Language 2

Language acquisition:
Learning, Innate Knowledge, Imitation, Analogy

- How do children acquire language?

A. Children are taught language by their parents and/or caregivers.
B. Children pick up language by imitating the utterances of those around them.
C. Language ability in children is innate, encoded in the DNA.

- How do children acquire the ability to walk?

A. Children are taught to walk by their parents and/or caregivers.
B. Children pick up walking by imitating those around them.
C. Walking ability in children is innate, encoded in the DNA.

- How do children acquire the ability to play a musical instrument?

A. Children are taught to play musical instruments by their parents and/or teachers
B. Children pick up musical instrument playing by imitating the playing of those around them.
C. Ability to play musical instruments in children is innate, encoded in the DNA.

Summary: Two views of language acquisition (Clip 1)

1. Generalized learning and problem solving abilities allow children to acquire language through imitation and by being teaching
2. Language results from specialized brain structures, specified in our DNA. Language is not learned; it is innate
3. Middle ground: How much of language does a child have to learn and how much is built in?

Children Know Language that They have Not been Taught (Clip 2)

- **Version 1:** "When did the boy say he hurt himself?" Both small children and adults accept two answers:
  - "in the bathtub"
  - "when he fell from the tree"
- **Version 2:** "When did the boy say ***how*** he hurt himself?" Small children and adults accept only one answer:
  - "in the bathtub"
  - NOT "*when he fell from the tree"
- **Claim:** Children have probably not been taught to make this (subtle?) distinction and it seems unlikely that they have often been exposed to it. Therefore, this provides evidence for innate knowledge of language structure.

- Are you persuaded that the evidence, summarized on the last slide, supports the claim that children have innate knowledge about language?

  (Can you think of other explanations for why children as well as adults make this distinction?)

A. Yes
B. Not sure
C. No

- Does it make sense to you that children typically learn grammar – i.e., the rules of syntax; how sentences can be structured – either by imitating the speakers around them or by being taught?

A. Yes

B. No

Imitation vs. Innateness (Clip 3)

The “What do you think Cookie Monster eats?” experiment

- Experimenter whispers to Sammy:
  “We know that Cookie Monster eats cookies and cakes. Ask the rat what he thinks”
- Sammy says to the rat puppet:
  “What do you think Cookie Monster eats?”
- What’s important here: Sammy easily transforms the experimenter’s instruction into a well-formed question.
  - He does this despite the theoretical complexity of the transformation required to go from one form to the other.
  - Sammy is 3 ½ and unable to follow the sequence of steps to tie a shoelace.

Summary: Inadequacy of Imitation

- Imitation is an *inadequate* explanation for language learning
  - ***Not*** because children are poor imitators
  - But because so much of what children learn is not available in their environment to be imitated
- Language is not something that you can *teach* a child, it is something that he/she has to learn on their own.

Creative Use of Language
Repetition vs. Analogy (Clip 4A)

- Even if we believe that much of language is learned by imitation, how can we explain creative use of language – production of grammatical sentences different from those ever previously experienced
  - By analogy? – Here's one example why probably not

The child hears …	By analogy, the child might produce
I painted a ***red*** barn	I painted a ***blue*** barn
I ***painted*** a red barn	I ***saw*** a red barn
I ***painted*** a barn red	But not *I ***saw*** a barn red

More Extreme Analogy Failures (Clip 4B)

Based on …	By analogy, we can say …
Taro ate a sandwich.	Taro ate.
Taro ate his words.	*Taro ate.

Based on …	By analogy, the same action is conveyed by …
John eats tomatoes.	John eats. (i.e., something)
John grows tomatoes.	*John grows. (He grows himself not something else like tomatoes)

- So, if language is, as Chomsky argues, innate, when should we expect small children to “know” important grammatical distinctions (e.g., Subject vs. Object)?

A. 5 years

B. 2 years

C. 1 year

D. 6 months

Looking Forward

- Chapter test on Language next Weds
- For Friday
  - Gleitman: Ch. 10, pp. 396 – 408
  - Norton Reader: Pinker chapter, pp. 97-107
- Coffee at Phoenix Grill?