

Run Boris Run: Strategic Voting in Sequential Elections

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Following the 1995 Russian parliamentary election, it was suggested that Russian voters may have used their votes to send a message to the then current Russian president, Boris Yeltsin, who was scheduled to run for reelection six months later. Building on this observation, we consider the incentives for information transmission through strategic voting in systems with sequential elections. We find that when an election for a sufficiently weak institution (e.g., a parliament) precedes an election for a strong institution (e.g., a president), in any equilibrium some voters vote against their preferred party in the first election to send a message to candidates in the second election. Following a brief discussion of the intuition underlying this argument, we present a model that allows us to isolate institutional features that affect the prevalence of this type of strategic voting: the relative importance of institutions to voters, the timing of sequential elections, and the relative cost of responsiveness by candidates.

An interesting irony has developed in the study of elections. Scholars seem convinced that parties and candidates are obsessed with measuring voters' preferences, but few studies take seriously the observation that mass behavior may be influenced by the fact that it is being measured. Two studies that are nearly 50 years old framed this information transmission problem in terms of the potential for respondents in preelection polls to distort their responses in an effort to influence the behavior of others (Dupeux 1954; Simon 1954). In subsequent years, though, political scientists have ignored the question of whether masses ever modify behavior during election campaigns in an effort to influence elites.¹

In the intervening years, however, political scientists have become interested in the question of whether there are circumstances under which voters might vote for a candidate or party other than the one they most prefer (*strategic voting*). To date, two explanations of strategic voting have been proposed: stra-

tegic voting within a single election in an effort to avoid *wasting one's vote* (e.g., Cox 1997) and split-ticket voting across two elections in an effort to *moderate policy outputs* (e.g., Alesina and Rosenthal 1995, 1996; Fiorina 1992).² In this paper, we consider a third type of strategic voting—voting to *send a message* to candidates—in settings with sequential elections. When an election for a relatively less important institution (e.g., a weak parliament in a presidential system) is followed by an election for a relatively more important institution (e.g., a strong president in a presidential system) and candidates running in the second election can respond to the outcome of the first election, equilibria exhibit this type of behavior. Specifically, voters face a trade off between influencing the first-election in the desired manner and influencing the behavior of candidates in the second election. When the former is sufficiently unimportant relative to the latter, in every equilibrium some first-election ballots are insincere. By isolating the relative importance of institutions to voters and the sequence of

¹While the potential for signaling in repeated elections has been noted in a small number of technical papers (Meirowitz 2005a,b; Piketty 2000; Razin 2003; Shotts 2000) the logic of this notion of strategic voting has not filtered into comparative politics. Moreover, relationships between institutional features and this behavior have not been explored.

²A third less related form of strategic behavior—strategic abstention—surfaces in Feddersen and Pesendorfer (1996, 97). Uninformed voters may strategically abstain in an effort to allow more informed voters to exert more influence on the election outcome.

elections as variables that affect equilibrium voting, the model can inform discussions about how elections ought to be staged in countries in which electoral institutions are being created or reformed.

The study of how election timing affects strategic voting is important for several reasons. First, the potential for strategic behavior to result in nonrepresentative governments has normative implications for representation-based justifications of democracy. Second, in contrast to other forms of strategic voting, this form of distortion can either be reduced or encouraged by a relatively simple manipulation of the timing of elections.³ Third, in contrast to strategic voting based on not wasting one's vote, which tends to result in more votes for mainstream parties, behavior consistent with the signalling motivation can result in extremist parties receiving more parliamentary seats than they would under sincere voting.⁴ Additionally, understanding voting behavior in presidential systems where parliamentary elections precede presidential elections is important because they actually exist in the real world; this is not just a matter of intellectual curiosity.⁵ Finally, this article contributes to our understanding of how elites receive information from citizens in view of the growing realization among both academics and practitioners that opinion polls can not be relied upon alone to do so. Recent theoretical work (Meirowitz 2005b) and an extensive history of inaccurate forecasts based on polls suggests that not all of the relevant information about voters surfaces in public opinion polls. The study of sequential elections as a means transmitting information reveals how elections themselves can facilitate information aggregation, thus suggesting an alternative source of information available to elites for filling the gap left by opinion polls. Overall, the article emphasizes the importance of understanding the intertemporal incentives faced by both masses and elites across multiple elections.

The paper proceeds as follows. Before presenting our theoretical arguments, we begin with an illustrative example—the 1995–96 Russian election cycle—of a case where a noted scholar suspected that voters were

indeed trying to use their votes in a parliamentary election to *send a message* to a candidate in a subsequent presidential election. After a brief discussion of the formal literature related to our topic, we present an informal discussion of the incentives to misrepresent one's preferences. In the fourth section, we introduce the model and show that under certain conditions all equilibria involve some insincere voting in the election for the weak branch of office. The analysis identifies conditions under which this type of behavior is predicted to happen and considers the welfare consequences of the phenomena.

