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Ambiguity – Production and Perception

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Dear editors,

Enclosed, please find our manuscript, “Learning about others: Modeling social inference through ambiguity resolution,” submitted as an original research article to *Cognition*.

In the paper, we address a fundamental property of human language and communication: ambiguity. Ambiguity seems to be a negative side-effect of an efficient communication system, and the fact that it is so pervasive in language has puzzled researchers for decades. We propose that ambiguity serves an important purpose beyond the efficiency it allows: observing how conversation partners resolve ambiguity reveals information about their beliefs and preferences (i.e., their priors). We develop a Bayesian computational account of how humans infer the priors of others upon observing their ambiguity-resolution behavior. We also model ambiguity creation as a strategy that allows speakers to actively seek better understanding of the listener’s state of mind.

Our work brings together several lines of research in linguistics, psychology, communication sciences, and mathematical modeling. We hope the behavioral and computational approach we develop will be of interest to the wide readership of *Cognition*.

We hope that you are able to consider our manuscript for publication, and we look forward to your comments and those of the reviewers.

Sincerely yours,

Asya Achimova, Gregory Scontras, Christian Stegemann-Philipps, Johannes Lohmann, Martin Butz