Language
Lecture 7

Today
Language
General information
How is it ____________________________?
Disorders
Other information about Language

Language: Why should we care?
Language disorders affect lots of people (__________________________)
____________________________ disorders
Alzheimer’s, Parkinson’s
general disorders
Autism, Developmental Dyslexia

What is language?
Language is hard to define
____________________________
____________________________
____________________________
Not really any of these

Language is complicated
Other intelligent animals ____________________________language except at the most basic levels
Computers can’t learn it
____________________________has yet to understand it

Language is complicated
BUT
Every normal human child in every culture acquires
____________________________competence before the age of 5
This learning occurs simply by ________________________to language,
and does not require explicit instruction (unlike reading or math)
And, it can emerge spontaneously in children with

Speaking is complex
“Why did Ken set the ____________________________ on top of the deck?”

Speaking is complex
Select words that will ____________________________
soggy vs. wet; deck vs. patio; set vs. put
Arrange them into the ____________________________
…*set the net on his deck* NOT
…*set the deck on his net*

Look up and arrange their ____________________________
*soggy net* NOT *noggy set*

**Speaking is complex (continued)**
Add appropriate ____________________________

*WHY did ken…* vs. *why DID ken…* vs. *why did KEN…*

Code the final product in ____________________________

“How did Ken set the soggy net on top of the deck?”

**Comprehension is complex**
Word boundaries are not present in ____________________________

How do we understand where words begin and end?

**Comprehension is complex**
We are unable to take a ____________________________ and break it into its components

**Comprehension is complex**
Language is ____________________________

**Language is complex**
A head $\alpha$, $\theta$-governs its complements, which it $\theta$-marks; if lexical, $\alpha$L-marks its complements and their heads. By SPEC-head agreement $\theta$-government is extended to specifier of IP and CP. These notions are defined in terms of X-bar theory and $\theta$-theory, independently of government… -Chomsky 1986

**Don’t forget grammar**

________________________

Don’t split infinitives
Don’t end a sentence in a preposition
No double negatives

________________________

Computer lover, not computers lover
Never ____________________________ been told the rule associated with this, but we know what is right and wrong
Fan-bleeping-tastic, not fantas-bleeping-tic
Insert the word before the first stressed syllable

**Soooo….**
Language is:

Complex
Ambiguous

________________________
If it is so difficult to understand what language is, how can we study it?

**How to study language?**
Break it down into pieces

Which two systems does language use?

**Broca’s Aphasics**

**Problems**
Motor cortex is ____________
Patients have full function of their mouth
Speech Production is disturbed
Patient is ____________

**Characteristics of Broca’s Aphasia**

_________________________speech
Patients often have a subset of practiced words or phrases they say well
Uncommon or difficult words are VERY hard to ________________
Severities range from mild to severe

**Characteristics of Broca’s Aphasia**
Comprehension is usually ________________
Reading abilities
______________is good
Very slow
Requires a lot of ________________
Dyslexia may co-occur

**What may be going on here?**
Broca’s Area believed to be involved in the ________________of words
How to say a word
Think of a word
Access the ________________to generate the word

**Wernicke’s Aphasics**

**Problems**
Auditory cortex is ________________
Patients are able to normally process all ________________sounds
Speech comprehension is disturbed
Patient is ________________of deficit

**Characteristics of Wernicke’s Aphasia**

_________________________speech
speech
Unable to understand and get ____________about what they are saying
Reading abilities
Affected to ____________
Complete ____________often seen
   Inability to write
If able to write, the writing is typically like their speech

What may be going on here?
Wernicke’s Area is believed to be involved in the ____________of words
How to hear a word
   Hear the word
   Unable to process the ____________of words (the sounds that make up the words)

Conduction Aphasics
A disconnect between the ____________processing and the ____________processing
Able to understand
Able to produce, fairly well

Conduction Aphasics
Unable to do tasks that require ____________between auditory and motor
   Repetition
   No real ____________given on own speech
       Leads to errors in own speech

Other types of Aphasia
________________________Aphasia
   Complete loss of ability to understand or produce language
   BOTH ______________
   Some recovery possible
       Frequently upgraded to ______________Aphasics

Let’s recap…
It seems like there are reasonable models for ____________processing
BUT there are many problems with these models

Problems with the traditional view
Only with ______________do you get broca’s aphasia, wernicke’s aphasia, or conduction aphasia
Other models are currently being researched
What else?
Traditionally: Language is considered _____________________________
Left hemisphere believed to be more _____________________________ oriented
   Right hemisphere is believed to be more _____________________________ oriented
Broca’s and Wernicke’s areas are in the _____________________________

So is Language Really Left Lateralized?
WADA studies
   Patients are still able to _____________________________ without the use of their left hemisphere
   Patients are unable to _____________________________ though
   Language decoding is not left lateralized

What about Sign Language?
Has _____________________________
Just like a traditional language _____________________________ in nature
How is it organized in the brain?

Sign Language
Organization is the same as _____________________________
CAN develop _____________________________ in sign language
Where are the lesions?
Lesions are in _____________________________ and also in some atypical ones (visual areas)

Where’s Grammar?
__________________________ grammar is processed
Possibly in _____________________________ areas

Random extra things about language
__________________________
Other related disorders

Past tense
Debate about how we _____________________________ of language
Add “ed” to the end when something is past tense
I walked
Is this a _____________________________ rule?
   Kids make mistakes: “I runned to the store”
Do we store each _____________________________?

Other related disorders
Alexia
Dyslexia
Problems reading

Inability to name items
Unable to access stored ___________________________