

Speaker knowledge modulates the effects of generic language on essentialist beliefs

Jessica Stephenson¹, Megan Moran¹, Sarah-Jane Leslie², Marjorie Rhodes¹

¹New York University; ²Princeton University

Background

Generic language refers to statements about kinds (e.g., "Girls wear pink") rather than individuals (e.g., "This girl wears pink"). While generics may seem neutral, they can promote **essentialist beliefs**¹—the idea that certain categories reflect inherent, unchangeable properties. Recent work² suggests these effects depend not only on **structural features** of generics, but also listeners' **pragmatic inferences** about a speaker's beliefs and intent.

Generic: "Girls wear pink"



Specific: "This girl wears pink"

Aims

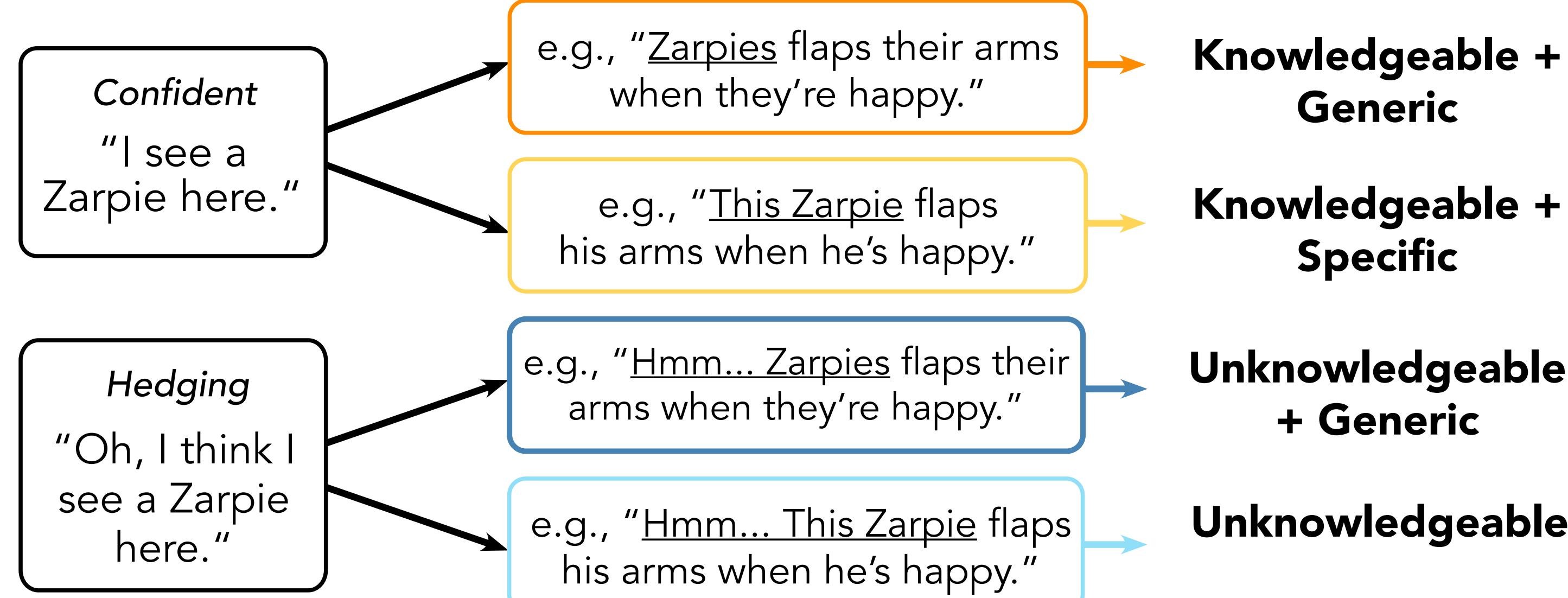
On this hybrid account of generic language, one key cue might be **speaker knowledge**: listeners may be more likely to adopt essentialist beliefs when a speaker is seen as knowledgeable about the group described.

