

What kind of "context" is scalar inference realization sensitive to?

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Scalar inferences and context

- *Faysal asked Fatima whether all of her relatives were coming. Fatima said that some of them were.*
 - Putatively more likely for *some* to be interpreted as meaning "not all"
- *Faysal asked Fatima whether any of her relatives were coming. Fatima said that some of them were.*
 - Putatively less likely for *some* to be interpreted as meaning "not all"
- These assumptions are based on introspection
- **Does context really affect real people's** interpretations in the way predicted by linguists?

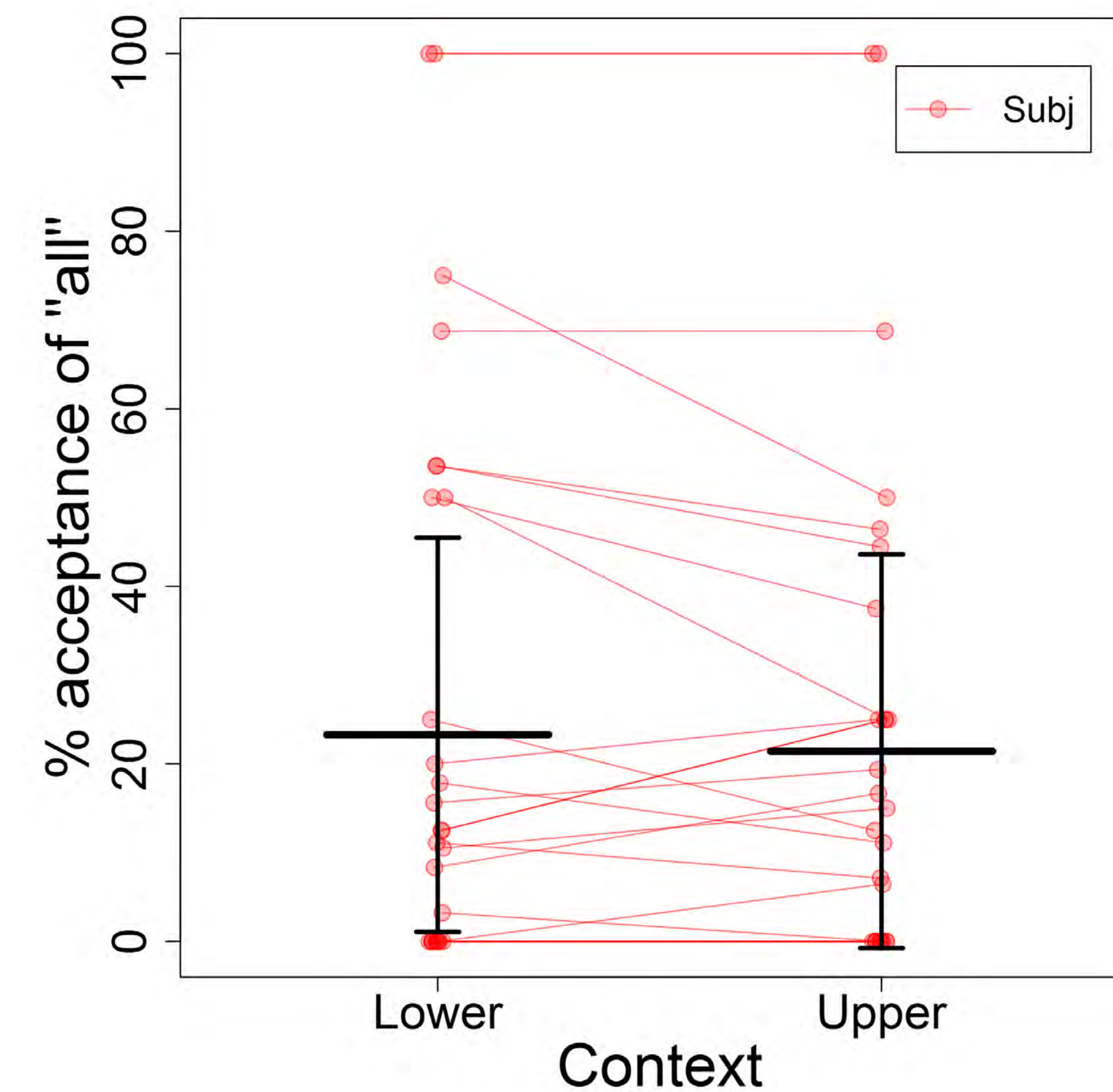
General method

- Context sentence and scalar expression:
 - Upper-bounded: *Faysal asked Fatima whether all of her relatives were coming. Fatima said that some of them were.*
 - Lower-bounded: *Faysal asked Fatima whether any of her relatives were coming. Fatima said that some of them were.*
