Apr 24, 2013

Dear Professor Vema,

Please find the attached manuscript “An Integrative Account of Constraints on Cross-Situational Learning” that we would like to submit 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 humans use to learn words’ meanings from ambiguous situations.

Across a number of problems in 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 unify framework that accounts for previously-contentious data and also makes near-perfect quantitative predictions about a large set of novel data presented here.

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 contribution presented her.

We also plan to release all materials, data, and code for the model presented in this paper.

Thank you very much for your consideration,
Daniel Yurovsky and Michael C. Frank