Attila Ambrus, Duke   Departmental Seminar on May 15, 2023 Host: Christoph Vanberg

Cheap talk with extreme states

Abstract:

This paper extends the classic cheap talk model of Crawford and Sobel (1982) to unbounded state spaces, and investigates how tail properties of the distribution of the state affect information transmission in equilibrium. Equilibria continue to have the interval partition structure, but for thin tailed distributions there is no upper bound on the number of partition cells, and there can be equilibria with infinitely many cells. Nevertheless, the effectiveness of communication depends on the magnitude of the sender's bias, as in Crawford and Sobel, as that determines how coarse information transmission is at the central parts of the state distribution. Our findings are qualitatively different for fat tail distributions, where we find that there is always an upper bound on the number of partition cells in equilibrium. Moreover, no matter how small (but nonzero) the magnitude of the sender's bias is, as the tail of the distribution gets heavier, the expected payoff of the receiver diverges to negative infinity. Many policy relevant variables in finance, macroeconomics and the economics of climate change are standardly modeled using fat tailed distributions. Our findings reveal that in such settings it can be difficult for an informed expert to credibly reveal information to a policymaker, even if their preferences are closely (but not perfectly) aligned.

* with Luke Zhao