To test this we ask:

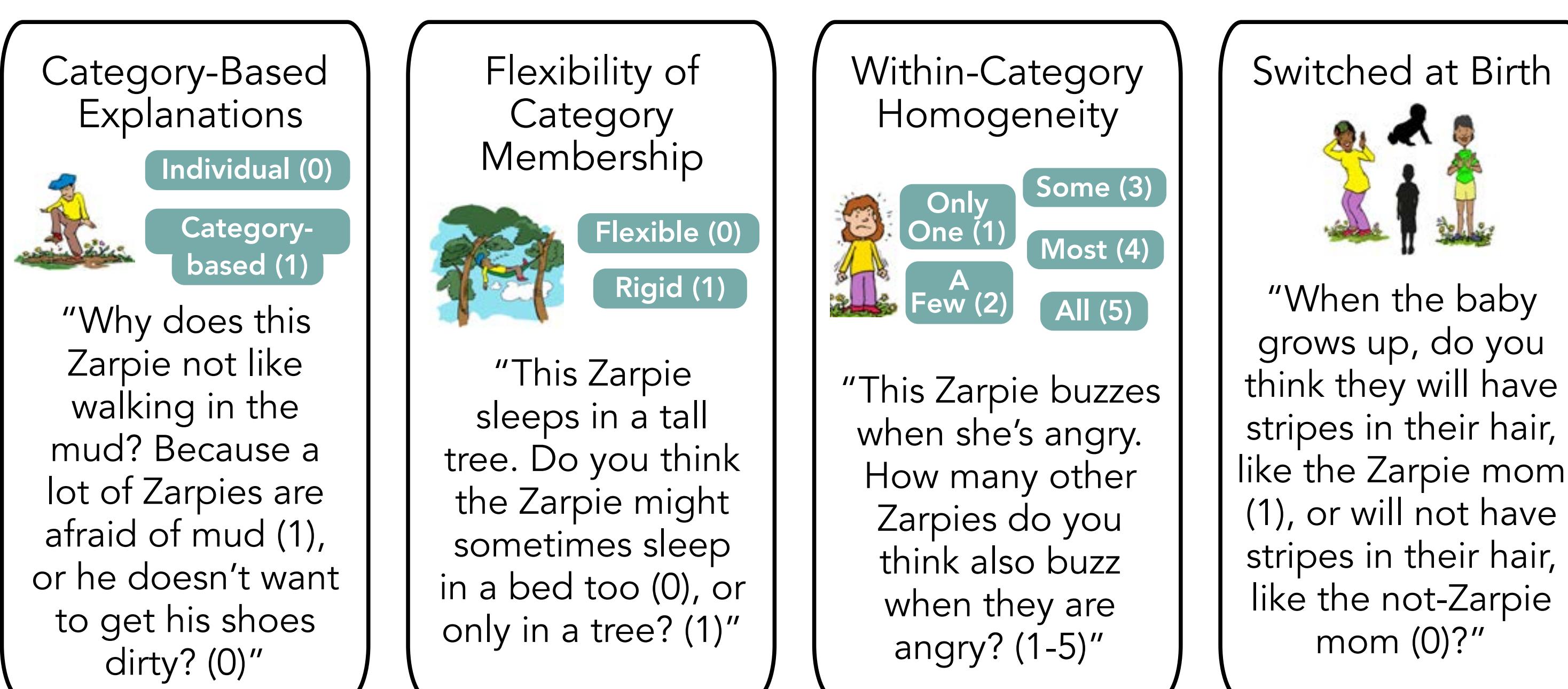
- Does speaker knowledge moderate the effect of generic language on essentialist beliefs about a novel social group?
- Do these effects differ across development, particularly between children and adults?

