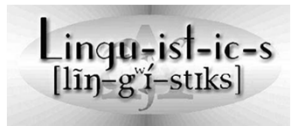


LNGT0101

Introduction to Linguistics



Lecture #4
Sept 19th, 2012

Any questions?

Any questions on Homework 1?

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Announcements

- VHS is a thing of the past. The Human Language Series is now on DVD. YES!
- Homework #1 is now due Tuesday Sept 25 at 1pm, either by e-mail or in hard copy in my mailbox at Farrell House.
- You should be able to answer all the questions on the homework after today's class.

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Announcements

- Follow up on Gopnik's study of the KE family (Cailey's question).
- If interested in more discussion of language modularity, you may want to have a look at Fodor's 1983 book *The Modularity of Mind*.
- Also, Pinker's *The Language Instinct* is a good source. As is Jackendoff's *Patterns in the Mind*.
- The view is by no means non-controversial.

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Summary of last class discussion

- We seem to have found evidence for:
 - Dissociation between language and intelligence.
 - Uniform acquisition of language by children.
 - A critical period for learning a language natively (with the caveat Meagan mentioned in class last time).
 - Today we talk about language and the brain.

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Language and the brain

- 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.

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Language and the brain

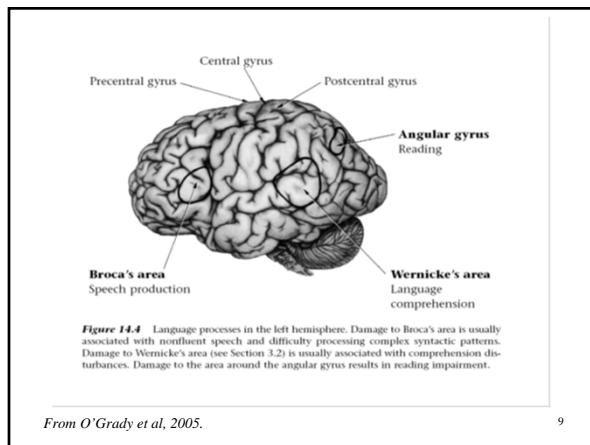
- Since we cannot operate on the brain directly, we look for opportunities when this becomes possible.
 - Cases of language impairment due to head injury.
 - Making use of technology that allows us access to how the brain functions when it comes to language (measuring blood flow, or electric and magnetic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

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Aphasia

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

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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 **function words**, e.g., articles, pronouns, prepositions, auxiliary verbs, and inflectional suffixes, from the sentence. Example1 Example2

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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.

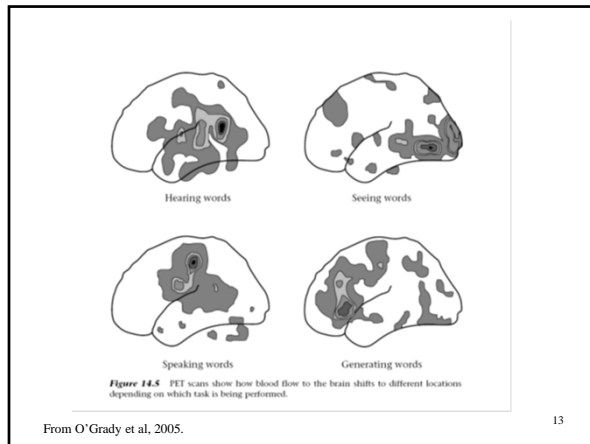
- Example1 Example2

11

Using technology to study language and the brain

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

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PET

- Watch a PET experiment for language processing here:

http://www.youtube.com/watch?v=5KXIDUo18aA&list=PL4DC464EA70E42A6D&index=3&feature=plpp_video

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Presentations and discussion of
Myth 12 and Myth 16.

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Next class agenda

- On Monday we start talking about phonetics, and the articulatory properties that phoneticians use to describe consonants and vowels.
- Read Chapter 6 on Consonants and Vowels, pp. 229-251.

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