Apr 28, 2013

Dear Professor Verma,

Please find the attached manuscript "An Integrative Account of Constraints on Cross-Situational Learning"; we are submitting this work for publication in *The Proceedings of the National Academy of Sciences*. The paper contains a set of experiments and computational models that together unify previously-opposed perspectives on the mechanisms used to learn the meanings of words from ambiguous language input.

Across the broader field of language acquisition, there is significant debate about the processes humans use to learn from the statistics of their language environments. We focus on one sub-problem—learning the meanings of concrete nouns—to show that these debates are likely ill-posed. We present a unifying framework that accounts for previous data and also makes near-perfect quantitative predictions about a large novel dataset that we present in the paper.

We would like to suggest Richard Shiffrin, Richard Aslin, and John Anderson as potential editors for this paper. Professors Shiffrin and Anderson are both experts in the analysis of human memory as well as the kinds of computational models we present here. Professor Aslin is an expert in the domain of early language learning and thus well-positioned to determine the value of the contributions in the current work.

We also plan to release all materials, data, and code for the model presented in this paper. We have provided a link in the supporting information to an online repository containing code and data from the analyses we report, but we are open to other data archiving solutions as well.

Thank you very much for your consideration,

Daniel Yurovsky and Michael C. Frank
Stanford University