Methods

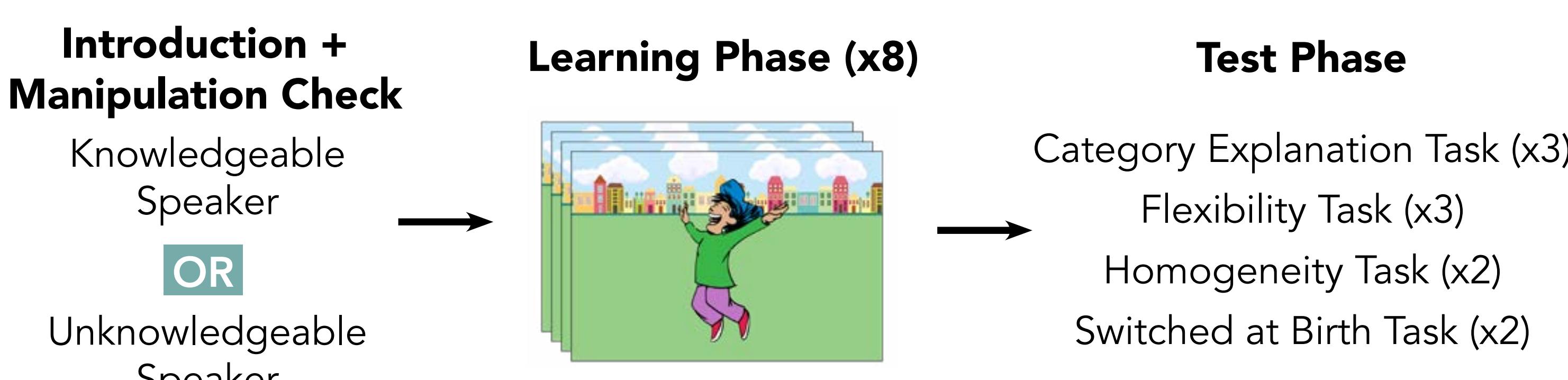
Learning Phase:



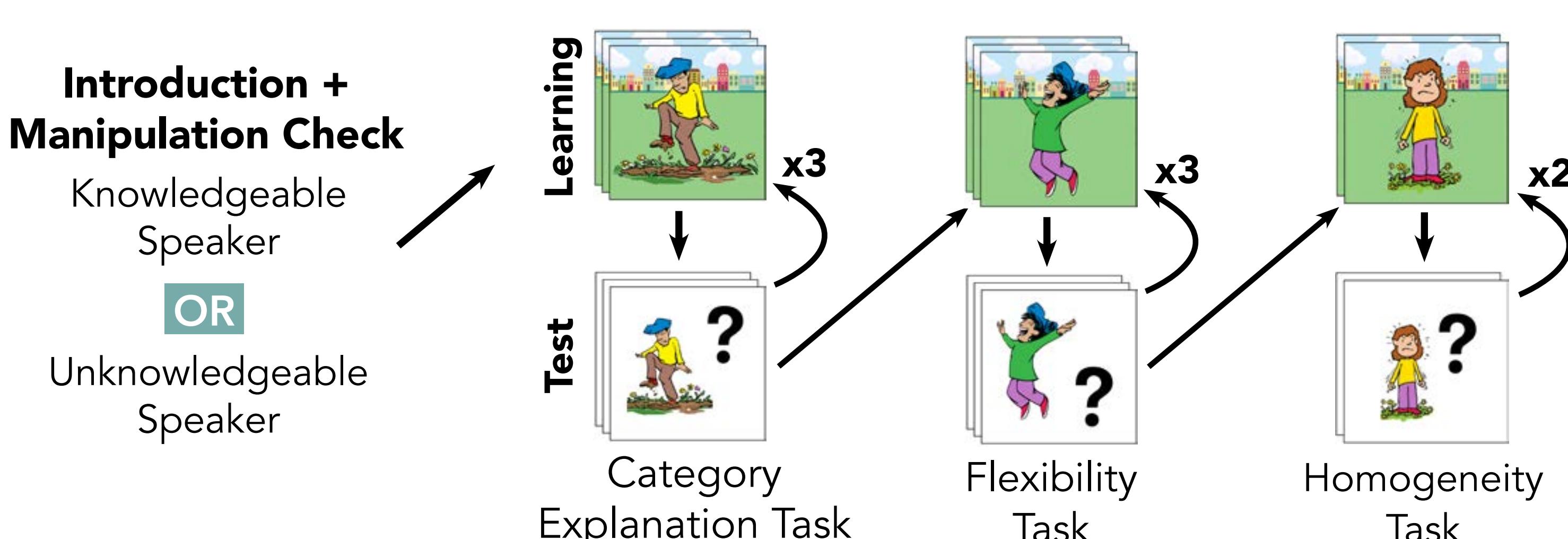
Test Phase Essentialism Tasks:



