

Huang & Snedeker (2009)

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Psych/Ling 236
4/16/12

General Rationale

1. Are generalized contextual inferences
 - E.g. scalar implicatures like “some” -> “some but not all”
computed automatically?
2. Is there a processing cost for going beyond the literal meaning of utterances?
(Implying a semantics/pragmatics distinction reflected in processing)
Or are implicatures processed automatically (cf. Levinson, 2000)

Previous work on a sem/prag border

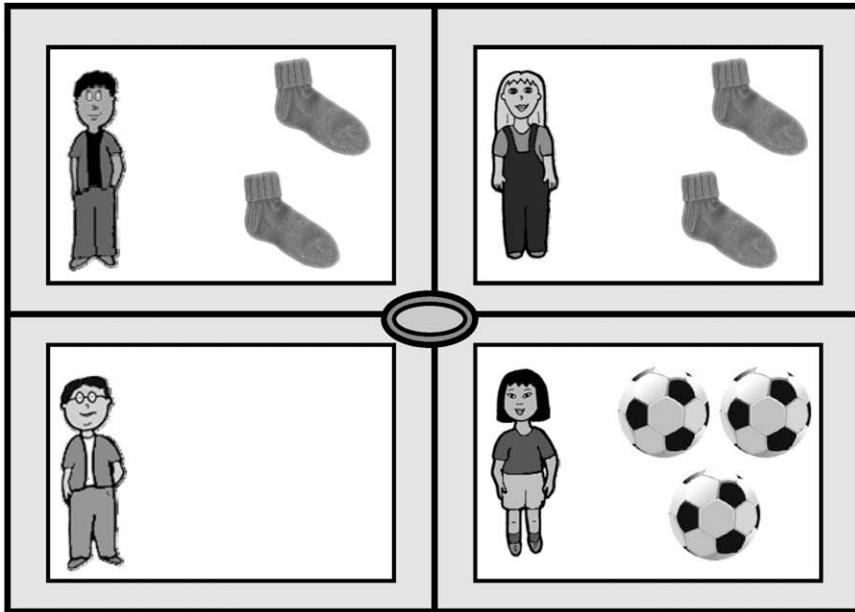
- Evidence from acquisition, e.g.
 - Noveck (2001): children accept “x might be true” as a description when “x must be true”
 - Papafragou & Musolino (2003): children accept “some of the horses jumped over the fence” when all did.
- Evidence from processing, e.g.
 - Bott & Noveck (2004): judgments slower for “some but not all” than “some and all”
 - Breheny et al. (2006): reading time for “some” higher when it is bounded by contexts

Rationale for current study

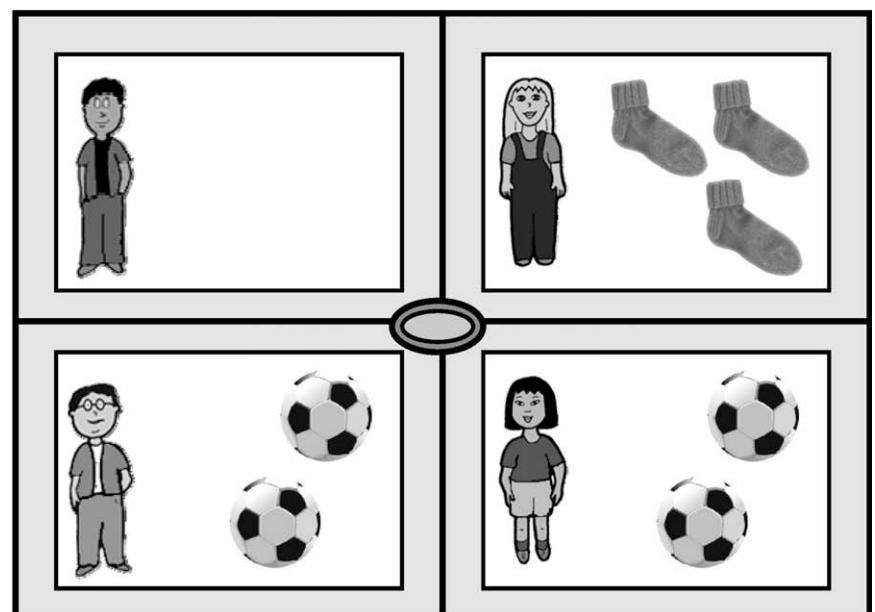
- Previous studies rely on context manipulations that are hard to match because they include linguistic material
- Eye-tracking methods improve on RT
 - Provide a more implicit measure of processing
 - Give timecourse information about potential processing slowdowns
- Matched comparison to numerals

