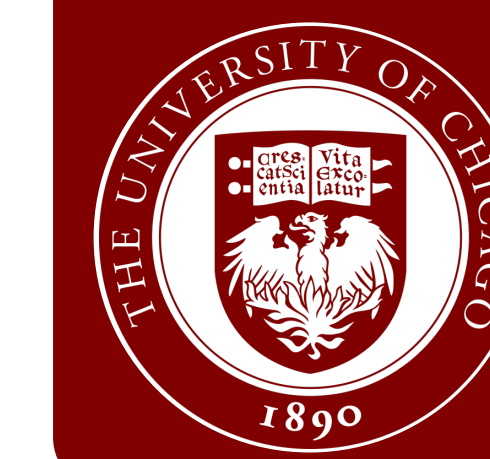


# "Oh! Um... Sure": Children use others' linguistic surprisal to guide stereotype inferences



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## How do we learn stereotypes from others?

Preschool age children hold gender stereotypes about others' preferences (e.g., Eisenberg et al., 1982)

Language, even explicitly egalitarian, can convey stereotype information (Chestnut, Zhang, & Markman, 2021)

Others' nonverbal affect can convey social information about groups (Skinner, Meltzoff, & Olson, 2016)

Others' surprised facial expressions signal a violation of expectations that children by 6 use to derive social inferences (Asaba et al., 2020)

How do children use conversational cues of surprise to reason about and learn stereotypes?

## Conversational cues to surprise:

Surprisal interjections (e.g., "oh")

Disfluencies (e.g., "um", "uh")

\*All utterances were pre-recorded

Older children use others' surprisal to...

- reason about gender stereotype-based expectations (Study 1)
- learn a novel expectation (Study 2)

Follow up work tests how children use these cues to learn novel gender expectations.

Overall, this work highlights how **feedback** and subtle markers of language production can transmit expectations and stereotypes.