- Probe question:
 - **Is it possible that all of Fatima's relatives are coming?**
- If a person makes a scalar inference (interprets "some" as meaning "not all"), they should think it is not possible that all the relatives are coming, so their rate of "yes" responses should be low.
- If context has the expected effect, the rate of "yes" responses should be higher in lower-bounded than upper-bounded contexts
- Experiments conducted online (Qualtrics, IbexFarm)
- 32 items each in experiments 1-3, 9 in experiment 4, 10 in experiment 5. Manipulation check conditions not shown
- Plots show difference-adjusted Cousineau-Morey intervals (exps 1-4) or LMEM-based intervals (exp 5)

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Exp 1: Politzer-Ahles & Gwilliams 2015

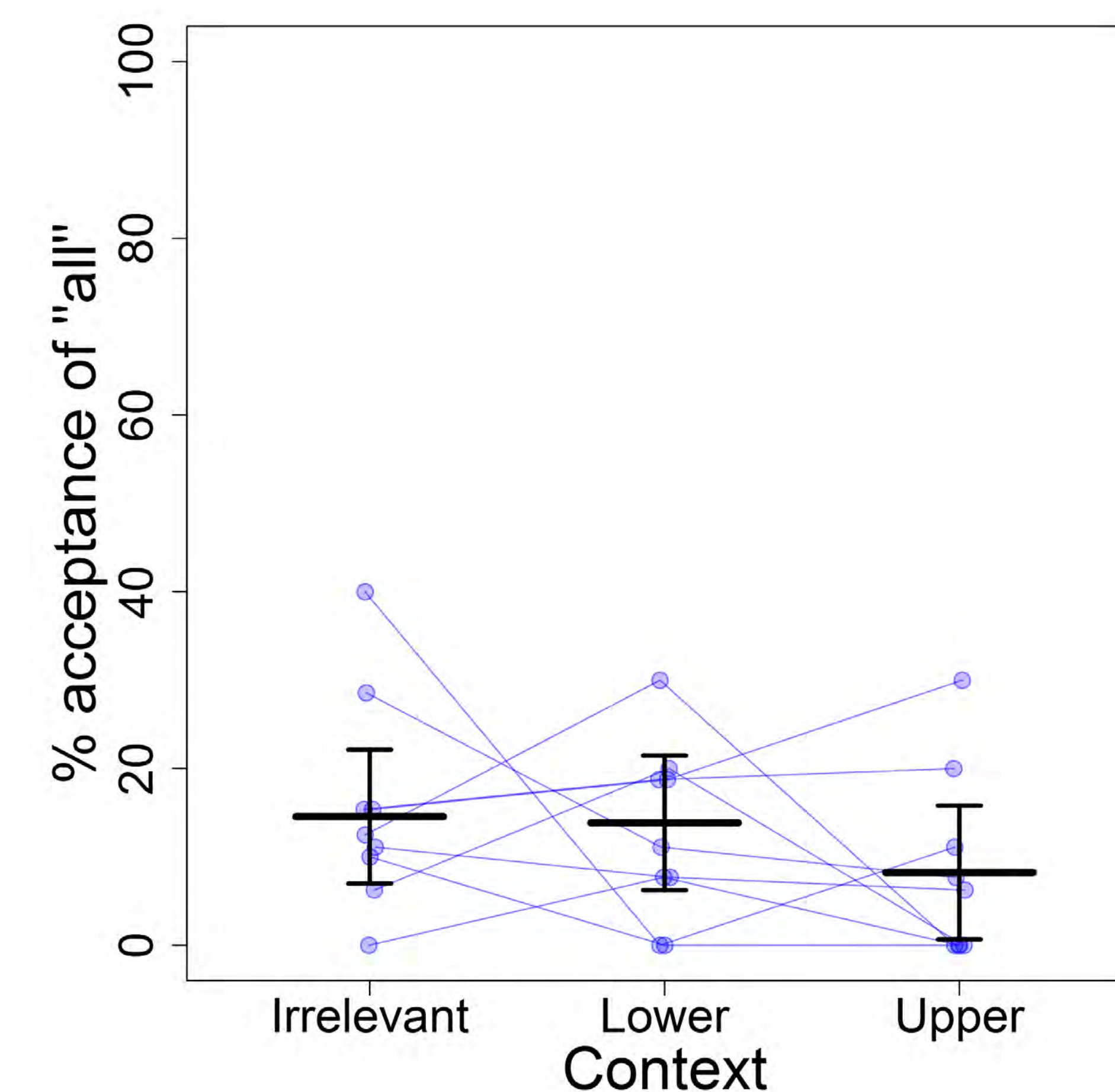
- N=28 English speakers



- Failed to observe significant context effect
- Maybe because participants are only sensitive to context on first exposure?

