology
- Anything related to written/oral translation

Summary of our discussion so far

- Human language is ...

Mr. D. Advocate walks in, but let’s pretend we didn’t notice.

Summary of discussion so far

- Human language is qualitatively different from other communication systems.
- One explanation for this is Chomsky's proposal that we are born with a species-specific language faculty, the so-called *innateness hypothesis*.
- One piece of evidence for this hypothesis comes from the so-called 'poverty of the stimulus' argument: "We just seem to know so much even though the evidence is so little."

Summary of discussion so far

- Today, we continue the same discussion of the biological basis for language.
- One other argument ...
- "Excuse me, Mr. Linguist!"
- Well, I think Mr. D. Advocate has a question:

Mr. D. Advocate has a question:

- Mr. D. Advocate: "*Yes, I do. I think I understand Chomsky's poverty of the stimulus argument, but why would that entail that there is a separate module in the mind for language? Why can't our ability to learn language be part of our general intelligence as human beings?*"
- Excellent question. Any suggestions for how we can go about proving or disproving this *modularity hypothesis*?

Language and intelligence

- The main argument typically cited against language being part of our general intelligence is the so-called "*double dissociation*" argument.
- Put simply, there are cases where general intelligence is affected but language ability remains intact. And there are cases where linguistic ability is affected, but other cognitive abilities remain intact.

Language and intelligence

- Turner's Syndrome* and *Williams Syndrome*.
- Savants*: Cf. the discussion of the cases of Laura and Christopher in the textbook.
- Specific language impairments (SLIs)*: The case of the KE family (first studied by Myrna Gopnik).

The KE family

Grandparents	F(76)—M (deceased)				
Parents	F(48)-M	M(47)-F	F(45)-M	M(42)-F	F(40)-M
Children	F(19) M(18) F(14) M(10)	M(22) F(20)	F(23) F(19) F(14) F(13) M(10)	M(12) F(9) F(7) F(4)	M(19) M(17) M(16) F(14) M(12) M(10) F(9) M(8) F(8)

The KE family

- The linguistic performance of members of the KE family who had the SLI was characterized by:
 - Slow speech,
 - frequent stoppage for corrections, and
 - absence of inflections like plural and tense
 - *The boy eat three cookie.*
 - Every day he walks 8 miles. Yesterday he ...
Response: *Walk.*
- Language therapy did not help.
- Notice, however, that all cognitive abilities remained intact.

Uniformity of language acquisition

- On the other hand, in acquiring their native language, children go through the same stages, with very slight differences, e.g., consider the acquisition of negation in English:
 - no Fraser drink all tea*
 - He no bite you.*
 - I can't catch you.*
 - I don't like it.*

Uniformity of language acquisition

- Also, children go through the same language acquisition stages across different languages: babbling, one-word stage, two-word stage, telegraphic speech, until they eventually converge on the “adult” grammar.

Uniformity of language acquisition

- Children also overgeneralize, again showing they're trying to figure out a “mental” grammar:
 - comed, goed, bringed,*
 - mans, foots*
- Notice that these forms do not occur in the linguistic environment of the child. Contrary to behaviorism, then, language learning cannot be a process of habit formation, in a response-to-stimulus fashion, coupled with reinforcement.

Reinforcement goes by unnoticed

- Even worse for the behaviorist approach is that it predicts that children should actually respond positively to correction of their utterances. But there is good evidence to the contrary: children typically resist (or simply ignore) correction of their language.
- Let's look at a couple of famous anecdotal child-parent exchanges:

“Incorrigible” children

- *Exchange #1 (from Braime 1971):*
 - Child: Want other one spoon, daddy.
 - Parent: You mean, you want the other spoon.
 - Child: Yes, I want other one spoon, please Daddy.
 - Parent: Can you say 'the other spoon'?
 - Child: Other...one...spoon
 - Parent: Say 'other'
 - Child: Other
 - Parent: 'Spoon'
 - Child: Spoon
 - Parent: 'Other spoon'
 - Child: Other...spoon. Now give me other one spoon.

“Incorrigible” children

■ *Exchange #2 (from McNeill 1966):*

Child: Nobody don't like me.

Parent: No, say 'nobody likes me.'

Child: Nobody don't like me.

[repeats eight times]

Parent: No, now listen carefully; say 'nobody likes me.'

Child: Oh! Nobody don't likes me.

A critical period for language acquisition?

- Ever wondered why you're having hard time learning a foreign language, even though you had no trouble whatsoever learning your first language?
- Well, if language is a biological system, we have an answer: Certain biological abilities follow a timetable and then get either “turned off” or “degrade” considerably, as Eric Lenneberg suggested for language in 1967.
- How do we test this hypothesis?

