



Influence of Children's Misarticulation on Preschoolers' Word Recognition



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Mentors

Background

- Krueger, B. (2013). Influence of Misarticulation on Preschoolers' Word Recognition (Master's thesis). Retrieved from KU ScholarWorks.
- Previous research has shown that children are able to perceive and process variability of speech due to misarticulations.
- In Krueger's (2013) study, children were presented with the canonical production (e.g. rope), a common substitute (e.g. wope), and an uncommon substitute (e.g. yope).
- The auditory stimuli were presented in a forced-choice paradigm in which children selected either a picture of a real object or a picture of a non-object.
- Children chose real objects more often for canonical productions than for misarticulated productions. Children chose real objects more often for common substitutes than for uncommon substitutes. Children's reaction times were longer for the misarticulations than the canonical productions. This suggests that children perceive frequent misarticulations as phonetic variants of real words; however this recognition comes at a processing cost.

Limitations

- In the previous study, auditory stimuli were presented with an adult's voice imitating child misarticulations.
- The processing cost may have occurred because it is unusual for adults to produce misarticulations. Misarticulation is more frequently associated with child speech.

Purpose

- The purpose of this study is to investigate whether adults and children perceive misarticulations differently when naturalistic misarticulations from child speech are used as stimuli.

Methods

Participants:

Measure	Children	Adults
Number	14	23
Mean Age (years)	4.3	18.5

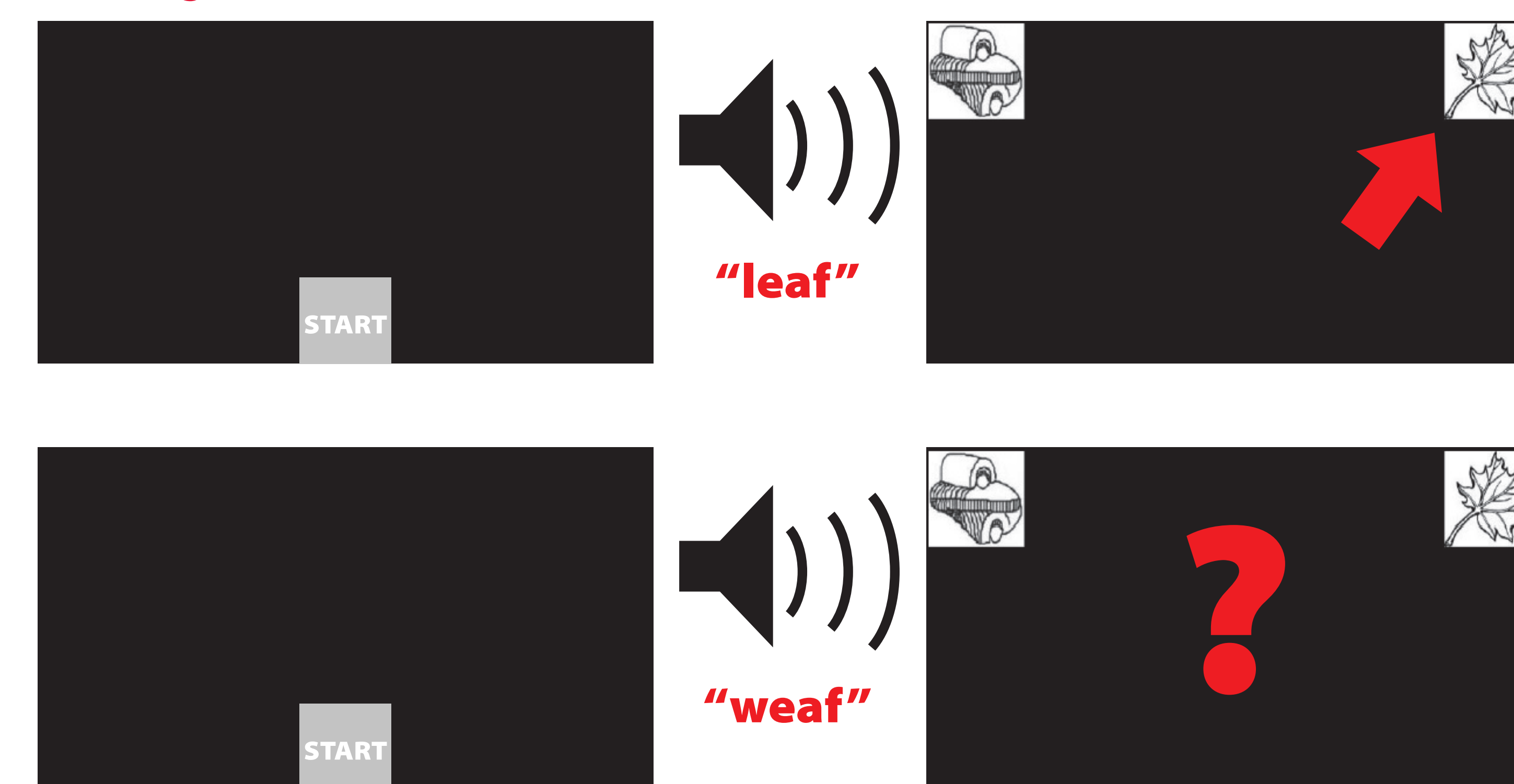
All participants had normal hearing, articulation, and vocabulary.