The 1995–96 Russian Election Cycle

In the December 1995 Russian parliamentary election, the political party most closely linked to the then incumbent President Boris Yeltsin suffered a bruising defeat at the hands of a newly resurgent Communist Party of the Russian Federation. With Yeltsin himself facing a reelection contest the following June, the results could not have been more ominous. One scholar noted that “the logical conclusion of such an interpretation of Russian electoral politics was that Yeltsin would surely lose a free and fair election in June 1996” (McFaul 1997, 1), while another stated that in the aftermath of the parliamentary election, all signs “heralded Yeltsin's crushing defeat in the June 1996 presidential election, a conclusion reached by many in Russia and the West” (Brudny 1997, 255). □

However, writing in the immediate aftermath of the parliamentary election, Colton was less pessimistic about Yeltsin's chances. He noted that the election:

must be seen in the proper political and institutional context. As of Yeltsin's forceful dissolution of the Congress of People's Deputies and the adoption of the current constitution by national plebiscite in 1993, ultimate authority in the Russian state has clearly resided in the executive branch, not the legislative branch. . . . Much of the time, the Federal Assembly functions more like a debating society or street rally than a responsible and deliberative council of lawmakers. Its accomplishments and potential for future development are given short shrift. Dissatisfied citizens could have inferred, not unreasonably, that December 1995 presented them with a megaphone, as George Wallace used to say about state-level primary elections in the United States, to “send them a message” from the privacy of the polling booth—them in this instance being the unaccountable officials in the Moscow executive establishment, chief among them a strong-arm president whose control was not up for grabs in the election. . . . A vote tossed to the KPRF or the LDPR [opposition parties] in December 1995 . . . was a low-cost choice for the citizen, since come what may Boris Yeltsin was still going to be in

³In the initial stages of designing democratic institutions, timing of elections is likely to be one of the easiest institutional features to change. Moreover, even in established democracies, changing the timing of elections may prove easier than other more fundamental reforms of the electoral process.

⁴For more on the consequences of increased vote shares for extremist parties, see Powell (1986).

⁵As of the summer of 2003, by our count 27 of the 83 countries in the world with presidential systems had held parliamentary elections that preceded presidential elections in the most recent electoral cycle. See web-based Appendix 1 for details.

the Kremlin after the voters were tallied and the parliamentary benches filled. (Colton 1996b, 372–73)⁶

Clearly, Colton felt that Russians were willing to use their vote in the parliamentary election to try to “send a message” to Yeltsin. Why might Russians have been willing to trade off their vote in the parliamentary election to send a message to a presidential candidate? After all, most theories of voting posit that citizens—if they choose to vote—will use their vote to support their most preferred party, or, at the very least, their most preferred party with a legitimate shot at achieving representation in the parliament. As previously noted, the point of this paper is to present a formal model that specifically addresses this question. In the remainder of this section, however, we note four reasons specific to the Russian case why Colton may have been correct in his assessment; these four reasons have natural connections to features of the formal model.

First and foremost, in Russia the presidency is clearly a more important institution than the parliament. In the terminology of comparative politics, Russia is a strong presidential system, which some have even called a super-presidential system (Fish 2000). Among the powers held by the president at the time were the abilities to chair meetings of the government, nominate the prime minister who then selects the government, remove the prime minister, initiate legislation, veto legislation initiated by the government, issue decrees that are not subject to parliamentary review, and directly command units of the military, police, and intelligence services that are not part of the normal chain of command and instead are directly under the control of the president (see Easter 1997, 194). Overall, “it is the president and his ministers and appointees who truly govern the Russian Federation, subject to checks and balances that are exceptionally weak” (Colton 1996b, 372).

Second, there was an appropriate party that Yeltsin supporters could choose to “punish” in the parliamentary election if they indeed wanted to send a message to Yeltsin. Although Yeltsin—and for that matter his successor Vladimir Putin—chose not to join a political party, all Russian parliamentary elections have had a “party of power” competing in the election to represent the interests of the government and the presidential administration. In the 1995 parliamentary election, the party of power was clearly Our Home is Russia (*Nash Dom Rossiia*, or NDR). Headed by then

Prime Minister Viktor Chernomyrdin, the party was formed prior to the election “with the primary purpose of supporting the Chernomyrdin government and laying the foundation for Yeltsin’s reelection campaign the following summer” (Marsh 2002, 78). Most of the cabinet members also joined the party, and it enjoyed the “overt support of the president,” as well as the “vast financial and political resources” at the disposal of the government (Belin and Orttung 1997, 34–5). Its connection to the government and Yeltsin was so strong that the party was described as “the unabashed defender of the status quo” (Colton 1996a, 296). Given these close connections between NDR and Yeltsin, it seems reasonable that Russian voters could indeed try to send a message to Yeltsin in the manner suggested by Colton by withholding votes from NDR.

Further evidence in this regard comes from the fact that Yeltsin himself interpreted the results of the 1995 parliamentary elections as an attempt by voters to send him a message.⁷ From Yeltsin’s own memoirs, it appears clear that he took the 1995 defeat to heart, literally. He wrote that, “New Year 1996 arrived with everything in disarray. It was right after my heart attack and right after a terrible defeat in the Duma elections. . . . It seemed as if all were lost.” (Yeltsin 2000, 16–17). As it turned out, Yeltsin was so concerned by his prospects in the 1996 election that he actually went so far in March of 1996 as to have decrees drawn up that would ban the Communist party, dissolve the parliament, and postpone the presidential election (24). Ultimately, though, he decided not to issue the decrees, but instead to pursue a vigorous campaign. In his own words, he decided he “would travel around the country, meeting with people and conducting an active campaign with an aggressive youth focus, concerts for supporters, posters, and media advertising” (27). With focus groups indicating in January of 1996 that three of the top five phrases people associated with Yeltsin were “drunk,” “ill,” and “out of touch with the common person,” a vigorous campaign that proved he was healthy, sober, and in touch with the common person was crucial (McFaul

⁶Indeed, this theme is reflected in the title of the article from which the quote is taken, “From the Parliamentary to the Presidential: Russians Get Real about Politics” (Colton 1996b).

⁷Of course, the parliamentary elections were not the only signal Yeltsin received regarding popular dissatisfaction in his presidency. Polls and focus groups also reinforced his message; in his memoirs, Yeltsin recounts being told that he had a 3% approval rating (Yeltsin 2000, 23). None of this, however, detracts from the fact that the 1995 parliamentary election offered an opportunity for a large number of citizens to deliver a similar, and somewhat costly, message, and that the results of that election were interpreted as revealing that “90% of the electorate voted against Yeltsinism in December” (Cohen 1996, cited in McFaul 1997, 1).

