Robust Social Learning from Unordered Actions

Kevin He
University of Pennsylvania

Abstract:
People often learn from others' actions without observing the chronology of who influenced whom. We study a sequential social-learning model where agents observe predecessors' actions as an unordered set and minimize worst-case expected loss across move orders. The unique equilibrium with this robust decision criterion is DeGroot aggregation: each agent equally averages their private signal and all previous actions. Robust actions are disproportionately influenced by early signals and converge to a random consensus centered around the true state. By contrast, Bayesian agents in the same environment learn the state, as does a Bayesian observer who sees the unordered actions of robust agents.