Methods cont.

Stimuli:

Canonical Word	Misarticulated Word	Real Object	Non-Object
Shampoo	Sampoo		
Ring	Wing		
Chalk	Shalk		
Goat	Doat		
Lady	Wady		

Paradigm:

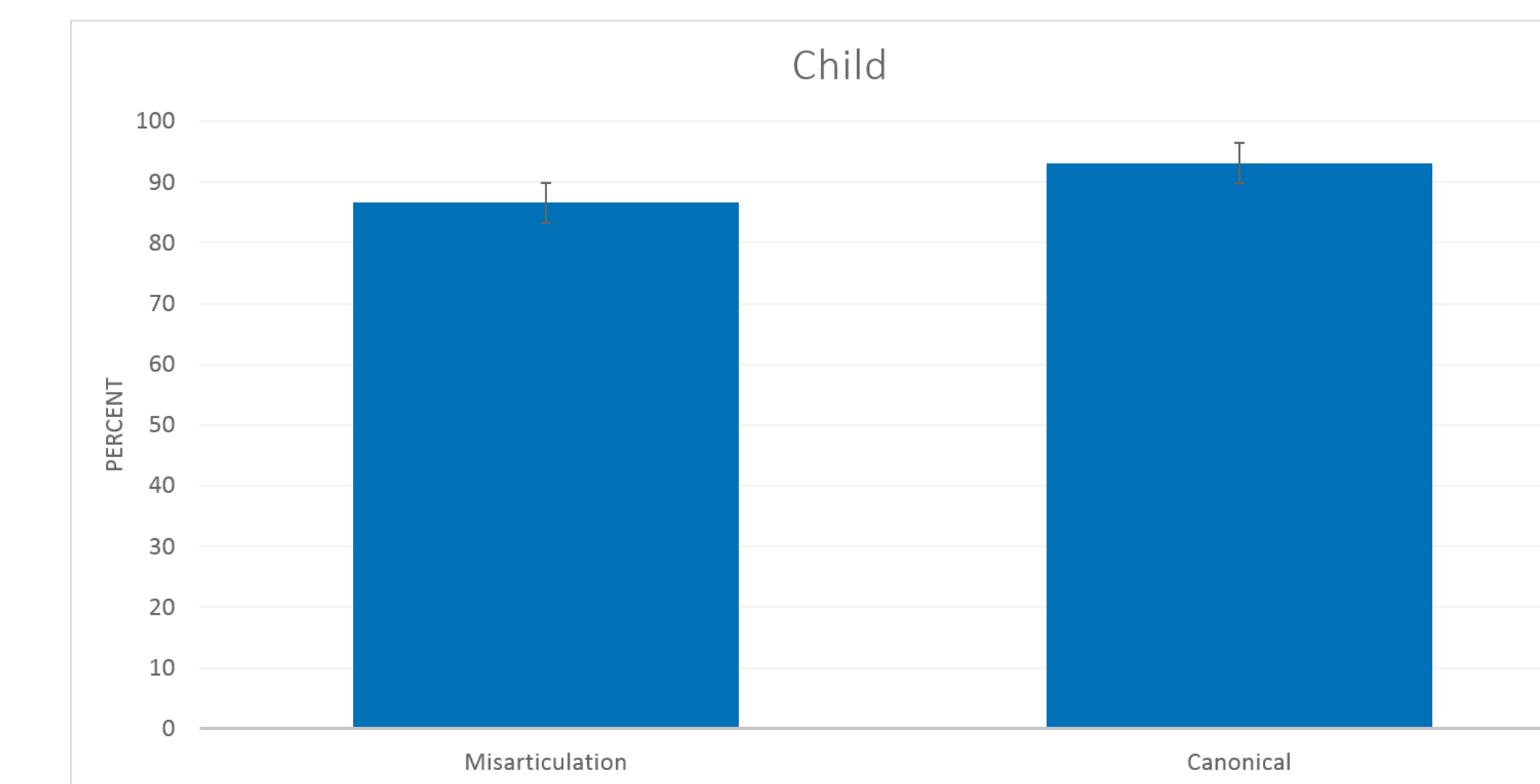
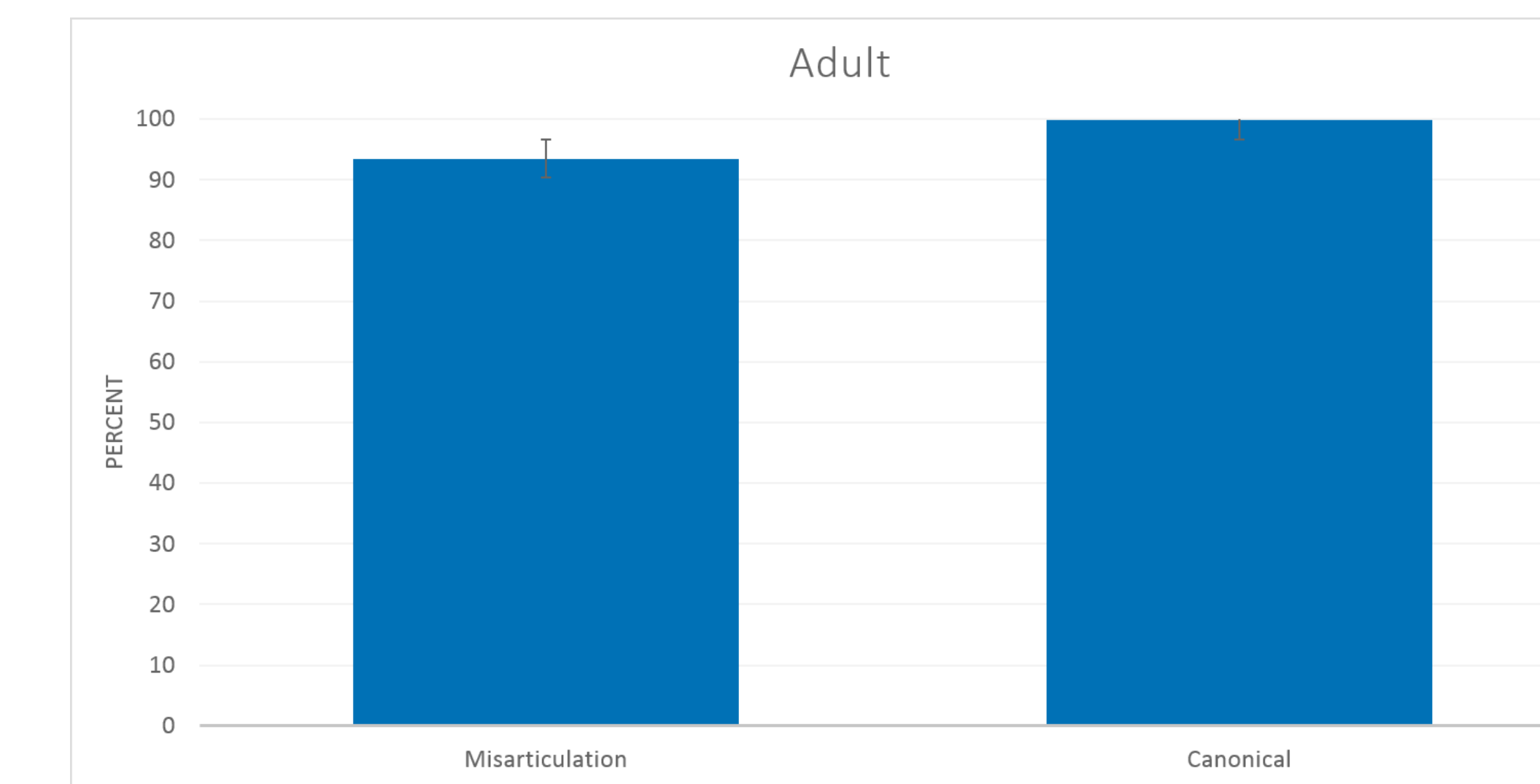


