Dr. Stephen Lindsay

Editor, *Psychological Science*

December 15, 2015

Dear Dr. Lindsay,

My co-authors and I would like to submit an original research article entitled "Real-time lexical comprehension in young children learning American Sign Language" for publication in *Psychological Science*.

Learning to find meaning in a spoken or a signed language requires learning to establish reference during real-time interaction – relying on audition to interpret spoken words, and on vision to interpret manual signs. Studies of early spoken language comprehension have measured children’s gaze as they look at pairs of familiar objects while listening to speech naming one of the objects (e.g., Fernald et. al., 1998). Such research shows that individual differences in real-time processing efficiency predict vocabulary growth and later language and cognitive outcomes (e.g., Marchman & Fernald, 2008). But, no previous research has explored how young children learning a *visual* language develop skill in processing signs from moment to moment.

In this manuscript, we ask whether children learning American Sign Language (ASL) develop skill in real-time processing of signs in ways that are parallel to children learning spoken language. We show that ASL learners’ comprehension skills improved with age and were strongly correlated with vocabulary size, showing meaningful links between real-time ASL processing and language learning. Finally, we show that deaf and hearing ASL learners processed ASL in a qualitatively similar way, suggesting that these skills are driven by experience with a visual language, and not by deafness. These novel findings show striking parallels between the development of language comprehension in visual language learners and in children learning spoken languages.

We believe that this manuscript is appropriate for publication in *Psychological Science* because XXX. We think our findings would be of interest to those readers who study language development, sign language, deafness, and language comprehension.

This manuscript has not been published and is not under consideration for publication elsewhere, and we do not have any conflicts of interests to disclose.

Thank you for your consideration.

Sincerely,

Kyle MacDonald (kyle.macdonald@stanford.edu)

PhD Candidate, Department of Psychology

Stanford University