Dr. Eric F. Dubow

Editors

*Developmental Psychology*

Dortmund, February 7, 2020

Dear Dr. Dubow,

Enclosed for your consideration is an original manuscript entitled “The development of infants' responses to mispronunciations: A Meta-Analysis”.

In this study, we use a meta-analytic approach to examine the developmental trajectory of 6- to 30-month-old infants’ ability to detect mispronunciations in familiar words (mispronunciation sensitivity) in the pursuit of evaluating competing theories about the detail with which infants represent familiar words. Our manuscript consists of 58 pages, including references but excluding tables and figures, but we believe this page number is justified. The results of our meta-analysis have proved fruitful on many fronts and believe all of the components that we broach are essential to understanding the developmental trajectory of the mispronunciation sensitivity effect. In addition to adding valuable effect size estimates to the field, we evaluate long debated issue of when infants’ develop phonologically well specified representations for familiar words, finding support for the early specificity hypothesis. We evaluate different theoretical questions posed with mispronunciation sensitivity studies, finding support for some but not all theoretical assumptions, as well as new evidence for the impact of experimental design on the mispronunciation sensitivity effect. In an exploratory analysis, we investigate whether researchers’ data analysis choices may have impacted this lack of a developmental effect. Our findings have implications for the broader study of development, both theoretically (support for evidence that a key linguistic skill emerges early in development) and practically (analyses decisions in a standard eye-tracking paradigm have a fundamental impact on the results, calling for the standardization and critical evaluation of eye-tracking analyses pipelines).

The manuscript is not currently submitted elsewhere and will not be submitted elsewhere prior to an editorial decision. An earlier analysis of this dataset was included in the 2018 Proceedings of the Cognitive Science Society (<https://mindmodeling.org/cogsci2018/papers/0228/0228.pdf>). This analysis was based on less papers than the current manuscript and did not contain the vocabulary analysis, the moderator analysis, or the analysis of data analysis choices. We therefore believe the current submission is substantially more elaborated than this Proceedings paper.

The dataset upon which our meta-analysis is based has been uploaded to both our Open Science Framework repository (<https://osf.io/rvbjs/>) as well as the Metalab platform (<https://metalab.stanford.edu>). This data is available publicly, but as we are the curators of this dataset we are confident that there are no other reports besides our own (see above) using this data set.

We would be very happy if you consider our manuscript for publication in Developmental Psychology.

Yours sincerely,

Dr. Katie Von Holzen

Dr. Christina Bergmann