



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 age¹ (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^{2,3}

Social and referential cues can help older, 14-month-old infants in difficult word learning tasks^{4,5}

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 task⁶
- 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

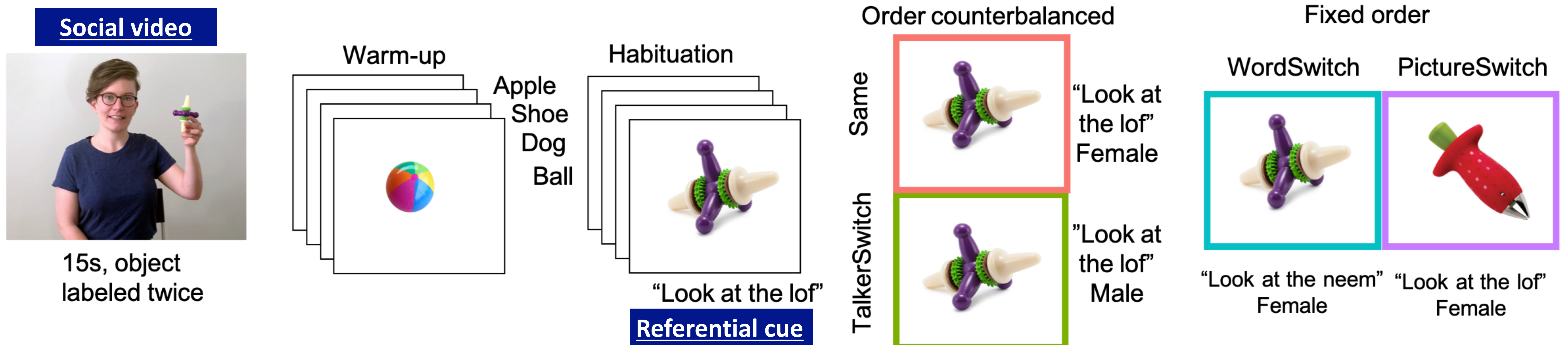
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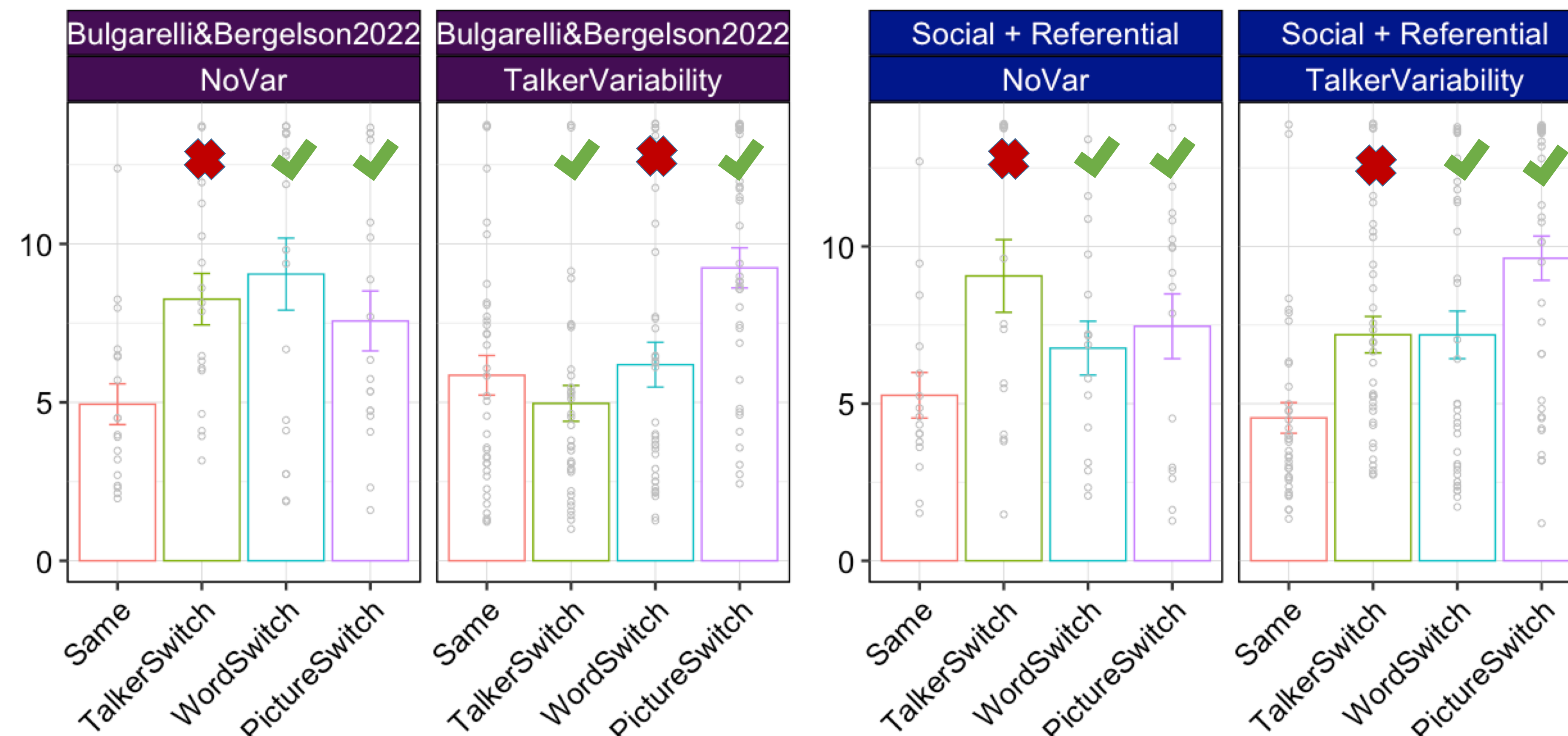
Citations

1. Bulgarelli, F., & Bergelson, E. (2022). Talker variability shapes early word representations in English-learning 8-month-olds. *Infancy*, 27(2), 341-368.
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Procedure



Results



- ✓ “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

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**