

Bayesian Persuasion in Networks: Divisibility and Network Irrelevance

Abstract:

We study a multiple-receiver Bayesian persuasion model in which the sender wants to persuade a critical mass of receivers, who are connected in a network and observe their neighbors' signals. We simplify the problem by considering signaling schemes ("experiments") which never target certain receivers, effectively dividing the network and preventing some of the information spillovers. Using this approach, we derive lower bounds on the value, find experiments that achieve them, and provide sufficient conditions for obtaining the optimal value.

Our framework allows us to better interpret cultural phenomena such as echo chambers and opinion polarization