



# Social and referential cues shape 8-month-olds' processing of talker variability during early word learning

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## Introduction

Word learning requires forming appropriately specific representations of how words sound

- Accepting words that sound different (e.g. new talker, new affect)
- Rejecting words when they change too much (e.g. new phonemes)

At 8 months of age<sup>1</sup> (see Bulgarelli&Bergelson2022 figure panel)

- Infants trained with a single token of a new word:
  - Dishabituate to a new talker
  - ✓ • Dishabituate to a new word
- Infants trained with talker variability
  - ✓ • Do not dishabituate to a new talker
  - ✗ • Do not dishabituate to a new word

Talker variability may have increased task difficulty

- Processing talker variability may be more challenging<sup>2,3</sup>

Social and referential cues can help older, 14-month-old infants in difficult word learning tasks<sup>4,5</sup>

## Current Study

Does adding social and referential cues help infants process talker variability appropriately during word learning?

## Methods

- 54 8-month-old infants
- One-word switch task<sup>6</sup>
- Three habituation conditions
  - No-Talker-Variability – 1 token from 1 female talker
  - Within-Talker-Variability – 12 tokens from 1 female talker
  - Between-Talker-Variability – 10 tokens from 10 female talkers

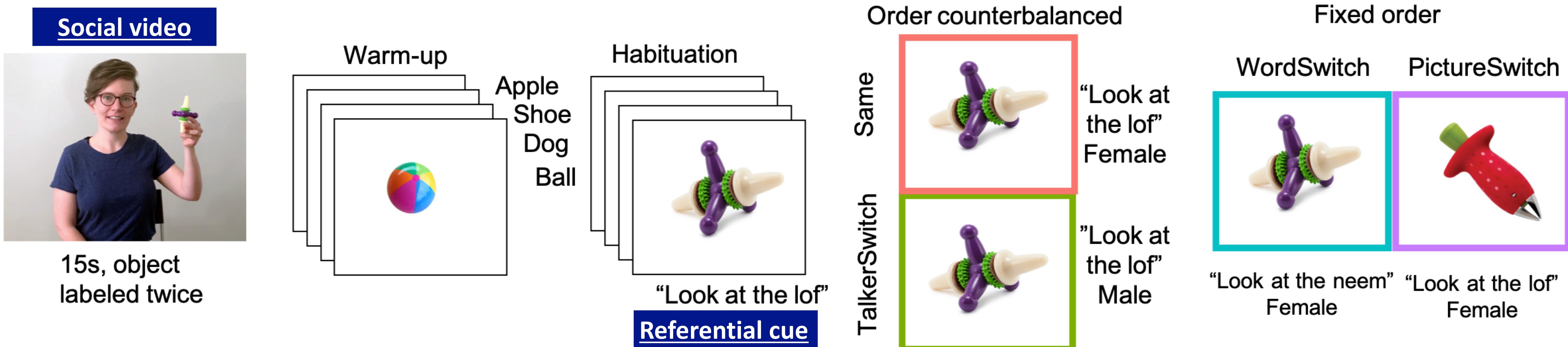
## Acknowledgements

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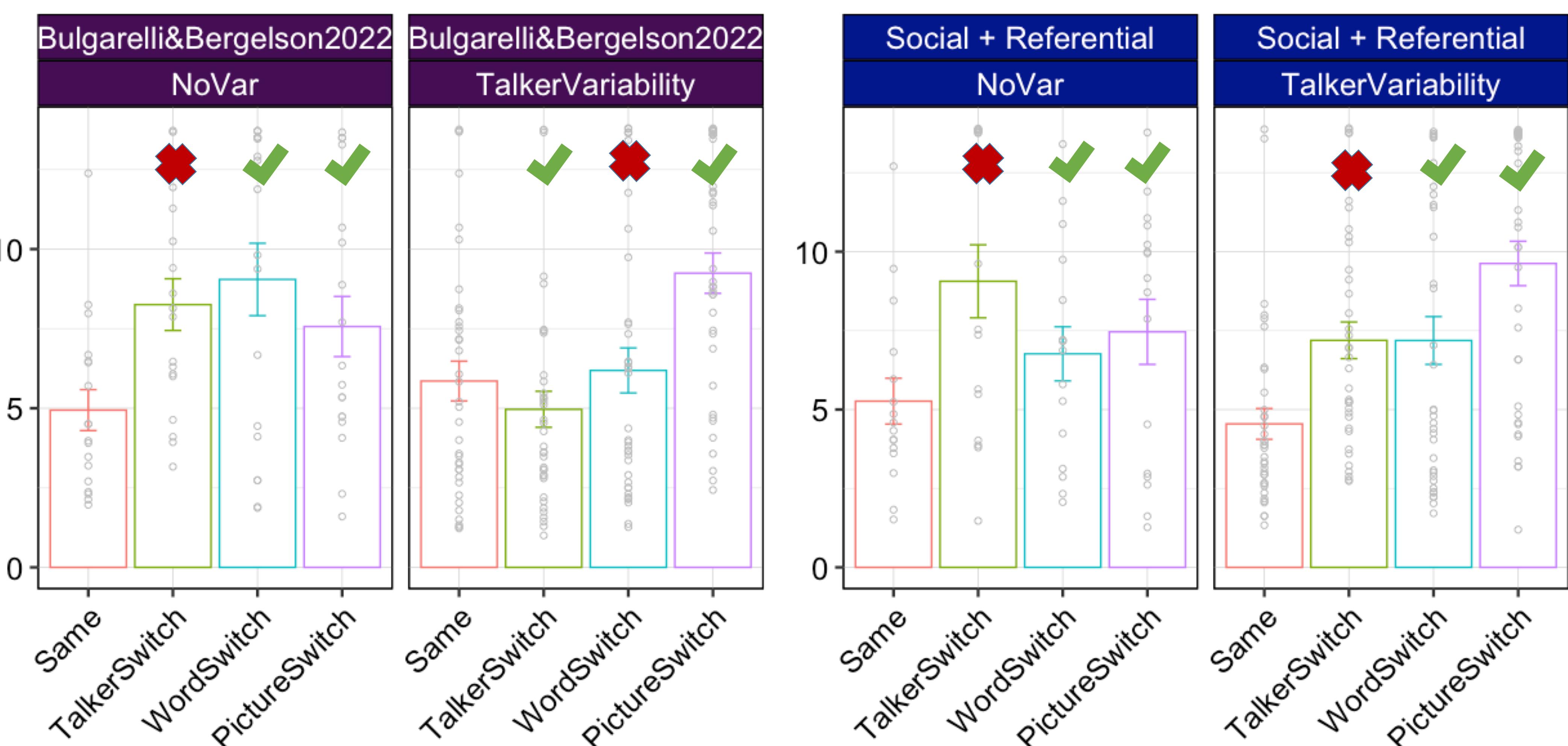
## Citations

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## Procedure



## Results



## Conclusions

- Adding social + referential cues changed how infants processed talker variability
  - Infants increase looking time to all types of trials, but in a more gradient way
  - Picture changes are considered more noteworthy than word and talker changes, which do not differ from each other
- But pattern is still not 'adult-like'
  - Talker changes and word changes should not be considered the same
- **Word learning in 8-month-olds is still fragile and sensitive to context and variability**

- ✓ "Adult-like" patterns  
✗ Not "adult-like" pattern

- Social and referential cues**
- Infants increase their looking time to all 3 trials,  $p < .001$
  - No-Talker-Variability
    - No significant differences across trial types
  - Talker-Variability
    - Looking time on PictureSwitch > Talker and Word Switch
    - TalkerSwitch != WordSwitch