On the Optimality of Diverse Expert Panels in Persuasion Games

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We examine a game where multiple senders communicate with a single uninformed receiver. Before the communication takes place, each of the senders, with a certain probability, learns the realization of the state of nature, which is a real-valued random variable. The information about the state is verifiable, so the senders cannot misrepresent it, but can conceal it by pretending they are uninformed. Upon seeing the senders' messages, the receiver can take an action that affects the payoffs of all parties. The receiver wants his action to match the state of nature, whereas for each of the senders, the preferred action is state independent.

In this setting, we ask whether the receiver would prefer the panel of senders to include senders with identical or diverse preferences over the actions. Casual intuition suggests that a diverse panel should result in more informative communication: whenever one of the senders would prefer to conceal the information, a sender with the opposite interests would prefer to reveal it. However, we prove that under certain reasonable conditions on the receiver's payoffs and the distribution of the state, the optimal sender panel is homogeneous: that is, all senders who are included in the panel have the same preferred action, equal to one of the endpoints of the interval over which the state is distributed. We investigate the conditions under which the optimal panel is homogeneous or heterogeneous, and test the robustness of the results to correlation in senders' information and the possibility of costly information acquisition by the senders.