Friday, December 10th, 2021

To: Editorial Board of *Cortex*

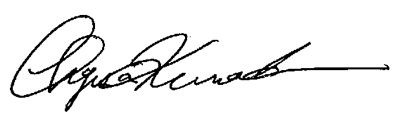
Dear Drs. Guediche and Caffarra,

# We are submitting our manuscript, “Most experiments on exposure effects in speech perception do not distinguish between underlying mechanisms: A computational review”, authored by Xin Xie, Florian Jaeger, and Chigusa Kurumada for consideration for the special issue *Mapping sound to meaning under challenging conditions: converging findings and open questions across methods*. The manuscript is original, not previously published, and not under concurrent consideration elsewhere.

The manuscript addresses a problem of importance to the study of speech perception—mechanisms that support perceptual constancy amid acoustic variability. Empirical work documents a rich body of exposure-driven changes in perception that allow listeners to accommodate challenging variability (e.g., unfamiliar accents). Focusing on this literature, we put forward a general computational framework that offers three mechanisms through which recent exposure can come to affect subsequent perception: (1) low-level, pre-linguistic, signal normalization, (2) changes in linguistic representations, or (3) changes in decision-making. Although the facilitatory effects of exposure on subsequent speech perception are often attributed to the second of these mechanisms (learning of talker- or group-specific representations), we show that the signature results of common experimental paradigms can alternatively be explained without reference to changes in linguistic representations. We believe that this novel result will be of interest to the readership of *Cortex* as it holds the potential to counter some of the common received wisdom in the field and cast new light on a wide range of existing findings.

Suggested reviewers are listed below. Thank you for considering our paper for publication.

Sincerely,





Xin Xie T. Florian Jaeger and Chigusa Kurumada

**Suggested reviewers:**

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