TABLE 1 1995 Russian Parliamentary Election

| Party | Percentage of Party List Vote | Total Seats |
|---|-------------------------------|-------------|
| Communist Party of the Russian Federation | 22.3 | 157 |
| Our Home is Russia | 10.1 | 55 |
| Liberal Democratic Party of Russia | 11.2 | 51 |
| Yabloko | 6.9 | 45 |
| Agrarian Party of Russia | 3.8 | 20 |
| Russia's Democratic Choice | 3.9 | 9 |
| Power to the People! | 1.6 | 9 |
| Congress of Russian Communities | 4.3 | 5 |
| Women of Russia | 4.6 | 3 |
| Forward Russia | 1.9 | 3 |
| Communist Workers of Russia | 4.5 | 1 |
| Party of Workers' Self Choice | 4.0 | 1 |
| Others | 20.9 | 13 |
| Independents | — | 78 |
| Total | 100 | 450 |

Source: Central Election Commission of the Russian Federation: Vybory Deputatov Gosudarstvenoy Dumi 1995.

1997, 23). Not only did he personally visit two dozen Russian cities in four months, he also made a concerted effort to appear in “active” settings, such as touring mine shafts or dancing on stage with rock stars (26–27). Indeed, he expended so much effort in the campaign that he suffered a massive heart attack only days before the second round of the election (Yeltsin 2000; chapter 3).

Finally, if the voters were indeed trying to send a message, there was time for the message to be heard and for Yeltsin to react. Put another way, the claim that voters were trying to send Yeltsin a message would make no sense if the parliamentary and presidential elections were held simultaneously, or if the presidential election had preceded the parliamentary election. Crucially, though, six months would elapse between the parliamentary and presidential elections, which Yeltsin would go on to win decisively (see Tables 1 and 2).⁸ Clearly, therefore, there were many voters who chose not to vote for the party most closely associated

⁸Russia employs a two-round majoritarian presidential election rule.

TABLE 2 1996 Russian Presidential Election

| Candidate | Percentage of the Vote: Round 1 | Percentage of the Vote: Round 2 |
|-----------------------|---------------------------------|---------------------------------|
| Boris Yeltsin | 35.28 | 53.83 |
| Gennadii Zyuganov | 32.03 | 40.30 |
| Aleksandr Lebed | 14.52 | |
| Grigorii Yavlinskii | 7.34 | |
| Vladimir Zhirinovskii | 5.70 | |
| Others | 1.17 | |
| Against All/Invalid | 2.96 | 5.87 |

Source: Central Election Commission of the Russian Federation: Vybory Prezidenta Rossiyskoy Federatsii.

with Yeltsin in the parliamentary election (NDR) but then did in fact cast their vote to reelect Yeltsin in the presidential election. While there are undoubtedly other reasons why voters may have chosen this course of action, the fact that such a large portion of Yeltsin’s constituency did not vote for the party most closely associated with him is certainly consistent with Colton’s speculation that voters used the parliamentary election as an opportunity to express displeasure with Yeltsin’s performance as president.⁹

Related Literature

There is some existing theoretical work that speaks at least tangentially to Colton’s intuition concerning the behavior of voters in the 1995 Russian parliamentary election. The most closely related is a series of papers (Meirowitz 2005a, 2005b; Piketty 2000; Razin 2003; Shotts 2000) that explore the incentives for strategic voting when there is a signalling motivation. Piketty (2000) considers multiple elections and finds that early voting may provide information to other voters in the second election. Piketty does not focus on communication between the masses and elites as the elite responses to voter communication are not endogenous. Razin (2003) considers one election but allows for the possibility that the size of the winner’s mandate may influence the policy she enacts in office. Here the behavior of elites is responsive but not the result of explicit optimization. Meirowitz (2005a) considers a two-party model of primary and general elections, showing that candidates can learn about voter prefer-

⁹To illustrate this point, consider the opposite scenario. Had NDR significantly outperformed Yeltsin, then it would be impossible to claim that likely Yeltsin supporters were defecting from NDR in order to send Yeltsin a message.

ences from party affiliation in the primary. Meirowitz (2005b) considers polling and elections showing that respondents will generally have incentives to misrepresent their preferences in the poll to influence candidate inferences and thus actions. The model in Shotts (2000) is closest to the current model. Shotts considers two, sequential, two-party elections. In the first the alternatives are fixed and in the second the candidate positions are endogenous. Shotts finds that in equilibrium first-party voting is informative, and in fact some voters abstain to signal that they are moderate even though voting is costless.

In contrast, in the current paper campaigning is not assumed to be over an ideological or Downsian policy dimension. Instead, as will be described below, candidates in the second election compete by accumulating costly valence. This departure from the repeated Downsian model allows us to analyze a simple model of strategic voting in sequential elections that may be more applicable in certain electoral circumstances; certainly, the 1995–96 Russian election seems to be an instance in which voters were particularly concerned with competence/valence. This is not to say that one cannot arrive at similar intuitions using a spatial approach; indeed, in the following section we develop the intuition behind voting to *send a message* in the context of the spatial model. A strength of the current model is that institutional features such as the ability of candidates to respond to early election results and the relative importance of the two branches of government can be varied. The analysis relates these institutional features to the phenomena of insincere voting.

The Intuition

In this section, we develop the intuition for why the masses may behave strategically when they know that elites are watching them. It is helpful to first consider a simple two-candidate election preceded by a public opinion poll. This model is a stylized example of the class of models analyzed in Meirowitz (2005b). To begin, assume that there are three voters with single-peaked symmetric utility functions (for example, tent-shaped utility functions) and each voter's ideal point, y_i , is drawn from the uniform distribution on $[0, 1]$. Two candidates are motivated only by the desire to win office and compete by simultaneously announcing (and committing to) policy points in the unit interval. We denote the policy platforms of the two candidates by x_1, x_2 , respectively. Without a poll, this is an example of the Downsian model with uncertainty about voter

preferences that has been analyzed by many scholars including Calvert (1985). It is well known that in this model the unique equilibrium pair of candidate platforms involve both candidates locating at the middle of the distribution of ideal points. Specifically, if $F(\cdot)$ is a probability distribution that characterizes the location of the median voter's ideal point, then the equilibrium involves both candidates locating at a point x^+ s.t. $F(x^+) = \frac{1}{2}$. With these stances the election is a tie, and each candidate wins the election with probability $\frac{1}{2}$. If one candidate is locating at x^+ then the other candidate will win with probability less than a half if she locates at any point other than x^+ . With ideal points drawn from the uniform distribution, $x^+ = \frac{1}{2}$.

Now suppose that prior to the policy announcements each of the three voters is contacted by a polling service and asked to reveal her ideal point. We let m_i denote the message that voter i sends to the polling service. The candidates then learn the sample average of the polling messages, $s = \frac{m_1 + m_2 + m_3}{3}$, before making their policy selections. In this game the candidates will locate at the middle of a different distribution, the posterior distribution of the median conditional on the sample average, which we denote by $F(m | s)$. The question we are concerned with is whether there is an equilibrium in which the voters announce their true ideal points, $m_i = y_i$. To see that truthfulness cannot occur in equilibria, suppose that voters 2 and 3 are truthful and consider a voter 1 with a low ideal point, say $y_1 = \frac{1}{8}$. This voter believes that the likelihood that the median is greater than her ideal point is high $1 - (\frac{1}{8})^2 = \frac{63}{64}$. Moreover, the middle of the posterior distribution of the median given the mean will be higher than $\frac{1}{8}$ if the mean is higher than $\frac{1}{8}$. Accordingly, it is very likely that truthful response to the poll will result in an outcome that is substantially higher than the agent's ideal point. On the other hand, if the respondent exaggerates her extremity (reporting $m_i < y_i$) then she is likely to pull the point $x^+(s)$ (which solves $F(x^+(x)|s) = \frac{1}{2}$) down and thus closer to her ideal point. She is not likely to pull it down very much, but any little bit is desirable. This logic can be used to show that in every equilibrium, some people are not truthful; instead in all equilibria strategic poll respondents are usually dishonest and candidates anticipate that behavior is dishonest. Candidates cannot simply figure out the true preferences based on the insincere responses they have observed. It can be shown that in equilibrium candidates learn less from the poll than they would if all respondents were honest.

Starting from this observation, we could then imagine that some respondents suffer a small psychic

cost from being dishonest. As long as this cost is small enough, truthful equilibria will still not exist, and thus strategic poll response would still involve lying. A final version of this story involves replacing the poll with an election over fixed alternatives and replacing the small psychic cost to lying with a small cost associated with influencing the first election the wrong way (e.g., causing your preferred party to receive fewer seats in the parliament). Our approach to sequential elections is to note that the incentives to honestly represent one's preferences while voting in elections for less important branches of government may not be very different from the incentives to answer honestly in a poll with a small cost for dishonesty. This is not to say that polls and elections are equivalent, but that the logic underlying the incentive to deviate from sincere answers in opinion polls and sincere voting in the first of two sequential elections may be similar.

In the next section we present and analyze a simple model that develops this insight. In contrast to the Downsian/spatial context of Meirowitz (2005b) and Shotts (2000), we simply assume that candidates can take costly actions that increase their appeal. This approach allows us to highlight the incentives in a simpler setting. The analysis focuses on behavior by voters cognizant that their actions might influence the beliefs held by parties/candidates, which in turn can affect the behavior of the candidates. Specifically, voters will have private preferences for particular parties (possibly ideological affinities induced by party platforms), and candidates will compete by selecting levels of a publicly desirable attribute (or attributes that collectively increase their perceived competence for holding office).

A Model

The goal of this section is to develop a model that abstracts away from much of the complexity of elections and campaigns and demonstrates how features of political institutions affect whether this form of strategic voting occurs in equilibrium. The model involves three voters (or factions of similar voters) that have private information about their preferences over three parties. It is known that one of the parties (say a fringe party) does not have plurality support but there is aggregate uncertainty over which of the leading parties does have plurality support. Parliamentary candidates are fixed as our focus is on the incentives faced by voters when the candidates running in

the second election can respond to the first election.¹⁰ We are inspired by Stokes' conclusion that "it will not do simply to exclude valence issues from discussion of party competition. The people's choice too often depends upon them" (1963, 373). Building on this point, we focus on a model of competition over valence (or the perception of valence) by candidates in the second (presidential) contest. After observing the outcome of the first (parliamentary) election, presidential candidates choose how much effort to expend on accumulating the perception that they have a valence advantage.¹¹ Voting in the presidential election is then based on the candidate choices and private party preferences. Valence accumulation refers to generating the perception of having publicly desirable attributes, such as a reputation for competence, compassion, integrity, strong leadership, etc. We use the term perception because voters typically do not actually know how competent or compassionate a leader is; at best they form perceptions from the behavior that they observe. The process of influencing these perceptions requires money, staffing, and time, and thus accumulation is costly to the candidates/parties. One can conceive of this cost in strictly financial terms, such as the actual cost of running campaign advertisements to refute charges of corruption. However, there are also important costs to candidates in terms of time (or, as in the case of Yeltsin, perhaps even health). Given this motivation, we assume that presidential candidates simply choose how much of a cost to absorb in their attempts to persuade voters that they should be elected.