Trial types (E1 and E2)

some/two

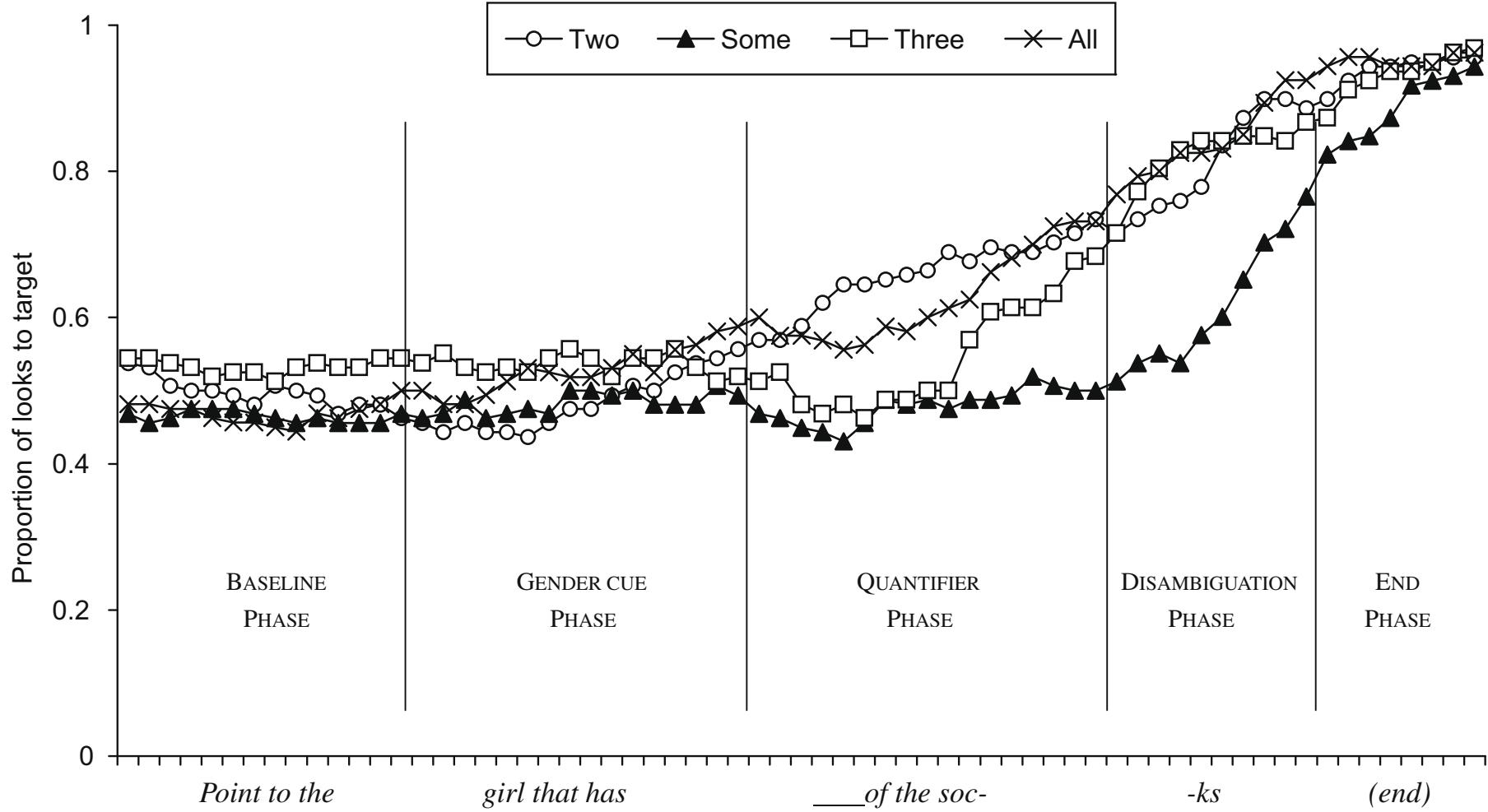


all/three



“Point to the girl that has some of the socks”

