A passion for voting ☆

Elena Panova

Toulouse School of Economics, 21 Allée de Brienne, 31000 Toulouse, France

A R T I C L E   I N F O

A B S T R A C T

We model expressive voting as a dynamic game with informed and ignorant voters. A voter has selective memory for actions and he is aware of it. We find a unique symmetric equilibrium with ignorant voting. Public signal in favor of one particular alternative creates the bandwagon and underdog effects. When the signal is sufficiently strong, the majority outcome is biased. This is a possible reason for persistence of public policies.

1. Introduction

A key argument for voting is its potential to choose public policies that are aligned with common interests on the basis of information gathered from different voters. The information-aggregation property of voting is established in settings where each voter behaves so as to improve the outcome, conditional on being pivotal (Feddersen and Pesendorfer, 1997). These objectives are called instrumental.

A voter with instrumental objectives votes on his private information if it is available. Otherwise, he abstains because he is more likely to spoil, rather than improve, the voting decision by better-informed voters (Feddersen and Pesendorfer, 1996). While recent experiments – natural (Lassen, 2005) and laboratory (Battaglini et al., 2008) – show that, indeed, voter information increases the turnout, voting with inferior information is quite common: Various polls reveal extremely low

political knowledge by a majority of respondents.[1] About 70% of participants in the American National Election Studies polls agree that "politics is too complicated."[2] Still, a majority of Americans votes in the US Presidential elections.[3]

A voter with instrumental objectives votes on his superior private- and not public information. In reality, however, the vote choices are sensitive to public information: campaign information (Hillygus, 2005; Gordon and Hartmann, 2013), political news (Gerber et al., 2009; Della Vigna and Kaplan, 2007; Enikolopov et al., 2011) and results of public opinion polls. Many studies find the bandwagon effect: a tendency to vote for public-opinion poll winners.[4] Fewer studies find the underdog effect: a tendency to support public-opinion poll losers (see survey by Irwin and Van Holsteyn, 2000). Agranov et al. (2012) conclude that the bandwagon effect appears when poll victories are small, while the underdog effect is observed when polls predict a landslide victory.

These observations suggest that voter motivation is not purely instrumental. A sizable literature proposes that voter motivation is expressive (see survey by Hamlin and Jennings, 2011): Most likely, an individual vote has no impact on the outcome. A voter should be motivated by the act of voting, expressing his loyalty to certain ideological or identity beliefs.[5] Starting from this common point, this literature highlights various aspects of expressive motivation, formalizing it in different ways: either as a benefit from voting (in a certain way) or as a payoff depending on the vote choices by the other voters (see Section 2 for details). These various approaches have been criticized for the lack of robust predictions regarding the effect of expressive motivation on voting behavior and outcomes (see, for example, Geys, 2006). We propose a new framework to analyze this effect.

Our approach is motivated by the effect of habitual voting which has not been modeled by either instrumental- or expressive-voting theories: Participation in one election increases the propensity to vote in the next election. This causal[6] relationship is supported by the real data (Green and Shachar, 2000; Denny and Doyle, 2009; Meredith, 2009) and field experimental data (Gerber et al., 2003). Gerber et al. (2003) discuss possible reasons for habitual voting. One is that the act of voting increases one's sense of political efficacy, in the spirit of Finkel (1985).[7] Such an impact of an action on beliefs is natural in the light of the psychological theory of cognitive-dissonance reduction (see Festinger, 1957 for the original theory and Harmon-Jones et al., 2009 for a survey): An individual who holds interrelated but dissonant elements of knowledge experiences discomfort and changes his cognitions so as to reduce the dissonance. Memory about recent behavior is most resistant to change. This theory is relevant for understanding voting (Mullainathan and Washington, 2007; Gerber et al., 2010).

With this motivation in mind, we consider a dynamic voting game with asymmetric information. The basic game has two successive votes: today and tomorrow. A continuum of voters chooses public policy from a binary set using a simple majority rule. The voters commonly benefit from matching their policy choice with a hidden state of Nature. They receive private signals on the state: signals by the informed voters (a minority) are perfect, signals by the ignorant voters are noise. There is no serial correlation in the states or signals. A voter can vote for either policy, or abstain. He maximizes his payoff from the act of voting, which is equal to his confidence in his vote choice.[8] The cost of voting is arbitrarily small. A voter has selective memory for actions: Today, he knows his private signal and its quality. Tomorrow, he forgets this information,[9] but he remembers his voting behavior and he can see the majority outcome. He is aware of his memory imperfection.

If the game was static or if voter memory was perfect, the ignorant voters would abstain, the informed voters would vote their signals, and the outcome would match the state. However, repeated voting removes this behavior out of equilibrium. An ignorant voter would like to deviate and vote: if he pools with the winners, he gains confidence in his tomorrow's vote choice and receives an expressive benefit from voting. In the unique symmetric perfect Bayesian equilibrium,[10] ignorant voters vote for different policies with equal probability. If a sufficiently high cost of voting is introduced, they abstain with

---

[1] For example, on such issues as the distribution of the state budget (Bartlett, 2011), the level of unemployment (Ansolabehere et al., 2012) or term limits (Romano, 2011).

[2] http://www.electionstudies.org/nesguide/toptable/tab5b_1.htm.

[3] Average turnout during 1996–2012 is 61,4% (U.S. Census Bureau).

[4] See, for example, Bartels (1988) or Cloutier et al. (2010). Sher (2011) isolates the bandwagon effect from strategic voting. Tyran (2005) finds the bandwagon effect in laboratory voting on a redistributive proposal. Coleman (2004) finds suggestive evidence for conformity in elections across wide geographical and time spans without referring to public opinion polls, based on a positive correlation between the entropies of turnout and vote choices.

[5] The expressive benefit from voting is apparent in polls (Carlsson and Johansson-Stenman, 2010). For example, one voter explains his participation in the US Presidential elections: "I do not care if my voice matters to the total. My vote – and the act of voting – matters to me" (http://www.freakonomics.com/2008/12/05/our-daily-bleg-why-do-you-vote/). In laboratory experiments by Feddersen et al. (2009) and by Morton and Tyran (2012), the subjects are inclined to vote for morally worthy alternatives and against their own monetary interest (these studies debate whether this "moral bias" increases in the size of the election (Feddersen et al., 2009) or not (Morton and Tyran, 2012)).

[6] Persistence in voting was established earlier (see references in Gerber et al., 2003).

[7] Relatedly, voting may increase the sense of civic duty or else improve conative attitudes towards voting through familiarizing the voters with the voting procedure. Alternatively, active voters may receive higher campaign attention.

[8] This paper isolates the instrumental objectives: pivot probabilities are null. However, the insights are robust to introducing instrumental objectives and decreasing the number of voters to being finite. The proof is available upon request. We thank an anonymous referee for requesting this robustness check. Further analysis is a promising research direction.

[9] For simplicity, the voter forgets any information about the underlying signal and its quality. We could assume that he forgets this information with a positive probability without a loss for the insights. We thank an anonymous referee for this remark.

[10] The equilibrium is unique because the informed voters have a dominant strategy to vote their signals. We model action-based motivation behind cognitive-dissonance processes, in line with a sizable evidence in Harmon-Jones et al. (2009). The most prominent alternative motivations are belief-based: