

the early PLAY and DEVELOPMENT LABORATORY

Preschool Interactions during COVID-19: Effects of Safety Regulations on
Vocalizations and Proximity in the Classroom

By: Christian Jerry

Background

- Children attending preschool during the COVID-19 pandemic may have experienced barriers to social interaction due to the prevalence of safety precautions, including face-mask mandates and social distancing guidelines. Face-masks, for example, may degrade the quality of the speech signal thereby hindering the intelligibility of children's speech. Suggestions to socially distance may also impact children's language experiences in their preschool classroom by reducing their opportunities for social interactions occurring in close proximity to their peers and teachers.



Question Of Interest

- The objective of the current study was to longitudinally examine the effects of COVID-19 safety precautions on children's language production and proximity to social partners in their preschool classroom.

Pre COVID-19 (Cohort 1)

N = 20 children ($M_{age} = 3.45$ years)

9 children with hearing loss

11 children with typical hearing

During COVID-19 (Cohort 2)

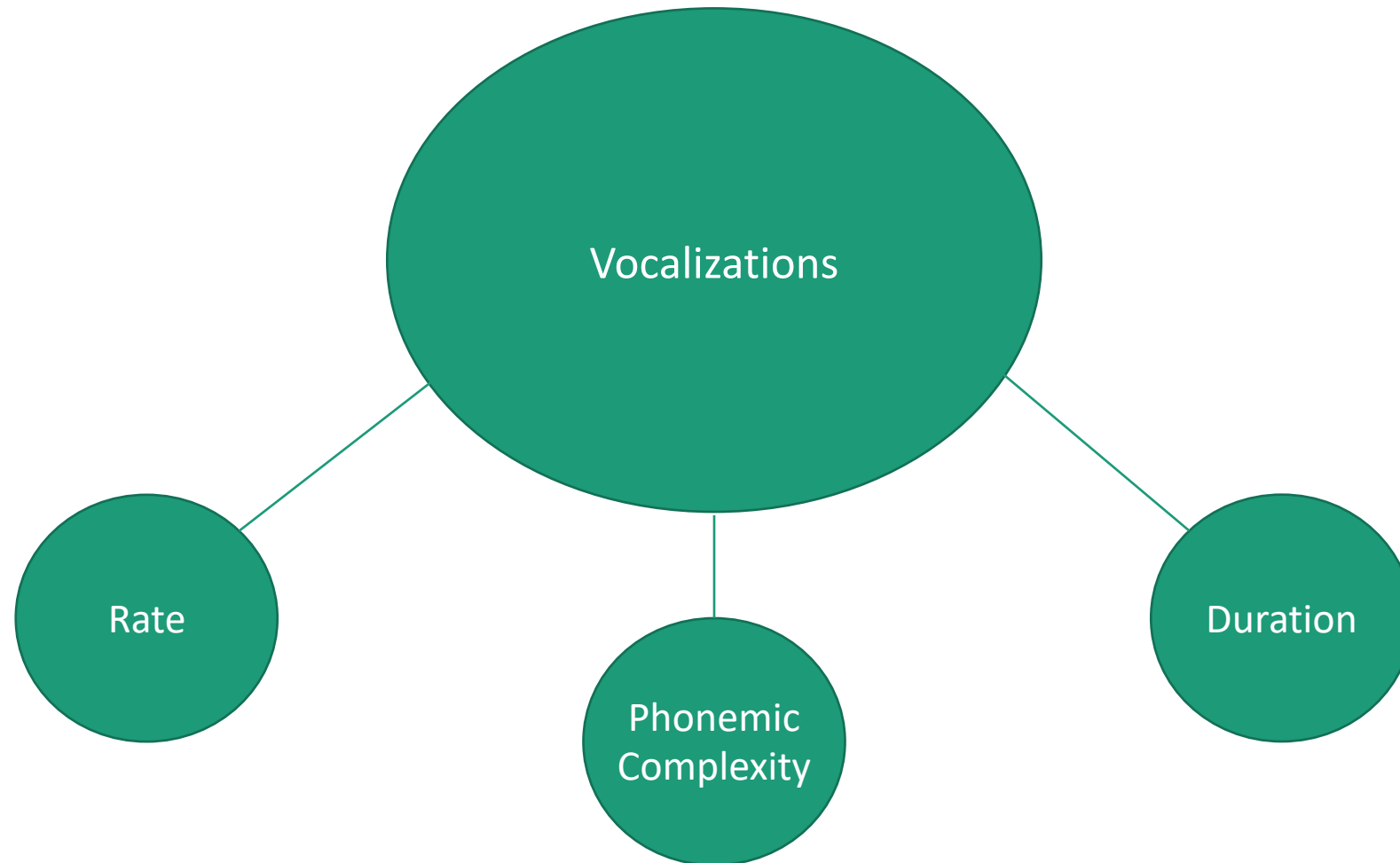
N = 16 children ($M_{age} = 3.59$ years)

7 children with hearing loss

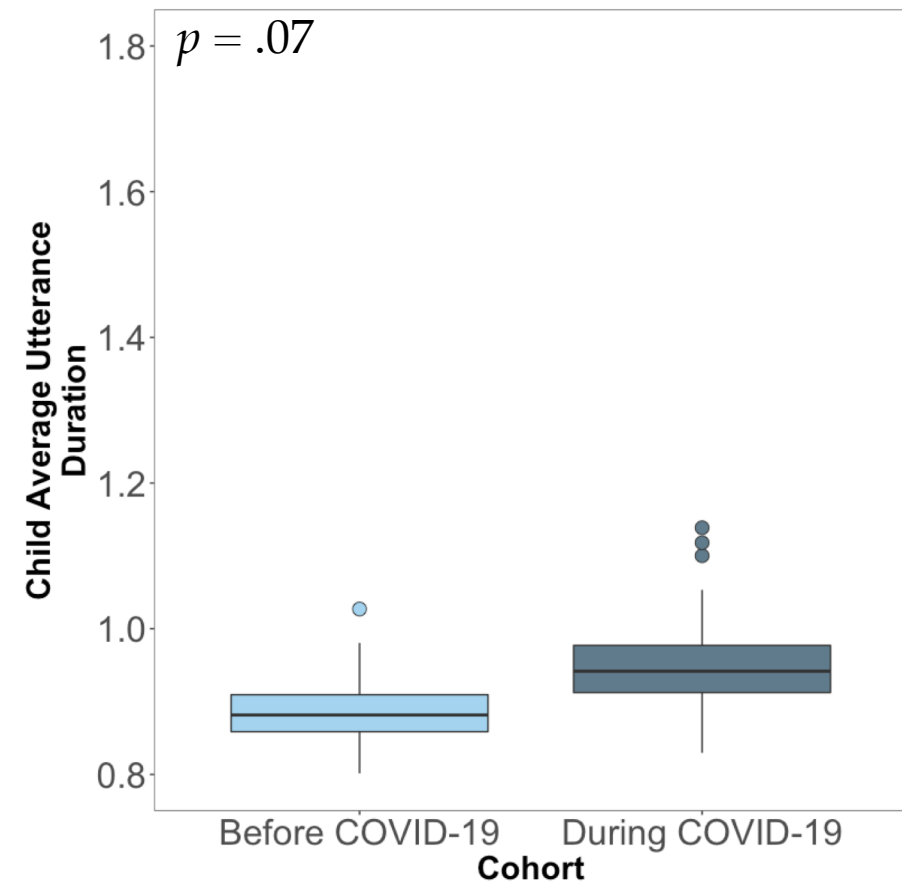
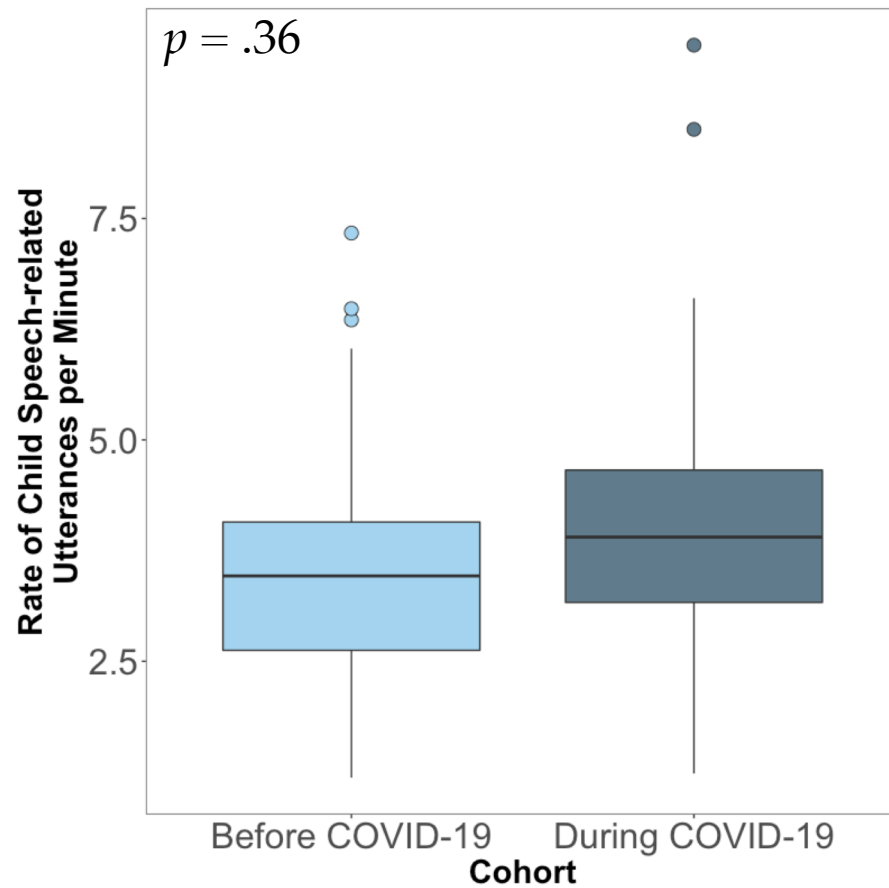
9 children with typical hearing



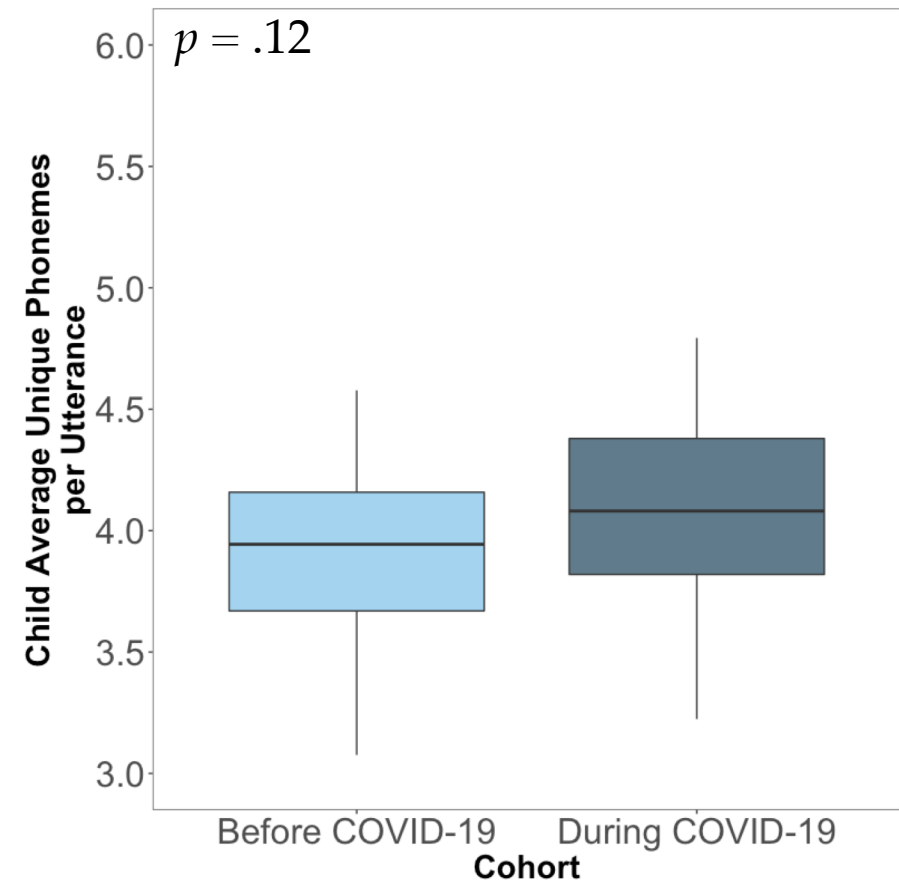
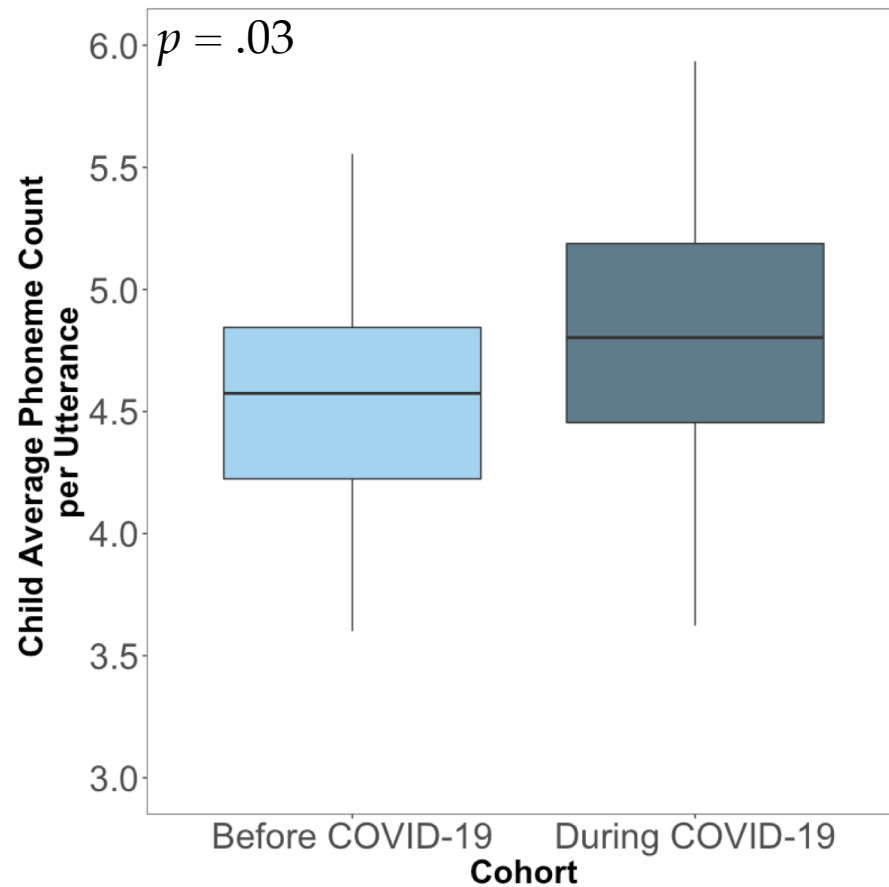
Measurements