Exp 4: Irrelevant contexts

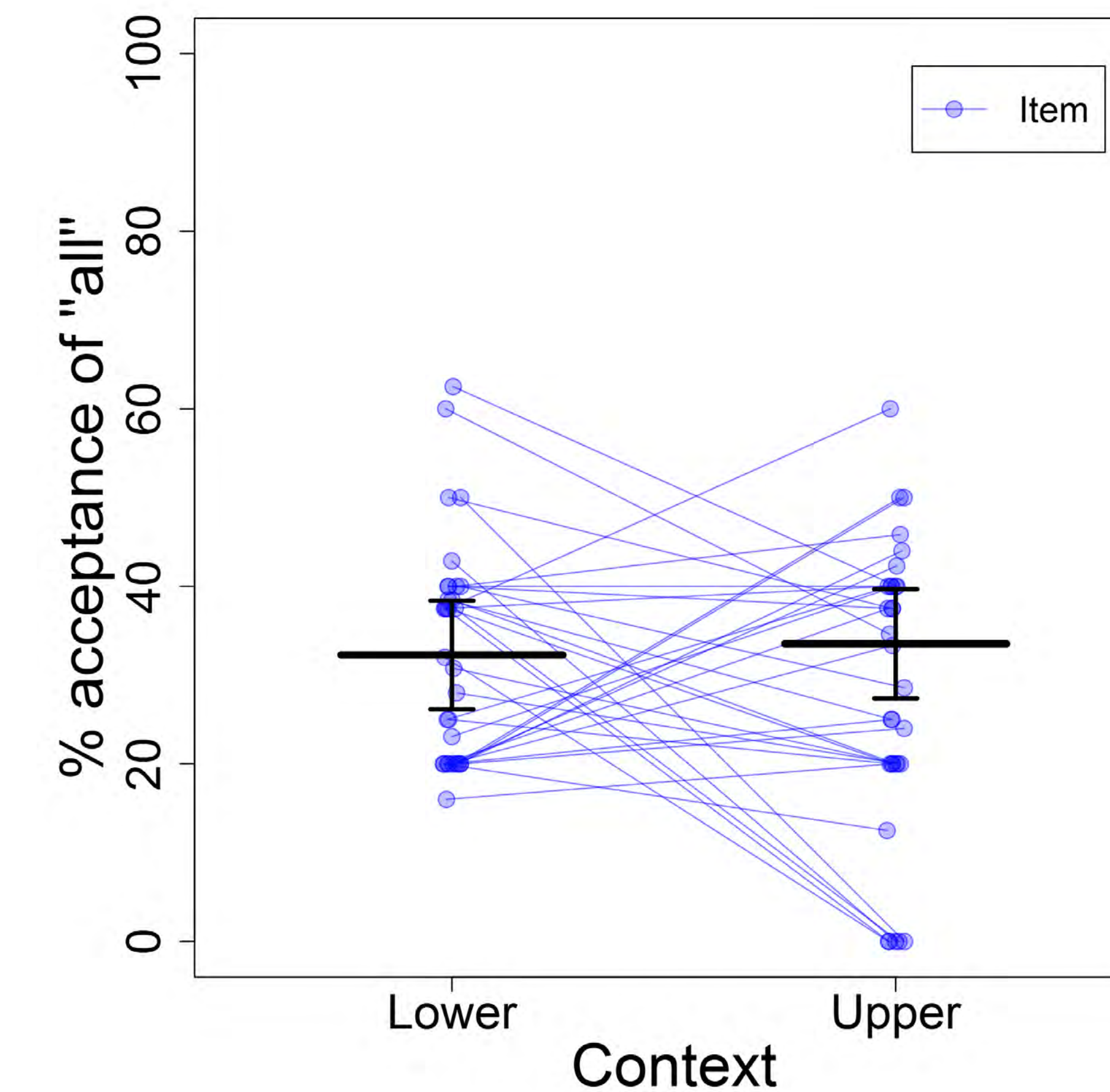
- N=55 (11 more excluded) Mandarin speakers
- Added an "irrelevant" context (e.g., *Faysal asked Fatima why she was cleaning house*).