Study 1: Blocked design ($n = 215$ children, $M_{age} = 7.37$, 56% girls; $n = 220$ adults, $M_{age} = 41.46$, 49% female)



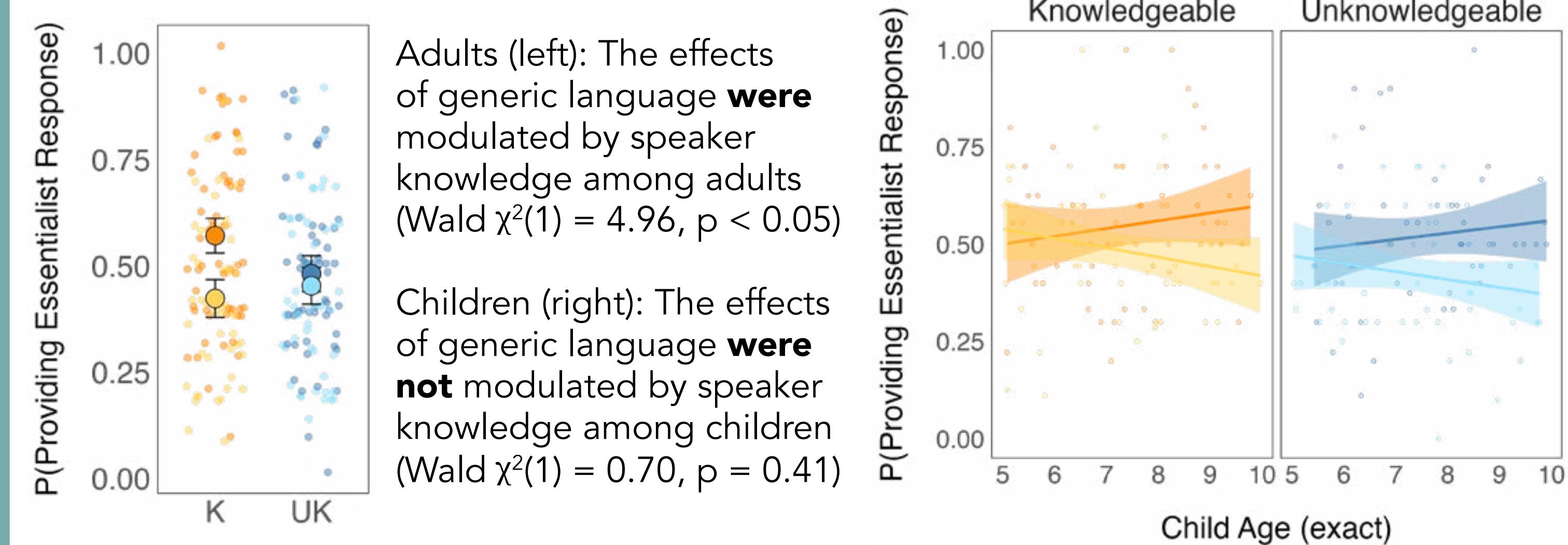
Study 2: Trial-by-trial design ($n = 233$ children, $M_{age} = 7.53$, 55% girls; $n = 217$ adults, $M_{age} = 38.74$, 49% female)