Dependent Variables:

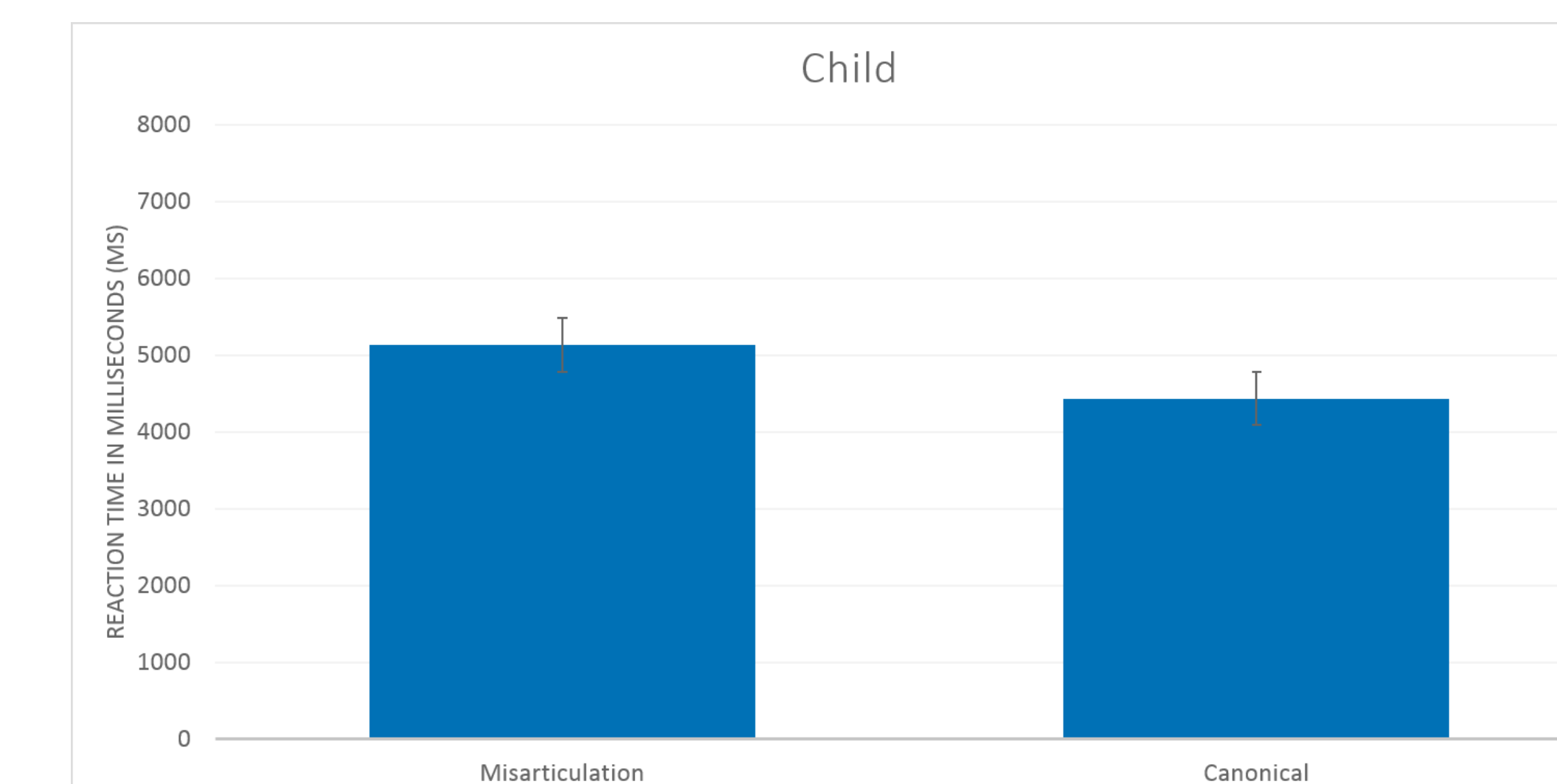
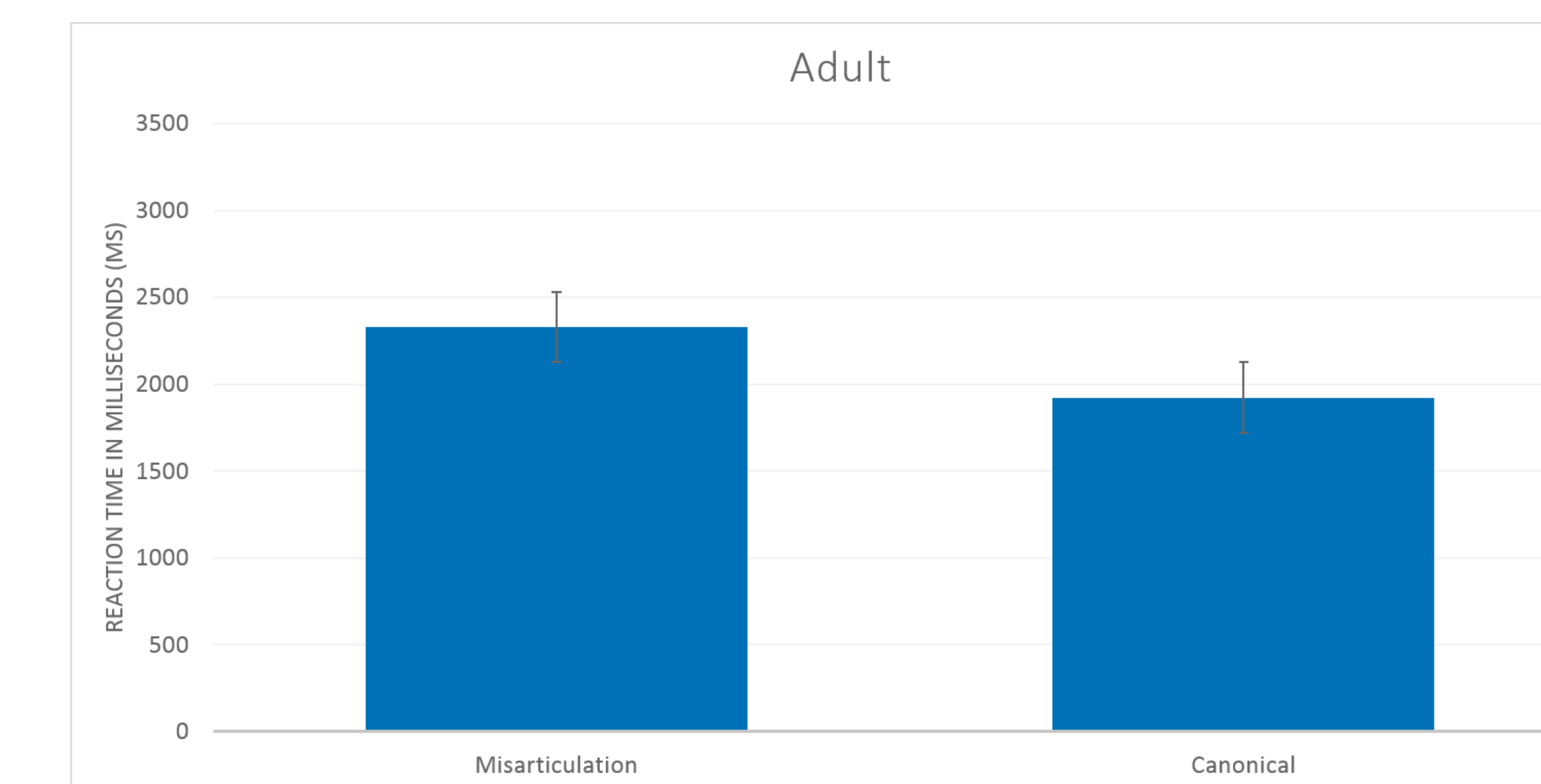
- Percentage of real object selection
- Reaction time (measured by the software as the time from the mouse click on the "start" button to the mouse click on one of the two pictures)

Results

Percentage of Real Object Selection across Stimulus Types



Reaction Time across Stimulus Types



Conclusion

- Adults and children chose real objects more often for canonical productions than for misarticulated productions.
- Adult's and children's reaction time was shorter for canonical productions than for misarticulated productions.
- This suggests that adults and children perceive misarticulations as phonetic variants of real words, but a processing cost occurs.
- This finding bolsters the previous finding that used adult imitated misarticulations, suggesting that the added cues provided by child speech did not alter the effect of misarticulation on processing.

Implications

- Adults and children interpret and process misarticulated speech in a similar way.
- An increased processing time in response to misarticulations could begin to explain why adults may describe having to concentrate or think harder when listening to child speech.



About the Authors

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