- Marginal trend for lower/upper context effect, not much for Irrelevant/other difference

Exp 2: Replicating Exp 1

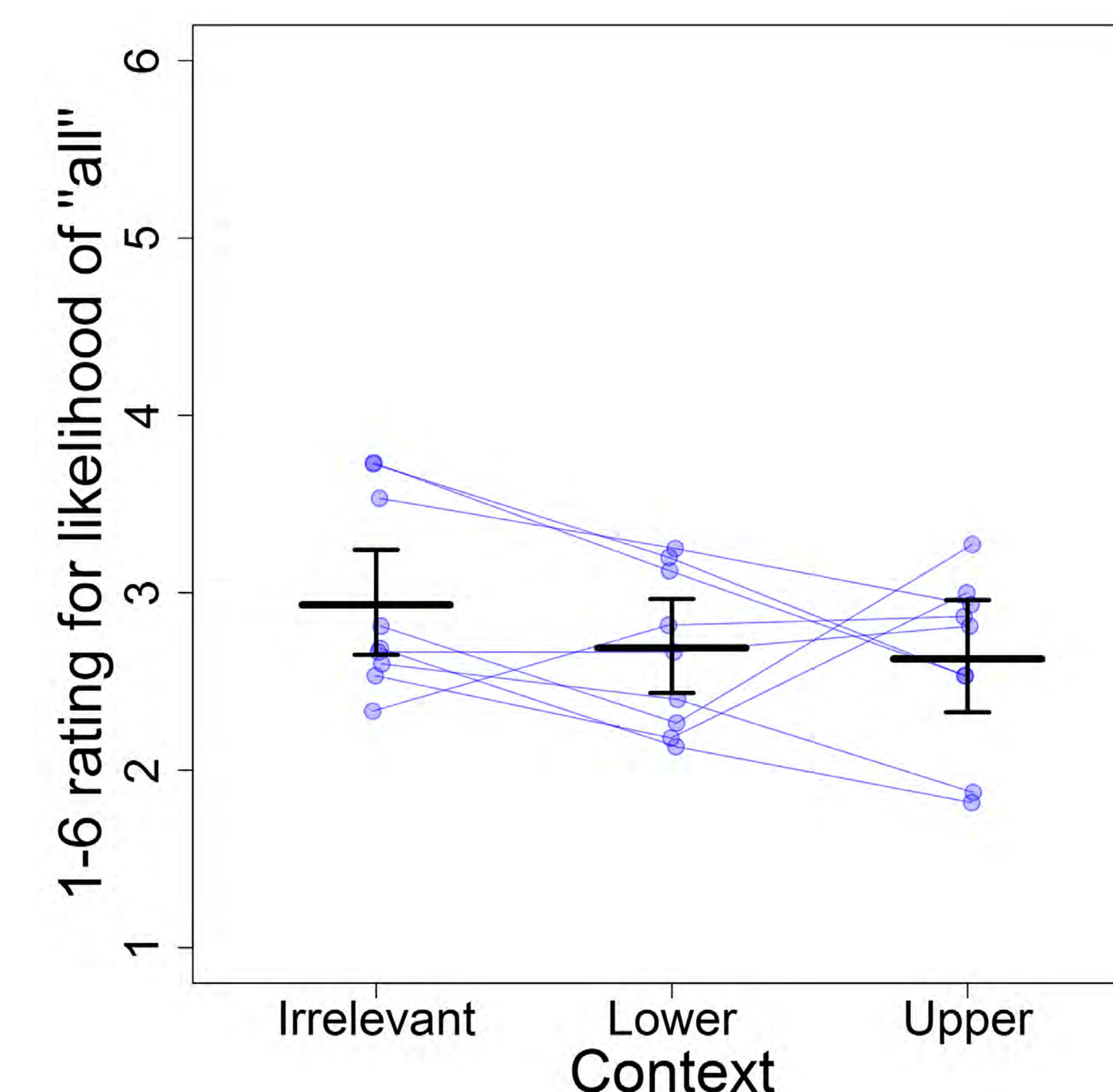
- N=44 (5 more excluded) English speakers



- Failed to observe predicted context effect
- (Also no trend towards adaptation over the course of the experiment)

