

Lab 3

- 4 subjects so far, 1 coming up today at 3pm
- After you run your subject, please email me and let me know which one you ran
- Post more time slots! Deadline extended to **April 9th**

Processing, learning and wh- movement in kids

Ling499a

Parsing and learning

parsing

- Uncertain about abstract structures to be assigned to the input
- Generation of structural hypotheses and selection
- Hypothesis generation: constrained by grammar X
- Selection: use of multiple sources of information

learning

- Uncertain about what grammar generated the string in the input
- Generation of grammatical hypotheses and selection
- Hypothesis generation: constrained by UG
- Selection: use of multiple sources of information

Valian

- Constraining the hypothesis space w/ principles & parameters
- “active learning” model – learners actively test grammatical hypotheses
- Some important issues:
 - How do learners deal with ungrammatical input?
 - How do learners parse input that their current grammar does not license?

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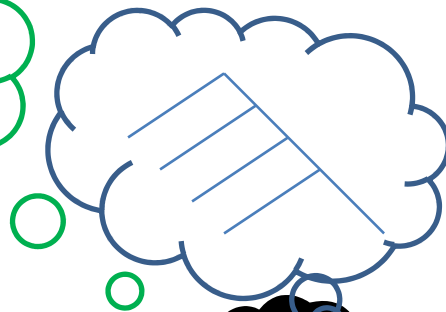
Learning involves parsing too!

Learning process

3. Hypothesize
and select
grammar

$Gx = G1?$
 $G2?$
 $G3?$
...

2. Analysis
of input



1. Input
from adults

Oaijsdfoijasnb
rbtkapiosadfi
oujansbaoijto
a...



Trueswell et al

- Children's parsers behaving differently
 - Referential principle
 - Reanalysis difficulties
- Important issues:
 - How and when does the child parser become adult-like?
 - Consequence on learning (research): If the child parser behaves differently, we cannot simply assume that children are internalizing the input the way adults would parse them

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Architectural constraints: Memory resources

Subject-object asymmetry in long-distance dependency processing

- Active gap filling: reducing memory burden
- Subject gap vs. Object gap
 - a. The reporter [that t attacked the senator] ...
 - b. The reporter [that the senator attacked t] ...
 - Reading time for the [] region slower in (b)
 - Aphasics often fail to interpret (b) correctly
 - the longer the dependencies, the harder

Seidl, Hollich and Jusczyk (2003)

- Tested comprehension of subject, object and where questions in 13, 15 and 20 month olds using preferential looking
 - What hit the keys?
 - What did the keys hit?
 - Where are the keys?
- **Show videos here**

Seidl, Hollich and Jusczyk (2003)

| | Where Q | Subject Q | Object Q |
|-----------|---------|-----------|----------|
| 20 months | ✓ | ✓ | ✓ |
| 15 months | ✓ | ✓ | x |
| 13 months | ✓ | x | x |

Questions about Seidl et al

- Why did the 15mo fail?
 - Linguistic immaturity?
 - Task demand?
- How would you test these questions?

Final paper requirement! (20pts)

- Propose your own experimental study (**max. 10 pages; due May 16th**)
 - Your research question should address grammar/parsing/learning issues we've covered in class!
 - Base your proposal on critical assessment of previous research
- Your paper should look like Intro & Method sections of published journal articles
 - **5pts**: 20min presentation of your project (4/30, 5/5)
 - **15pts**: quality of the write-up (question, method)
- **Talk to me about your (preliminary) ideas sometime in April !!!**

For Thursday

- **Read and summarize thornton & crain** (don't worry too much about the details of the syntactic analyses; you could ignore 1.2.1 if you want)
- Start making appointments to discuss your presentation / final paper