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Ambiguity – Production and Perception

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Dear editors,

We would like to submit a manuscript entitled:
Learning from others: Pragmatic social inference through ambiguity resolution.

In this 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: it allows the speaker and the listener to reason about hidden beliefs of each other, which lead to individual interpretations of ambiguous phrases.

Here we develop an account of how humans use ambiguity resolution to build more accurate predictive models of each other. This information seeking behavior is aimed at ensuring efficient communication and ultimately efficient interaction between people. Our work brings together several lines of research in linguistics, communication sciences, and mathematical modeling. We develop a formal account of social Bayesian reasoning inspired by Rational Speech Act models. Our analysis offers a foundation for developing precise models of social interaction.

We believe this paper fits within the journal's main focus on the interaction between cognitive processes and behavior. We hope the computational approach we develop will be of interest to the wide readership of Nature Human Behavior.

Sincerely yours,
Asya Achimova,