## Study 1 (N = 120, ages 4-9)



## Using surprisal to reason about others' expectations via extant stereotypes?

**Fluent Condition:**  
no surprisal markers

**Surprise Condition:**  
interjections and disfluencies

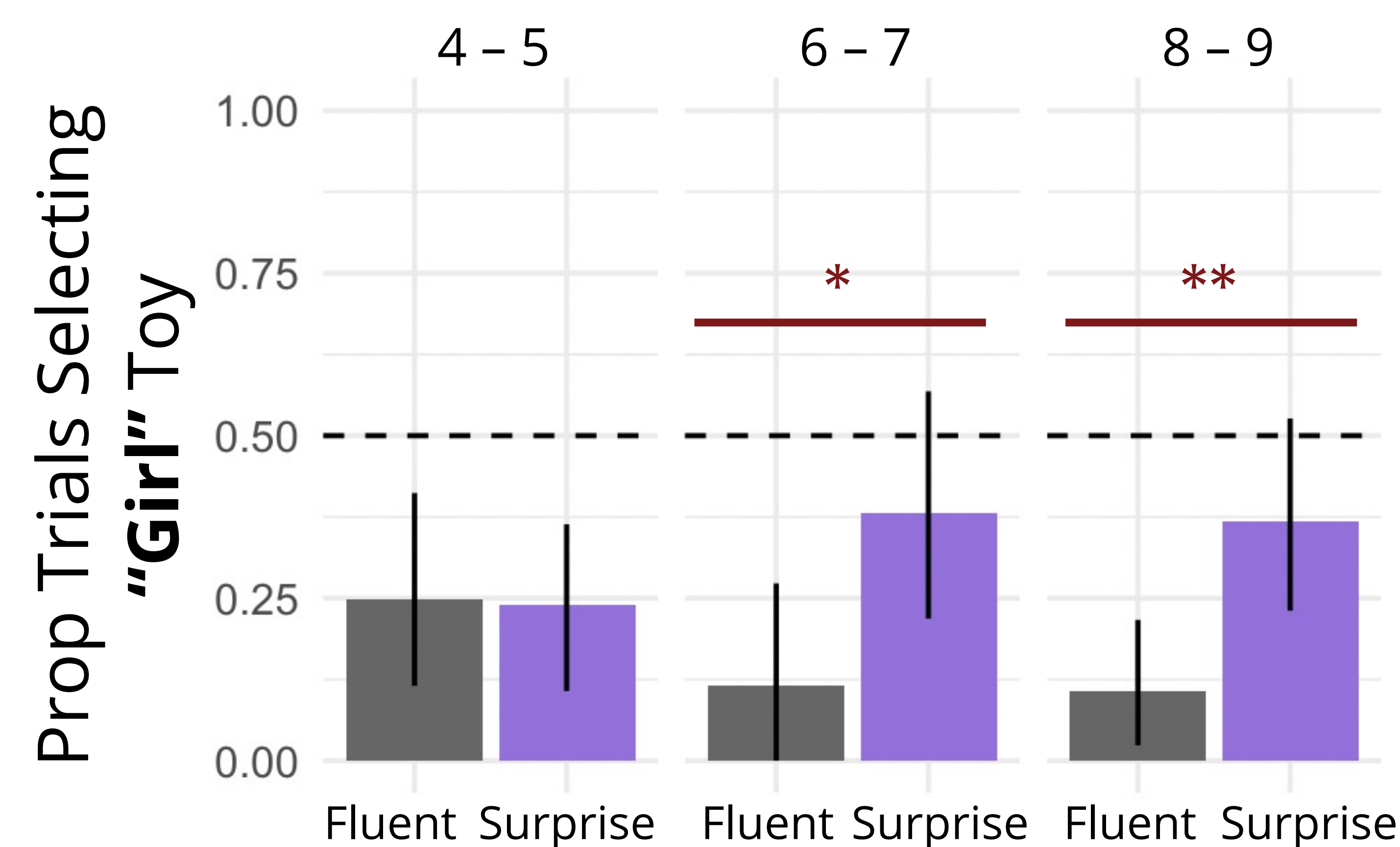


Toy choice DV:

"Which toy do you think John asked for – the truck or the doll?"