Experiment 1 data

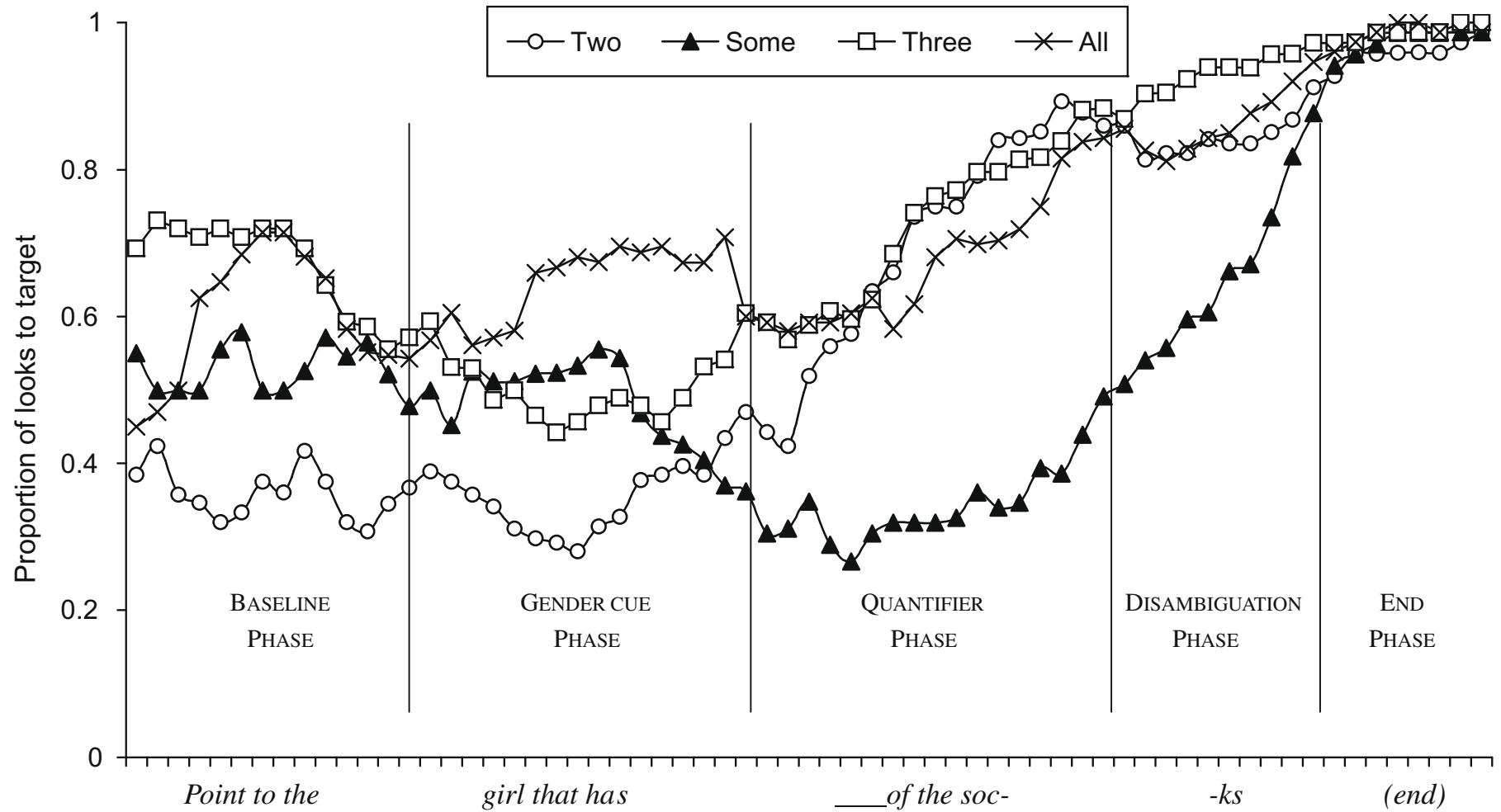


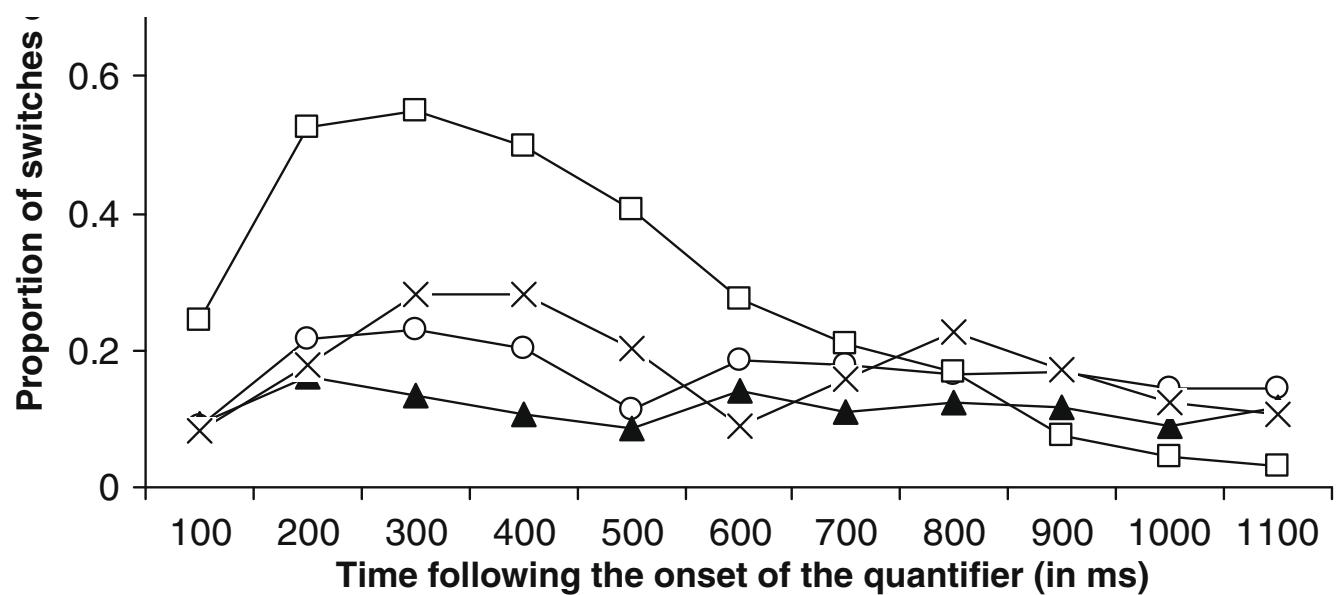
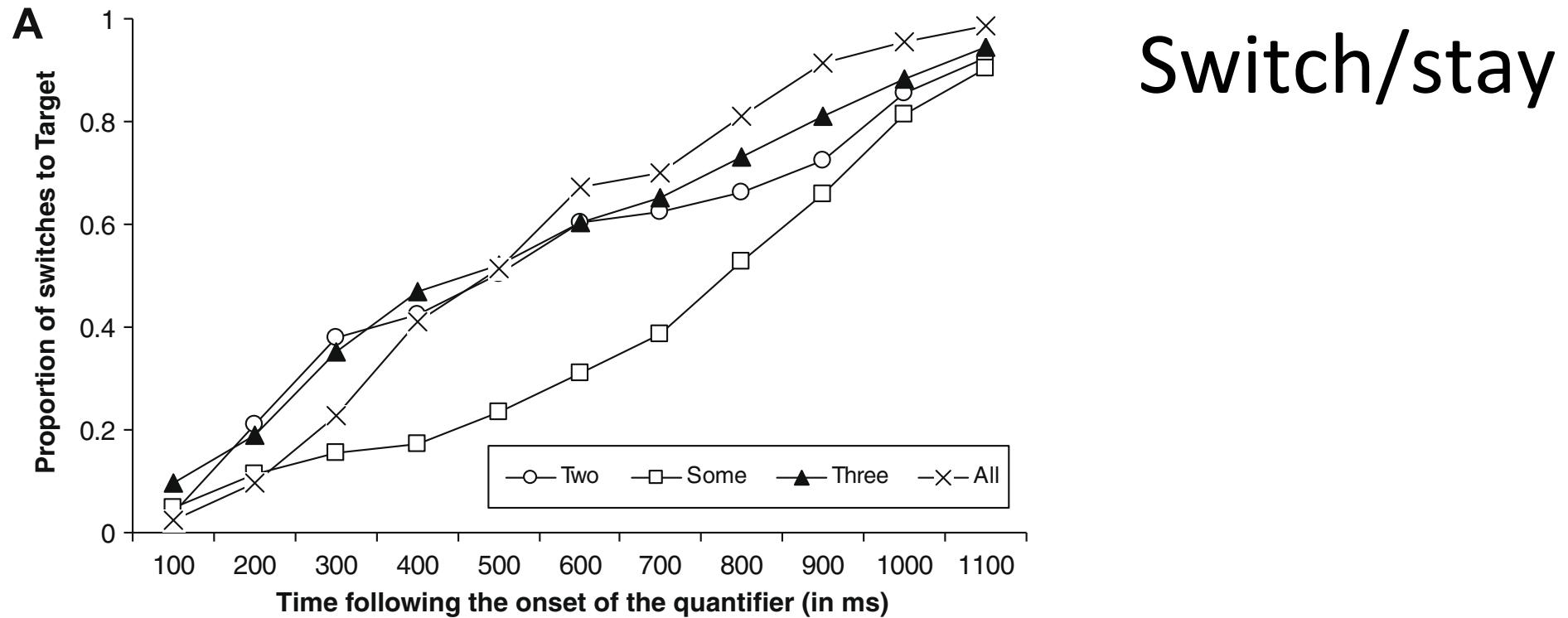
Note: no “some but not all” reading until phonetic material disambiguates!

E1 issues/rationale for E2

- General slowness of “three” contexts might be due to weirdness of “three *of the X*” when 3 = all of the x
 - Two and three trials: boy with none now has one
 - Quantifier trials: unchanged

