When is a majority sufficient to persuade a population to adopt a convention?

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Abstract

We develop a model of persuasion and convention formation. Agents choose between two strategies. Strategy A is risk dominant and thus naturally attractive under best response and similar dynamics. However, a planner would rather the agents play strategy B. Agents form heterogeneous beliefs about aggregate play via statistical inference from random sampling. The planner observes aggregate play and can influence agents' beliefs via a signaling mechanism. We characterize conditions under which such informational interventions can reverse the inherent bias towards A, so that a simple majority adopting B suffices for sustainable growth leading to the adoption of B by the entire population. Our analysis examines how the effectiveness of persuasion depends on agents' preferences and inference procedures, considering a variety of biases in updating rules. Notably, from a starting point of standard Bayesian updating, the planner benefits when agents under-infer or under-react to new information. Overall, this work contributes to our understanding of how strategic communication and information design interact with evolutionary dynamics and convention formation in economic and social settings.