The Game

The electorate consists of three voters $N = \{1, 2, 3\}$ and three parties $P = \{1, 2, 3\}$ running for office. We denote an arbitrary voter with the letter i and an arbitrary party with the letter p . There are two periods in the model. In the first period there is a parliamentary election, in which each voter casts a ballot $v_i^1 \in P$ for one of the three parties. Parliamentary seat shares are then allocated proportional to the vote. By s_p we denote the number of seats (or votes) that party p

¹⁰A richer theory might move back a stage and consider endogenous parliamentary candidates. Of course any model of this type would require a solution of the game in which parliamentary alternatives are fixed. Thus the current model represents a critical first step in formulating the richer theory.

¹¹Hereafter, we simply refer to the first election as the parliamentary election and the second election as the presidential election.

attains in the parliamentary election. By $s = (s_1, s_2, s_3)$ we denote the seat portfolio. After observing the parliamentary election (and thus learning s) a candidate from each of the first two parties must select a level of valence accumulation a_p of either 0, 1 or 2 in the presidential campaign. To keep things simple we assume that the third-party candidate cannot accumulate valence.¹² We denote the vector of candidate actions by $a = (a_1, a_2)$. Voters knowing s and a then vote in the presidential election. We denote these ballots by $v_i^2 \in P$. The winning candidate under plurality rule then enters office.¹³ We denote the party that wins the presidency by p^* .

Each voter has an underlying preference for one party. A voter with a preference for party p would like party p to have a majority of the parliamentary seats. A voter that has a preference for party p would like party p to win the presidency as long as there is not some other party that has a sufficiently higher level of valence accumulation. These preferences are assumed to be private information so that only voter i learns her type $\theta_i \in P$. Voter payoffs are given by the utility function

$$u(s, p^*, a_{p^*}; \theta_i) = \begin{cases} \alpha + \gamma + a_{p^*} & \text{if } p^* = \theta_i \text{ and } s_{\theta} \geq 2 \\ \alpha + a_{p^*} & \text{if } p^* = \theta_i \text{ and } s_{\theta} < 2 \\ \gamma + a_{p^*} & \text{if } p^* \neq \theta_i \text{ and } s_{\theta} \geq 2 \\ a_p^* & \text{otherwise.} \end{cases} \quad (1)$$

Thus α is the value to having one's preferred party, θ_i in the presidency and γ is the value to having one's preferred party in the majority of the parliament. Letting $\theta = (\theta_1, \theta_2, \theta_3)$ denote the vector of voter types, we assume that the following profiles occur with strictly positive probability: (1, 2, 1) with probability g_1 , (2, 2, 1) with probability g_2 , (2, 1, 1) with probability g_3 and (1, 1, 1) with probability $1 - g_1 - g_2 - g_3$.¹⁴ In this setting party 3 can represent a fringe party which is

¹²Relaxing this assumption does not change the general conclusions. This assumption may be justified on the grounds that no feasible amount of valence will offset party 3's narrow band of support and thus any costly accumulation would be suboptimal. Moreover, this assumption captures the empirical regularity that more parties often compete in parliamentary elections than in presidential elections (as was the case in our illustrative Russian example). Put another way, dropping the third presidential candidate from the model has no effect on any of the results reported below, and thus the model is equally appropriate for settings in which more parties compete in the parliamentary election than the presidential election.

¹³We assume that ties are resolved by fair coin tosses.

¹⁴This construction allows cases where voter types are independent ($g_1 = 1 - g_1 - g_2 - g_3 = g_3$). While this parameterization is far from general, it allows for a reasonable approximation of the case where party 3 is not a serious contender, and party 1 is more likely

not very popular on ideological grounds. Despite this, in equilibrium party 3 may receive some votes in the parliamentary contest. Moreover, the basic intuition and findings are not qualitatively changed if we assume that some small portion of the voters may actually like party 3 best or if we assume that there are only two parties.

Since parties/presidential candidates cannot influence the parliamentary election, it is sufficient to focus only on the party preferences over the presidential election. Without loss of generality we assume that each party assigns utility 1 to winning the presidency and 0 to losing. We assume that each unit of valence imposes a cost of β on the candidate, so β is the marginal cost of valence accumulation relative to the value of the presidency. One way to conceptualize this trade-off is that a candidate would prefer to spend any given day relaxing (or making money for personal consumption) as opposed to campaigning. Accordingly, candidates seek to maximize $q_p - \beta a_p$ where q_p is the probability of winning the presidency. The probability q_p will be determined in equilibrium.

A voter's strategy is a pair of mappings. The first, $v_i^1(\theta_i)$, is a type dependent parliamentary voting rule and the second $v_i^2(a, s, \theta_i)$ is a rule for voting in the presidential election which depends on the public information a , s and the private information θ_i . Candidate strategies are mappings $a_p(s)$ which determine the level of valence accumulation as a function of the parliamentary election outcome. Finally, we must also consider candidate beliefs about the types of the voters based on the information s . By $\pi(s)$ we denote the candidate's belief about the probability that at least two voters have type $\theta_i = 1$ conditional on the parliamentary outcome s . Since no voters have type 3, $1 - \pi(s)$ is the candidate's belief about the probability that exactly two voters have type $\theta_i = 2$. A *perfect Bayesian equilibrium* (PBE) is a pair of strategies and beliefs so that (1) strategies are sequentially rational and (2) $\pi(s)$ satisfies Bayes' rule when the rule is well-defined. For a given profile of candidate strategies, a strategy for voter i is *weakly dominated* if it contains a voting mapping for which there is some other voting mapping which does at least as well for player i regardless of the strategies used by other voters and strictly better for some strategy used by the other voters. Throughout, we will focus on perfect Bayesian equilibrium in which voting strategies are not weakly dominated. This requirement rules out equilibria

to garner majority support. This parameterization is rich enough to demonstrate the incentive for insincere behaviour in the parliamentary election.

where following some profile of parliamentary seat shares and accumulation decisions a party wins the presidential election by a unanimous vote even though given the accumulation decisions a majority of voters prefer that a different party win the presidential election.

