Pronoun Resolution, Cue Frequency, and Cue Reliability
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Pronoun resolution is influenced, but not determined, by many contextual cues. Which factors matter most in acquisition?

- cue frequency
- cue reliability

**First-Mention**

1. Sally sent the toy to Mary. She bought candy.
2. Sally talked with Mary on the phone. She had lots to say.

**Frequency:** high
**Reliability:** low
**Acquisition:** Weak & slow at 4-6yo (Arnold et al., 2007; Song & Fisher, 2007)

**Implicit Causality** (Garvey & Caramazza, 1974)

1. Sally frightens Mary because she is from Cambridge.
2. Sally fears Mary because she is from Cambridge.

**Implicit Consequentiality**

1. Because Sally frightens Mary, she is going to Cambridge.
2. Because Sally fears Mary, she is going to Cambridge.

Modulated by verb class (Brown & Fish, 1983; Hartshorne & Snedeker, under review)

**Frequency:** low
**Reliability:** high
**Acquisition:** no prior data

**Experiments**

- Visual world paradigm (Tanenhaus et al., 1995)
- Experiencer-object (subject-biased) verbs
- Experiencer-subject (Object-biased) verbs:
  - admire, like, love, hate

**Implicit Causality:**

- "Dora likes D.W. very much, because she is such a nice girl. Can you point to her?"

**Implicit Consequentiality:**

- "Because Dora likes D.W. very much, she is really gonna want to be friends. Can you point to her?"

**Discussion**

- Syos show adult-like processing of implicit causality and implicit consequentiality.
- Development of pronoun resolution may depend on:
  - Cue frequency, not reliability, or
  - Driven by broader ability to infer coherence relations
- Rapid online pronoun resolution was seen only experiencer-object verbs, only in implicit causality sentences.
- Perhaps because of semantic roles? (Pustejovsky, 1995)

**References**

- Hartshorne, J.K. & Snedeker, J. (under review). What is implicit causality? Word knowledge, an arbitrary feature, or an effect of semantic structure?