

On the Role of Information in Collective Decision-Making

In many situations, citizens or group-members share common objectives, but disagree over which collective action will achieve their desired ends. In such settings, majority voting can be an effective mechanism for pooling private information. A conflict arises, however, between the quantity and quality of information. On one hand, Feddersen and Pesendorfer (1996)¹ show that uninformed agents can improve election outcomes by *not* voting, leaving decisions to those who are informed. This can explain voter abstention in costless voting environments (e.g. voting and abstaining on the same ballot), as well as the salient empirical importance for voter turnout of information variables such as education, age, and political knowledge. On the other hand, the much older Condorcet (1785)² jury theorem points out that decisions are best made by pooling as many private signals as possible, even if individual signals are only minimally informed. This dissertation provides a general, unified framework for analyzing the importance of information for both voting behavior and election outcomes.

Chapters I – II

“Information and Voting: the Wisdom of the Experts versus the Wisdom of the Masses”

The Condorcet model assumes that voters have identical information accuracy, while the Feddersen-Pesendorfer model assumes voters to be either perfectly informed or perfectly uninformed. The key assumption in this paper is that individual expertise is drawn from a continuous distribution, so that no one’s information is perfect. Equilibrium is characterized by an information quality threshold, above which citizens vote informatively and below which they abstain. The tension between information quality and quantity bounds this threshold so that significant fractions (e.g. close to half) of an electorate vote and abstain, even in an arbitrarily large electorate. The equilibrium level of turnout also maximizes the probability of a desired election outcome, which is perhaps surprising given that not everyone votes.

This threshold equilibrium structure implies that the importance of information for voting is relative, not absolute—a voter’s own information leads her to vote while the information of others leads her to abstain. To test this hypothesis, I use proxies of the absolute levels of voter information (e.g. education, age, etc.) to construct percentile rankings within each state. Regressing voter participation on these absolute and relative information variables together, I find that information increases voter turnout almost exclusively through the relative channel—compelling evidence of voters’ strategic use of information.

¹ Feddersen, Timothy J. and Wolfgang Pesendorfer. 1996. "The Swing Voter's Curse." *The American Economic Review*, 86(3): 408-424.

² Condorcet, Marquis de. 1785. *Essay on the Application of Analysis to the Probability of Majority Decisions*, Paris: De l'imprimerie royale. Trans. Iain McLean and Fiona Hewitt. 1994.

Chapter III

Every Vote Counts: Signaling in a Common-Value Election

In existing common-value election models, voters seek to identify the better of two alternatives. In many settings, however, the number of alternative collective actions may be immense. Accordingly, this paper considers a one-dimensional policy space, in which the (common) value of any policy is given by its proximity to some unobservable ideal, of which individuals receive private signals. In this setting, sincere voting is likely to identify whichever of two policy proposals is closer to the ideal. In fact, the location of the ideal policy itself can be inferred somewhat from vote totals. If allowed to modify his campaign proposal after winning office, therefore, an official can utilize this information and move toward the ideal policy. This corroborates the popular notions that large vote margins convey a “mandate” from voters for dramatic policy changes, and that votes can influence policy outcomes without necessarily changing the election outcome. Among other things, this provides a possible reason for third party candidates and their supporters, which are difficult to explain in traditional pivotal voting models.

Updating campaign proposals in response to vote totals greatly strengthens the original Condorcet jury theorem: if votes reflect private information then, as the number of votes grows large, the policy that is implemented converges in probability to the optimal policy. If voting serves only to signal private information, the Feddersen and Pesendorfer (1996) logic of the “swing voter’s curse” no longer applies. An analogous “signaling voter’s curse”, however, does extend the logic of strategic abstention: by voting, an individual pushes policy one way or the other; since her peers’ votes will accurately identify the optimal policy, a poorly informed agent wishes to do neither, and will instead abstain.