Analysis

First, since the value to office is 1 and the cost of a units of valence is $a\beta$ the most that a candidate is willing to invest in valence accumulation is $a = \frac{1}{\beta}$. Second, valence accumulation by candidate $p \neq \theta_i$ will only change i 's vote if $a \geq \alpha$. In order to focus on games in which the candidates' choices are consequential we assume that $2 > \alpha > 1$. If a positive level of valence is accumulated by any candidate it will be at a level $\alpha \leq a_p \leq \frac{1}{\beta}$. Of course accumulation of $a_p = 0$ is always an option for candidate p . Our first result characterizes equilibrium behavior when β is relatively high.

Proposition 1 *If $\beta > \frac{1}{\alpha}$ then (1) any PBE in weakly undominated voting strategies involves sincere voting in parliamentary and presidential elections and (2) if a majority of voters are of type p then party p attains a majority in the parliament and wins the presidency.*

To see this, first assume $\beta > \frac{1}{\alpha}$. This implies that no candidate will ever accumulate valence as it is too costly. Given this fact, parliamentary voting cannot affect valence accumulation and so in any weakly undominated strategy player i of type $\theta_i = p$ will cast ballot $v^1 = p$. Moreover, since valence accumulation is constant across parties at every history, in any weakly undominated strategy players will vote sincerely in the presidential contest. The second fact follows immediately from sincere voting.

If there is an equilibrium with sincere voting ($v_i^1(\theta_i) = \theta_i$ for each $i \in N$) then the presidential candidates will be able to infer θ from the parliamentary seat shares. We now assume that $\beta \leq \frac{1}{\alpha}$ and $2 > \alpha > 1$ and consider the incentives faced by presidential candidates if voter preferences (types) are learned from parliamentary voting. There are two possible types of seat shares that can occur under sincere parliamentary voting: one gets at least two seats, two gets at least two seats. In the first (second) case, if no candidates accumulate valence, the outcome of the presidential elec-

tion will be victory for 1 (2). If party p is preferred by a strict majority of voters then a candidate p' must accumulate $a_{p'} \geq a_p + \alpha$ to win the presidential contest. Alternatively, the most that candidate p' is willing to accumulate is $a_{p'} = \frac{1}{\beta}$. Moreover, the maximal amount of valence accumulation that the preferred candidate p will undertake with positive probability is $\frac{1}{\beta} - \alpha$, the amount that assures victory if the other candidate accumulates the most that she is willing to accumulate. The following simple normal form represents the payoffs of the simultaneous decision problem when candidates believe that p is preferred by a strict majority.

| | | | |
|-------------------|---------------|--------------------|---------------------|
| $p \backslash p'$ | 0 | 1 | 2 |
| 0 | 1, 0 | 1, $-\beta$ | 0, $1-2\beta$ |
| 1 | $1-\beta, 0$ | $1-\beta, -\beta$ | $1-\beta, -2\beta$ |
| 2 | $1-2\beta, 0$ | $1-2\beta, -\beta$ | $1-2\beta, -2\beta$ |

It is clear that no pure strategy accumulation strategies can be supportable in an equilibrium as either the losing candidate will have an incentive to accumulate less or more valence or the winning candidate will have an incentive to accumulate less valence. In other words, given any conjectured pure strategy profile of valence accumulations at least one candidate has a strict incentive to change her level of accumulation while holding the other candidate's level fixed. Mutual best responses do exist in mixed strategies. We characterize a mixed strategy profile following a history in which it is believed that candidate p has the support of a strict majority of the voters. Clearly strategy $a_p = 2$ is strictly dominated by $a_p = 1$ and $a_{p'} = 1$ is strictly dominated by $a_{p'} = 0$. The mixed strategy equilibrium to this game is

$$\begin{aligned} q &= (1-\beta) \\ z &= 2\beta \end{aligned} \tag{2}$$

where q is the probability that $a_{p'} = 0$, $(1-q)$ is the probability that $a_{p'} = 2$, z is the probability that $a_p = 0$, and $(1-z)$ is the probability that $a_p = 1$.

Now if a voter (say 1) has type $\theta_1 = 1$ and she conjectures that both the other voters are voting sincerely (both in the parliament and presidential elections) and the candidates believe that all voters are sincere, then she will have an incentive to vote insincerely.¹⁵ Conditional on having type 1, voter 1 believes

¹⁵In any equilibrium with sincere voting, candidates must believe that voting is sincere and thus update their beliefs based on accordingly.

that party 1 has the support of at least two voters with probability 1. The expected utility to voting for party 1 in the parliamentary election (and then optimizing in the presidential contest) is

$$EU_1 = qz\alpha + q(1-z)(\alpha+1) + (1-q)z2 + (1-q)(1-z)(\alpha+1) + \gamma. \quad (3)$$

The expected utility to voting for party 2 in the parliamentary election (and then optimizing in the presidential contest) is

$$EU_2 = q(1-z) + (1-q)z(2+\alpha) + (1-q)(1-z). \quad (4)$$

If (4) is larger than (3) insincere voting is preferred to sincere voting. The difference between these two expected utilities is

$$\delta = EU_2 - EU_1 = z\alpha(2-q) - \gamma. \quad (5)$$

This difference is positive if

$$\gamma < 2\beta\alpha(1+\beta). \quad (6)$$

Accordingly, we have just shown that when $\beta < \frac{1}{\alpha}$, if (6) holds then a voter will have an incentive to vote insincerely in the parliamentary election. This implies that the following proposition is true.

Proposition 2 *If $\beta < \frac{1}{\alpha}$ and $\gamma < 2\beta\alpha(1+\beta)$ then there is not an equilibrium with sincere voting in the parliamentary election.*

Thus, if the value to having one's preferred party win the parliament is small enough relative to the value of having one's party win the presidency, sincere voting is not a best response. Since the game is finite, Selten's (1975) well-known result ensures the existence of trembling-hand perfect equilibria. Since trembling-hand perfect equilibria do not involve weakly dominated strategies, this result ensures that a Perfect Bayesian Equilibrium in weakly undominated voting strategies exists in this game.

Proposition 3 (Selten 1975) *For any parameterization at least one Perfect Bayesian Equilibrium in weakly undominated voting strategies exists.*

Combining propositions 2 and 3 yields the immediate consequence

Corollary 1 *If $\beta < \frac{1}{\alpha}$ and $\gamma < 2\beta\alpha(1+\beta)$ then there exist equilibria in which some voters vote insincerely in the parliamentary election, and there are no*

equilibria in which all voting is sincere in the parliamentary election.

Redefining $\lambda = \frac{\gamma}{\alpha}$ as the relative importance of the parliamentary election we can express a simple characterization of the critical value of λ for which only equilibria with some voters behaving insincerely in the parliament exist. Specifically if $\frac{\gamma}{\alpha}$ is less than $\lambda^+ = 2\beta + 2\beta^2$ then no equilibria involve sincere voting by all voters. This means that as λ^+ becomes larger sincere voting by all voters becomes supportable in equilibrium for a smaller set of parameters γ, α . Interpretation of this critical threshold leads to the following comparative static.

Corollary 2 *Insincere parliamentary voting is more likely as: (1) the relative importance of the parliament, λ , decreases or (2) the cost of valence accumulation relative to the value of winning the presidency, β , increases (up to the value $\frac{1}{\alpha}$).*

The second part of the corollary holds because λ^+ is increasing in β . So, for larger values of β the set of γ 's for which (6) holds is larger. The fact that increasing the cost of accumulation makes insincere voting more likely is somewhat counter intuitive. One might think that when accumulation becomes more costly, presidential candidates will be less responsive to the parliamentary outcome, making insincere voting less attractive. This is true when the cost becomes too high ($\beta \geq \frac{1}{\alpha}$). For intermediate values of β , in equilibrium higher costs to valence accumulation make the advantaged candidate more thrifty in their likely accumulations and the disadvantaged candidate less thrifty (see equation (2)). Given this, the expected gains to convincing a candidate that she is unfavored (and thus must accumulate more valence to win) are larger when valence is more costly.

Welfare Analysis

Given the fact that valence accumulation is desirable to voters, but not to candidates, standard notions of efficiency are relatively blunt discriminators of outcomes in this model. Despite this point, we can conclude that when $\lambda < \lambda^+$ any equilibrium to the game is inefficient in a reasonably clear sense. When $\lambda < \lambda^+$ in any equilibrium the party that is preferred by a majority of voters will not control the parliament with positive probability. If this occurs then there is a

different government which is majority preferred to the one that emerges. Moreover, this new majority government is stable in the sense that no third government is majority preferred to the second one. Specifically, let $g^1 = (s, p^*, a_p^*)$ denote the realized seat share, presidential party, and accumulation of the president in an equilibrium. Either party 1 or 2 has majority support. If the majority preferred party p' does not have a majority in the parliament, then consider the alternative government g^2 that gives p' a majority in the parliament and includes p^* as the president with a_p^* . This new outcome is majority preferred to the original one. While this new outcome may also be beatable by some other government, the government g^3 that has p' in control of the parliament, p' as the president, and $a_p = 2$ is unbeatable under majority rule. This government is a Condorcet winner relative to collective preferences over governments. Alternatively put, this new government is in the majority rule core. As such

Proposition 4 *There exists a government $g^+ = (s, p^*, a_p^*)$ that is a Condorcet winner, but if $\beta < \frac{1}{\alpha}$ and $\gamma < 2\beta\alpha(1 + \beta)$ then every equilibria of the game puts positive probability on selecting a government that a majority of voters like less than g^+ .*

Limits of the Model

The model involves two substantial simplifications. First, in some states of the world a voter will know which party has majority support, based just on her private information. Richer models would involve residual uncertainty where voters form beliefs conditional on their type. This simplification allows us to more simply express the incentive to vote insincerely when other voters behave sincerely.

Secondly, the assumption that only two of the parties are viable contenders renders the last stage of voting much simpler. Neither of these assumptions are critical but they serve to simplify the presentation. In many multiparty contests there do seem to be parties with absolutely no chance of victory in the presidential contest. The model may present an explanation for their performance in the parliamentary election; some voters vote for them in the parliamentary election, despite the fact that they are not their most preferred party. The idea that voters might strategically vote for a small party that they like less than a larger (more viable) party is counter to the standard vote wasting explanation of strategic voting but, as the current model demonstrates, rationalizable as a low-cost

signal from voters to candidates.¹⁶ Finally, one might want to include more parties and distinguish between different aspects of valence but the current model highlights intuition about incentives that will be present in richer models.

An additional concern is that the model does not offer the presidential candidates the opportunity to learn about voter preferences from direct public opinion polls. In a richer model involving polls and parliamentary elections, the logic of the current model extends. Under the conditions of Proposition 2, ($\beta < \frac{1}{\alpha}$ and $\gamma < 2\beta\alpha(1 + \beta)$), there cannot be an equilibrium in which voters are sincere in either the poll or the parliamentary election. While polls can provide some information, the conclusions in Meirowitz (2005) are suggestive that we should not expect them to reveal all of the information possessed by voters. In the current setting, consider the case of $\gamma = 0$ to understand equilibrium behavior in a model with polls instead of parliamentary elections. Given this conclusion, there is the opportunity for parliamentary elections in addition to polls to reveal more information than polls alone. Our model, however, demonstrates that parliamentary voting cannot reveal all of the relevant information (e.g., will not result in sincere voting). To see this, imagine reanalyzing the model with different values of the parameters, g_1, g_2, g_3 which reflect updated beliefs. Proposition 2 still applies indicating that sincere voting will not occur.

