Background

Disfluency…ummm…uhhhh…

• Disfluencies produced more when words are tougher to retrieve e.g. low frequency (Goldman-Eisler, 1968)
• Listeners rapidly infer reference to hard-to-name objects from disfluency (Arnold, Hudson-Kam, & Tanenhaus, 2007)
• Canceled if speaker has object agnosia

Pragmatic inferences: Three hypotheses
1. No speaker modeling; only use of conventionalized cues - ruled out by Arnold, et al. (2007), Grodner & Sedivy (in press)
2. Modeling is specific to particular speakers/situations; thus is highly flexible
3. Speaker models develop gradually, they can be suspended but not rapidly altered based on top down cues
To tease apart 2 and 3, we introduce a speaker who is only impaired for one category of items

Experiment 1

• Goal: Replicate disfluency effect from Arnold et al. (2007)
• Ss told that the speaker was a “female professional” (no impairments)

Click on thee…ummm…purple number 6.

• Fluent or disfluent instructions
• Instructions referred equally often to numbers, letters and the hard-to-name squiggles
• Speaker: typical, number-impaired, or letter-impaired

Predictions

Following a disfluency…

• Unimpaired speaker condition: look longer at the squiggle than the letter or number
• Impaired speaker condition: Flexible speaker modeling: look longer at the squiggle vs. unimpaired category, but not with the impaired category
• Suspended speaker modeling: no difference between the two impairment conditions

Experiment 2

Is the effect modulated by knowledge about the speaker?

• Number- or Letter-impaired
• Looked only at Number and Squiggle displays
• Catch trials: speaker fails to remember the referent’s name
  • Ss clicked on the number 90% in the number-impaired condition, and 4% for letter-impaired, p < .01

Summary

• Listeners can cancel pragmatic inferences when they believe the speaker is unusual
• No evidence that specific speaker characteristics are modeled during on-line processing

References