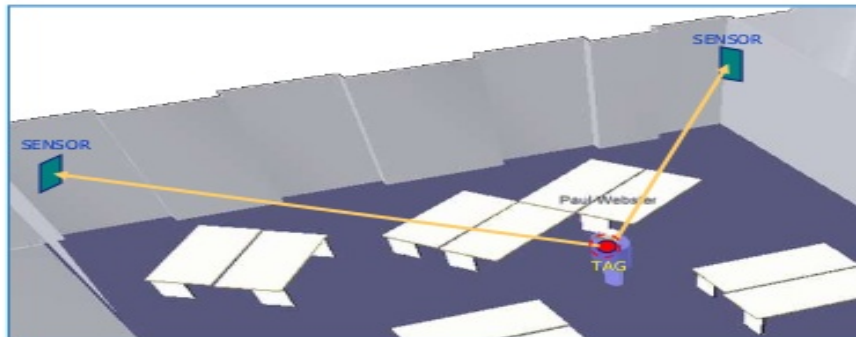
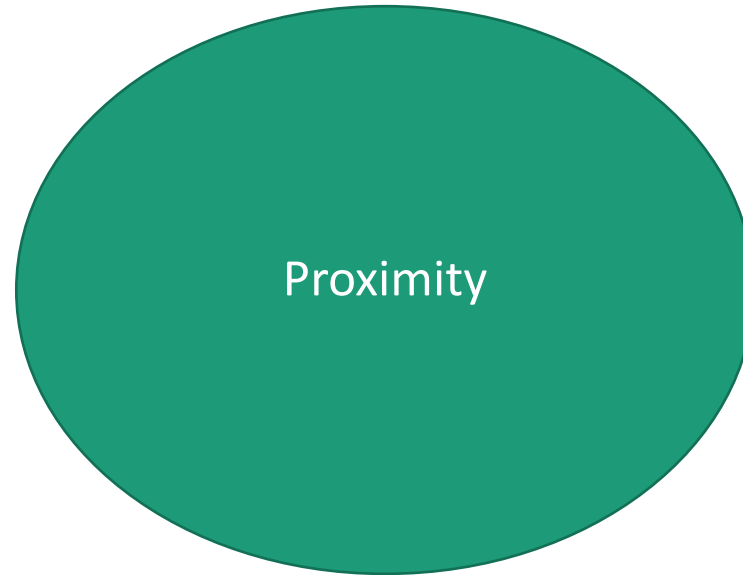
Rate & Duration of Child Utterances