Results

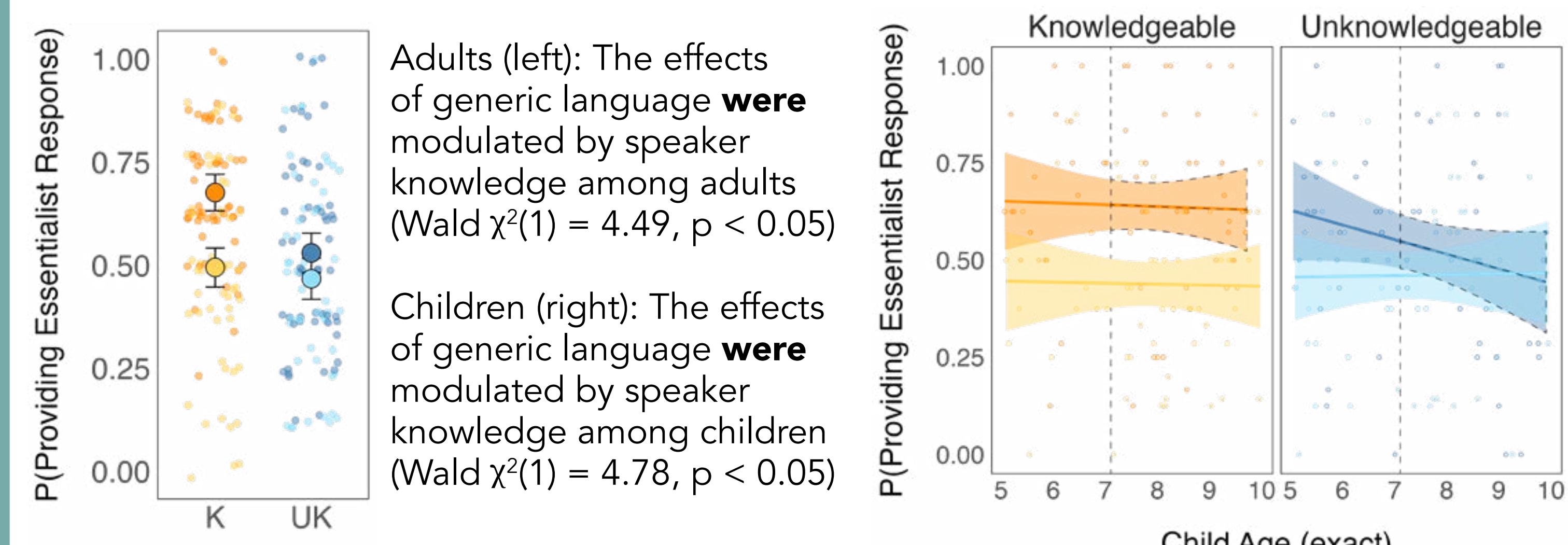
Condition: **Knowledgeable+Generic** **Unknowledgeable+Generic** **Knowledgeable+Specific** **Unknowledgeable+Specific**

Study 1



Combined analysis: The effects of generic language were modulated by speaker knowledge and age group (as revealed by a knowledge*language*age group interaction, $\text{Wald } \chi^2(1) = 5.24, p < 0.05$).

Study 2



Although these effects did not vary significantly by age, Johnson-Neyman analysis identified that the effect of speaker knowledge became statistically significant ($p < 0.05$) in the generic condition beginning at age 7.12 (dashed line).

Discussion

These two studies show that generic language promotes essentialist beliefs, but the effect depends on more than linguistic form alone. Adults consistently used speaker knowledge to modulate their interpretation of generics—endorsing essentialist beliefs only when generics came from a knowledgeable speaker. Children, by contrast, showed this sensitivity only when memory demands were minimized. In Study 1, they formed essentialist beliefs regardless of who the speaker was; in Study 2, they responded more like adults when evaluating statements immediately. Exploratory analyses suggest that sensitivity to speaker knowledge may begin to emerge around age 7, hinting at a developmental shift in pragmatic reasoning. These findings suggest that while pragmatic reasoning about speaker intent emerges in childhood, it may be masked when tasks require sustained memory for speaker cues.

Link to full text:



References

1. Leshin, R. A. (2021). *Child Development*, 92; Rhodes, M. (2020). *Cognitive Development*, 21; Rhodes, M. (2012). *PNAS*, 109; Gelman, S. A. (2008). *Discourse Processes*, 4; Wang, M. M. (2022). *Developmental Psychology*, 58
2. Rhodes, M. (2024). *Trends in Cognitive Sciences*

This research was supported by National Science Foundation Grant DRL-2400839

