Do listeners model speakers in on-line sentence comprehension?

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**Pragmatic Inferences**

- Are inferences conventionalized or based on mental-state modeling?
- Evidence for on-line speaker-modeling
  - Inferences made in on-line processing disappear if listeners believe the speaker is socially/linguistically unusual
  - Adjectives (Grodner & Sedivy, in press)
  - Disfluency (Arnold, Hudson-Kam & Tanenhaus, 2007)

**Question**

To what extent do pragmatic inferences depend on beliefs about the speaker?

- Evidence so far is consistent with slower processing of the same inferences or with canceled inferences
- Previous studies look at prediction, not interpretation
- Instructions always disambiguated reference
- If speaker impairments truly cancel inferences, interpretation in a globally ambiguous sentence should be affected

**Design**

- Visual world: TOBII eye tracker
- Novel objects, novel words – globally ambiguous instructions
  - Similar to Nadig, Sedivy, Bortfeld, & Joshi (2003)
  - Unique referent only if contrast is inferred from the adjective

- **Speaker manipulation**: described as another student (reliable) or someone with social/linguistic impairments (unreliable); based on Grodner & Sedivy (in press)

**Predictions**

- **Reliable Speaker**: look at and choose target more than competitor
- **Unreliable Speaker**:
  - On-line processing: look equally to target and competitor
  - Final interpretation:
    - **Canceled inference**: choose target and comp. at chance
    - **Slower inference**: choose target more than competitor

**Experiment 1: Eye movement data**

- **Aim**: Replicate unreliable-speaker effect from Grodner & Sedivy

**Final Interpretation**

- What people clicked on in Experiment 1
- Additional data from web-based sample, Experiment 2, n=227

**Results**

- All groups chose target (item with a contrast object) above chance, p’s < .05
- No sig. difference between reliable and unreliable speaker conditions, p’s > .05

**Summary**

- Knowledge that a speaker is atypical affects online processing but does not necessarily block inferences

**Future Directions**

- Need to explore other types of pragmatic inferences
- Other types of speaker manipulations

**References**