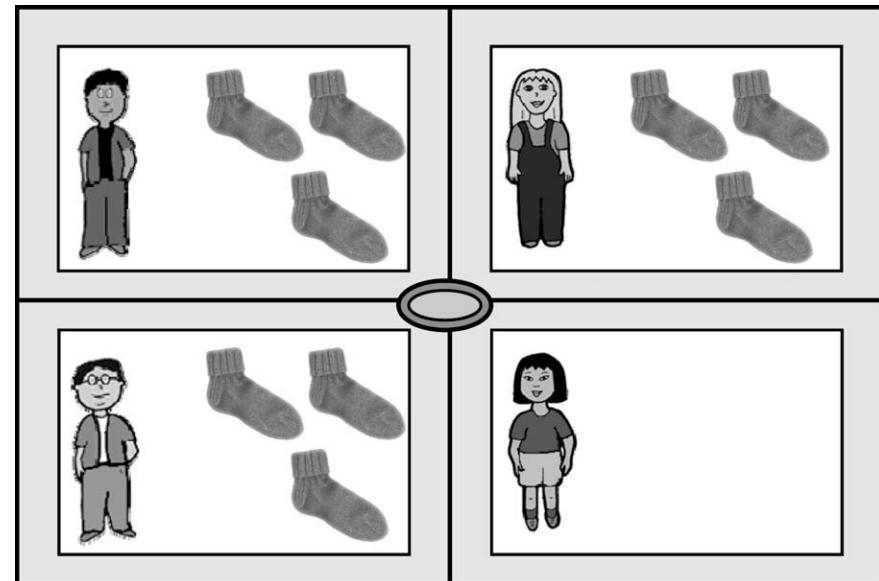
Experiment 2 data





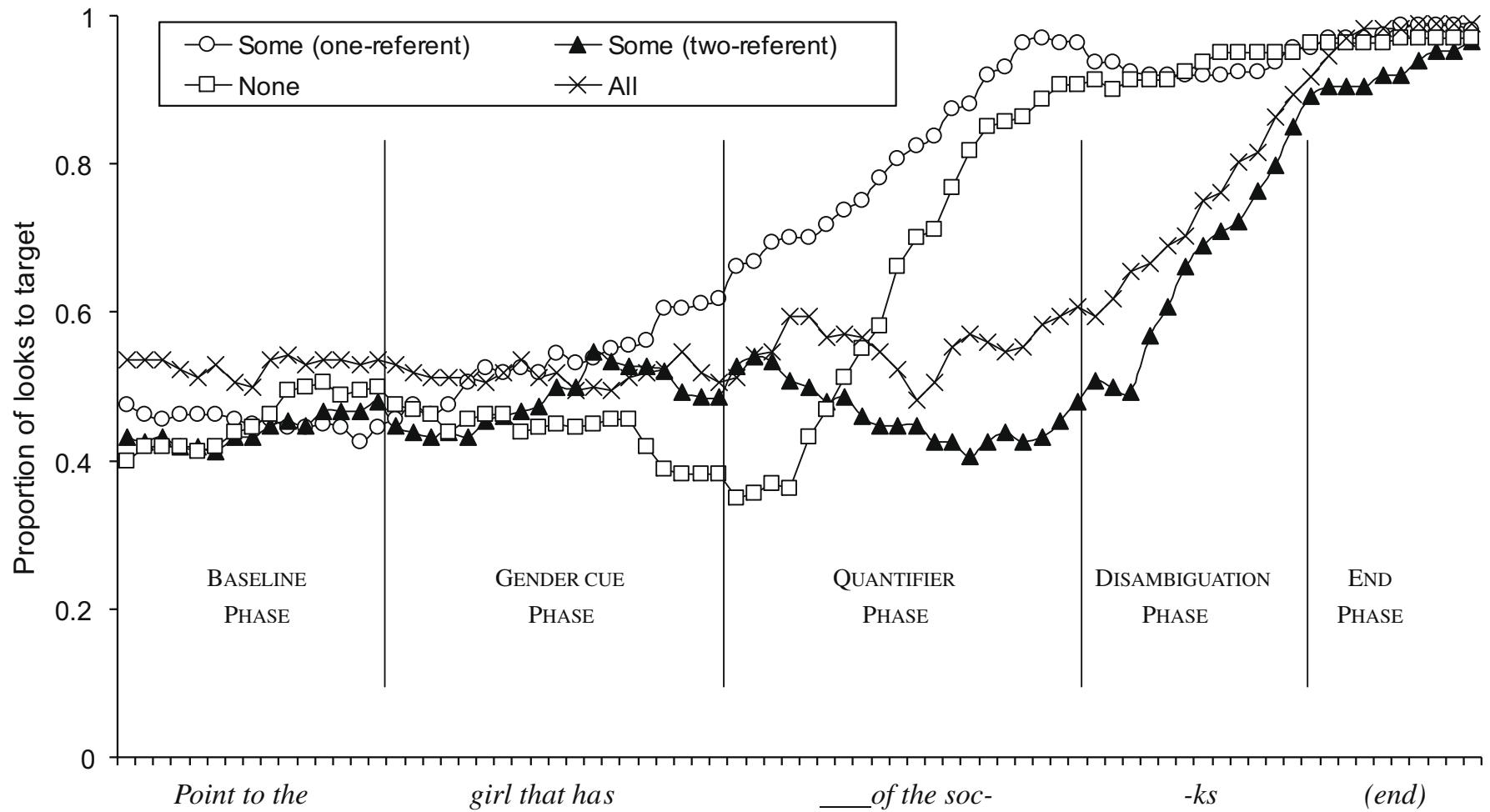
Experiment 3 rationale

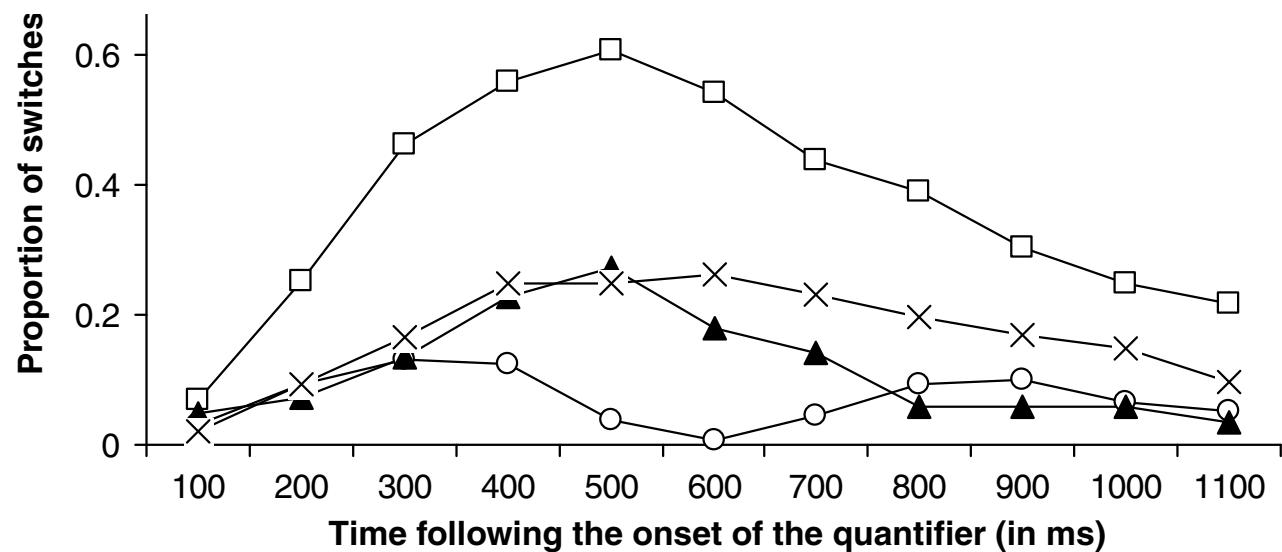
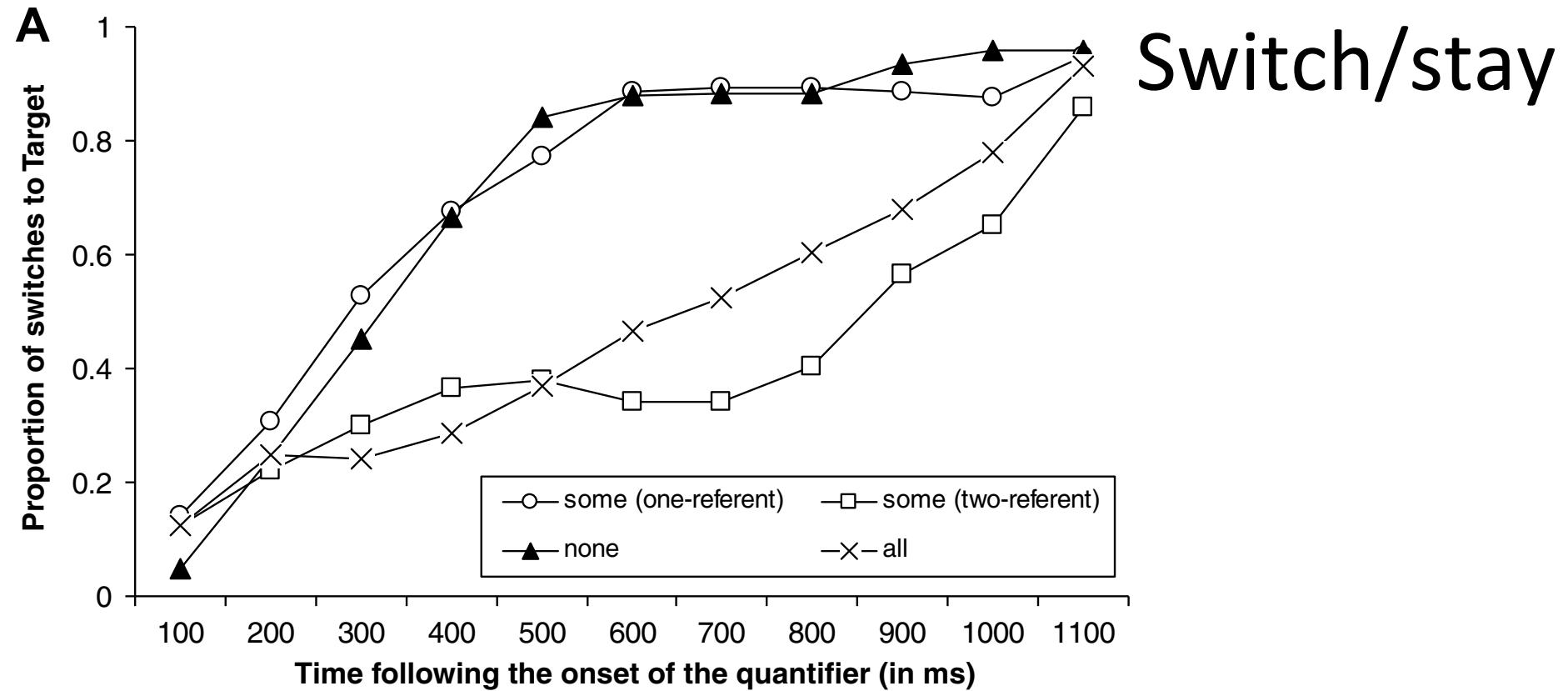
- Alternative explanation: lexical ambiguity
- Perhaps two words:
 - some = some | all
 - some = some & \neg all
- Might compete, producing slowdown
- We should see this competition independent of context



“Point to the girl with some of the socks”
(one-referent)

Experiment 3 data





Discussion

- Processing cost for making a pragmatic inference that goes beyond the semantics
 - Consistent with previous developmental and processing evidence
- Alternative explanations
 - “Verification conditions”: quantifiers hard?
 - Simultaneous lexical ambiguity for some
- As with Breheny’s results, results constrain theories that posit automaticity of implicature
 - (Even if implicatures are *sometimes* fast...)