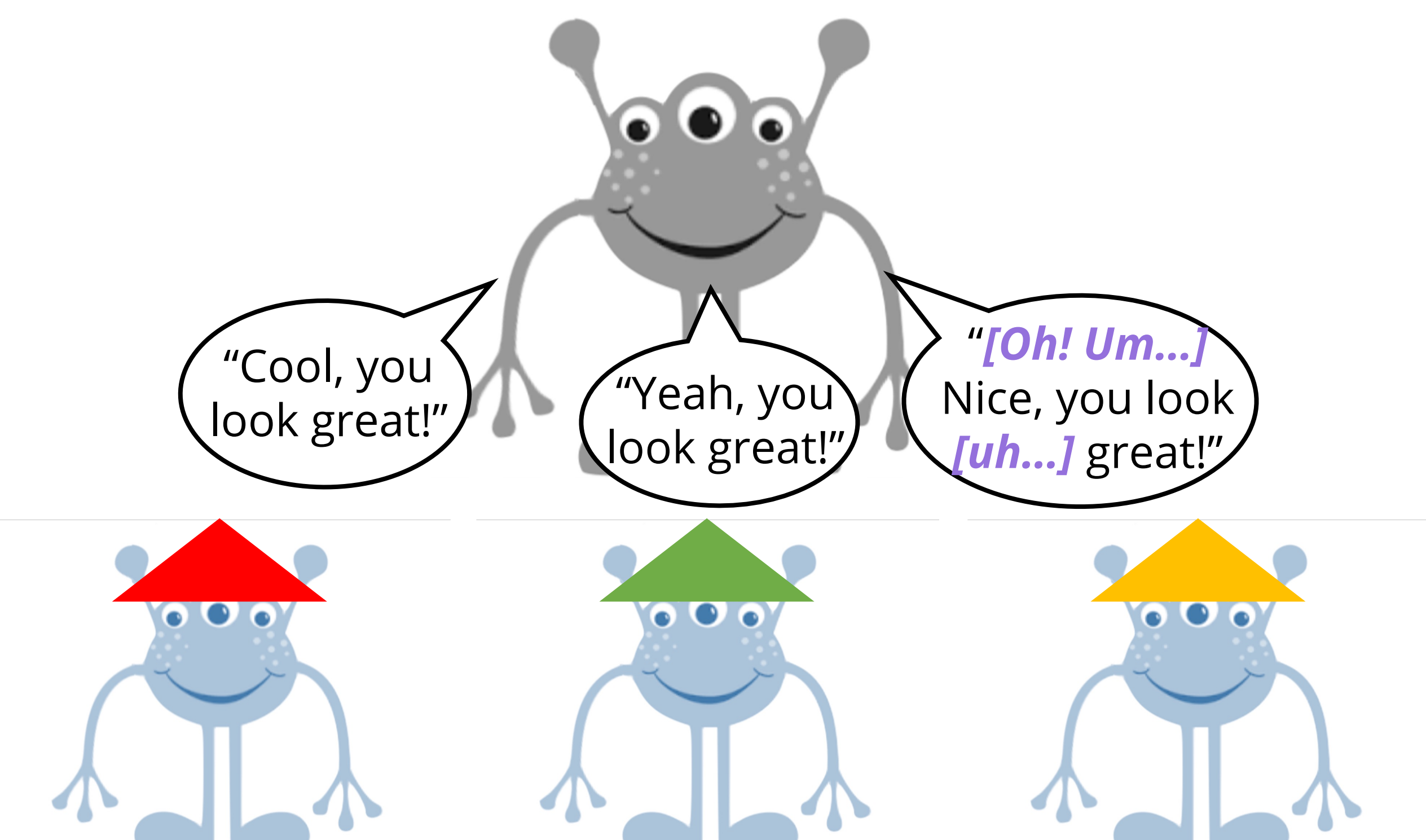
## Children by 6-7 use others' surprise



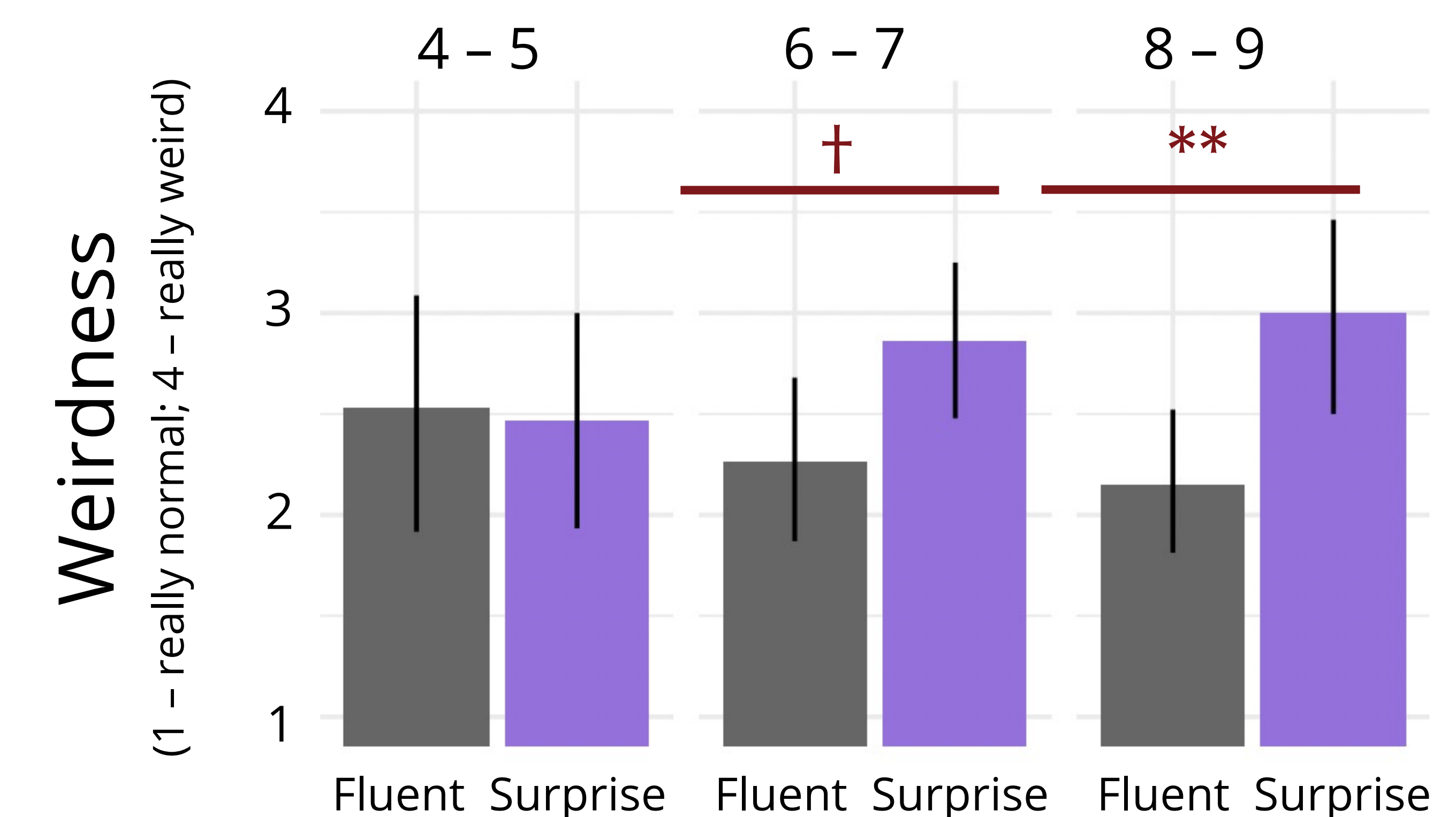
## Study 2 (N = 120, ages 4-9)



## Using others' surprisal to learn an entirely novel expectation?



Children by 8-9 say ▲ = "weirder"



## Children at all ages predict teasing