A critical period for language acquisition?

- The cases of “wild children”.
- **Isabelle** discovered at the age of 6 with no language skills, but within a year she learned to speak and was able to function normally in school.
- **Genie** discovered at the age of 13, but her language development never matched what normal children do.
- **Chelsea** misdiagnosed as mentally ill, fitted with hearing aids at 31, but after 12 years of training her language level remained that of a 2 and ½ year old.

Language and the brain

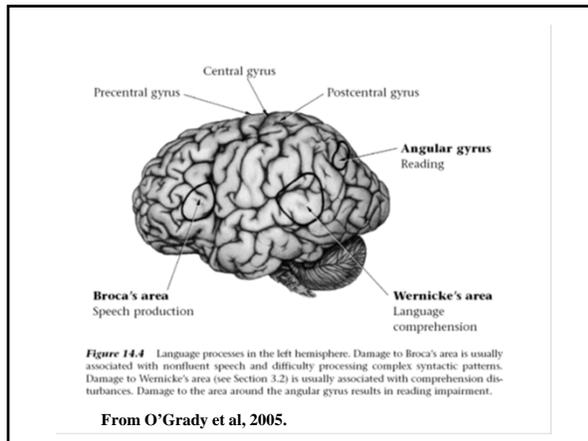
- Finally, we also know from neuroscience studies that language is neurophysiologically represented in the brain.
- For one thing, for most right-handed individuals, language is represented in the left cerebral hemisphere of the brain.

Language and the brain

- Of course since we cannot operate on the brain directly, we look for opportunities when this becomes possible (e.g., language impairment due to head injury), or make use of technology that allows us access to how the brain functions when it comes to language (measuring blood flow, electric or magnetic fields associated with certain language tasks).

Aphasia

- Aphasia is a language impairment that results from damage to the brain, due to a stroke, trauma to the head, brain infection, etc.
- There are several cases of aphasia, depending on where the trauma takes place.



Broca's aphasia

- Broca's aphasics typically have difficulty producing speech:
... har eat ... wit ... poon
 (Intended sentence: It is hard to eat with a spoon.)
- They typically have problems with so-called **function words**, e.g., articles, pronouns, prepositions, auxiliary verbs, and inflectional suffixes, from the sentence. [Example1](#) [Example2](#).

Wernicke's aphasia

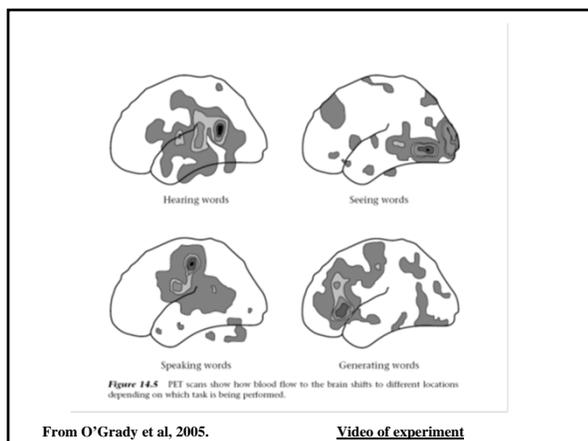
- In *Wernicke's aphasia*, patients' speech sounds very good, there are no long pauses, sentence intonation is normal, function words are used, and word order is syntactically correct. The problem is that their speech rarely makes any sense:

I could if I can help these this like you know ... to make it. We are seeing for him. That is my father.

- [Example](#).

Using technology to study language and the brain

- CT scanning
- PET
- fMRI
- MEG
- etc.
- Cf. the relevant sections in Chapter 2 of the textbook.



So, to sum up the evidence for the biological basis for language,

- There's poverty of the stimulus in language acquisition.
- There's evidence for dissociation between language and general intelligence.
- There's uniformity of language acquisition by children within the same language and across languages.
- There is good evidence that language learning is not a matter of habit formation.
- There seems to be evidence for a critical period.
- And there is good evidence that certain linguistic abilities are represented in certain parts of the brain.

Questions for thought for Wednesday

- Obviously, you should have noticed by now that linguists' understanding of what language is is quite different from what is commonly assumed.
- First, what does that entail regarding our understanding of cross-linguistic variation (between languages as well as between dialects)?
- Second, what does that mean for our understanding of the term 'grammar' and the way we approach the study of language?
- We answer both questions on Wednesday.

Next class agenda

- Universality and parity.
- Prescriptive vs. descriptive grammar.
- Phonetics: Consonants. Read Chapter 6, pp. 230-245.