Exp 5: Using a rating scale

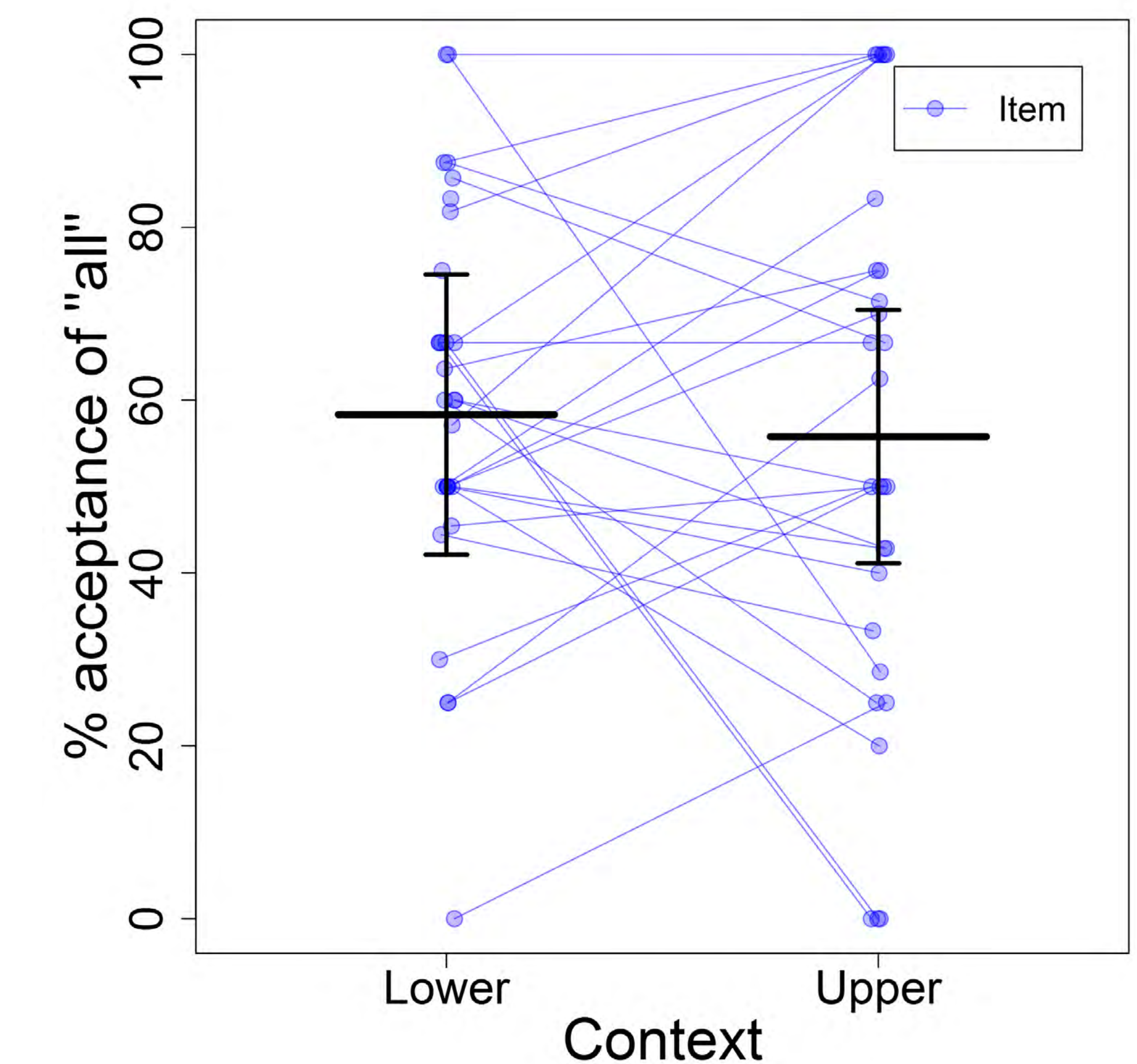
- N=72 (7 more excluded) Mandarin speakers



- Not statistically significant (z=-1.64, one-tailed p=.05), model comparison p=.147), but a trend towards more inferences in Irrelevant context than other contexts

Exp 3: Avoiding pragmatic adaptation

- N=688 (100 more excluded) English speakers (1 trial each)



- Failed to observe significant context effect

Discussion

- Do upper- and lower-bounded contexts differ in how much they facilitate inferences?
 - *Inconclusive* – 4 of 5 experiments found trends in that direction, but only one is close to significant
 - Lower-bounded contexts may support inferences more than previously thought (as they still make quantity relevant to the question under discussion)
- Do contexts in which quantity is relevant vs. irrelevant to the question under discussion differ in how much they facilitate inferences?
 - *Possibly* – 2 of 2 experiments found trends in this direction, one non-significant and one marginal