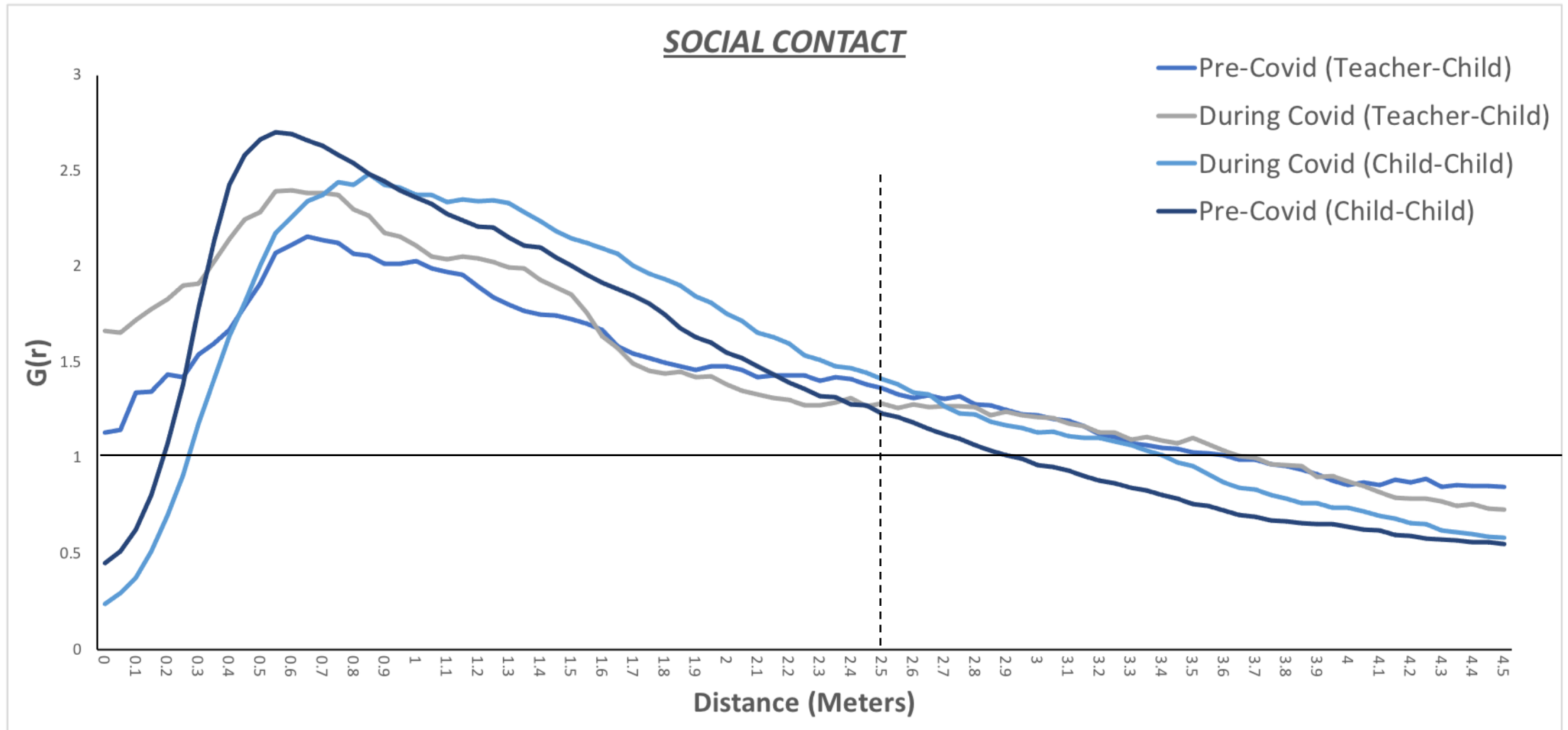
Phonemic Complexity of Child Utterances



Measurements



Children's Proximity to Social Partners



Conclusion / Review

- There was no significant differences between cohorts of children in the rate, duration, or the number of unique phonemes contained in speech-related vocalizations.
 - Children in Cohort 2 (during COVID-19) produced a *larger* number of overall phonemes per speech-related vocalization than Children in Cohort 1.
- Visual inspection of the radial distribution function did not indicate differences in the range of distances in which children were in social contact with their peers or their teachers between cohorts.
- Overall, there was no evidence of a decline in the rate, duration, or complexity of child speech with a mask, as well as proximity in the context of increased safety guidelines (.2-2.5m).

What's Next

- look at the motion data, and combining it with the proximity analysis, to investigate the effect of children's language when in social contact with another social partner during COVID-19.