Conclusions

Theories of strategic voting have previously focused on incentives within the context of a single election or

¹⁶Sorting out this distinction between the two forms of strategic voting at the aggregate level is not a simple matter. If a parliamentary election has a low threshold for representation (e.g., if it uses proportional representation), then the avoiding wasting one's vote story could also predict more diffuse support for parties in the parliamentary election than in a presidential election; there are more opportunities for votes to be wasted in a presidential election than in a parliamentary election with proportional representation. However, at any given threshold, the send a message form of strategic voting would predict more diffuse support within the parliamentary election than the avoiding wasting one's vote form of strategic voting, as in the latter case voters would shy away from parties for which doubts existed about their ability to cross the threshold. Thus the distinction is particularly relevant for parties hovering near the threshold prior to the election. Of course, in the strategic voting not to waste one's vote scenario, the voter is assumed to prefer the small party for which she votes more than the large party, whereas in the send a message form of strategic voting, voters may actually choose to vote for a less preferred small party. Microlevel data, therefore, should be able to illuminate this question; we discuss this point in greater detail in the web-based Appendix 2.

explanations of split-ticket voting that hinge on a desire to moderate government output. Recent theoretical work on information transmission, however, has demonstrated the potential for tension between voting to affect the outcome of an election and voting to send messages to elites. In this paper, we have considered strategic voting as it might occur across sequential elections. More specifically, we demonstrate that voters may have an incentive to vote against their preferred candidates in a first election for a weaker (usually legislative) branch of government in order to *send a message* to candidates competing in a second election for a more important (usually executive) branch of government. In doing so, we provide a richer explanation for the somewhat counterintuitive behavior that Colton speculated was occurring in Russia in 1995.

Practically, the paper has implications for institutional design. We suggest that when elections for a weak parliament precede elections for a strong presidency, the emerging parliament may be less representative because of insincere voting. For unconsolidated democracies, this may be particularly worrisome because it can lead to extremist factions being over-represented in the parliament. More generally, this possibility could lead to a more acrimonious relationship between the president and parliament than other institutional arrangements. One conclusion that follows from this reasoning is the conjecture that systems in which elections for a weaker institution precede elections for a stronger institution will exhibit more gridlock and increased instability over time than other electoral arrangements.

At first glances *send a message* voting and *split-ticket* voting (Alesina and Rosenthal 1995, 1996; Fiorina 1992) seem to generate equivalent predictions. For example, in the 1995–96 Russian election cycle, one could interpret the strong showing of both the communists and Yeltsin as an attempt to moderate policy. The crucial distinction of the *send a message* approach, however, is that it hinges on the sequencing of elections. A split-ticket approach would predict a similar parliamentary outcome regardless of the sequencing of elections. Conversely, our approach only predicts this phenomena when the weak election precedes the strong election.

Overall this work shows that the study of information transmission from the masses to the elites may be more closely tied to comparative institutional analysis than has previously been suggested. We demonstrate that the presence of strategic behavior can be linked to observable and manipulable institutional structures. This is the first study to consider the types

of real-world political institutions that might lead to this behavior and in doing so brings together two distinct bodies of literature. While positive theorists have previously noted the incentives to vote strategically as a means to send a message, little energy has been applied to isolating the types of institutional features that are ripe for this behavior. Conversely, scholars of comparative institutions have been concerned with strategic behavior for years; however, few (if any) explanations of voting behavior have been proposed that hinge on the potential transmission of information from masses to elites across a sequence of elections. This paper represents a first step in this regard, with future work considering extensions and empirical tests.

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Web Based Appendix I: Coding of Electoral Systems and Election Timing

This appendix provides coding details for the claim made in footnote 4 of the paper. Countries are coded as presidential, parliamentary, or mixed on the basis of descriptions found in Gorvin (1989), <http://www.electionworld.org>, or <http://www.europeanforum.bot>. If the country is described as having a president with executive power who is directly elected by universal suffrage for a set term, we classify the country as a presidential system. If a country is described as a government by parliamentary majority, with no president or a president elected by the parliament, we consider it a parliamentary system. Mixed systems are classified on a case by case basis; only 12 countries fall into this category. In general, the first pass at coding each election was made using Gorvin (1989), and then subsequently updated or confirmed using the other sources. Election dates were culled from a wide variety of sources, including Keesing's Electoral Archive, Dirksen's Elections Around the World (<http://www.electionworld.org/>), the International Foundation for Electoral Systems (<http://www.ifes.org>), the International Almanac of Electoral History, and the Lijphard Election Archive. Full documentation of the coding of systems and dates of elections are available from the authors upon request.

Web Based Appendix II: Potential Empirical Investigations

Several empirical investigations of the model seem plausible. Elections for members of the European Union (EU) Parliament represent one avenue for testing. Member states in the EU hold separate elections for their own national parliament (e.g., the British House of Commons, the German Bundestag, the French Assemblée Nationale) as well as elections for representatives to the EU Parliament. By all accounts, European citizens are much less concerned with the actions of the EU Parliament than with the actions of their own national parliaments (Moravcsik 2002); indeed, scholars have gone so far as to refer to these elections as second-order elections (Reif and Schmitt 1980).¹ Moreover, to date EU parliamentary elections have not tended to feature pan-European parties, but instead have been dominated by national parties that compete for seats in both national parliaments and the EU parliament. Thus a comparative analysis could feature EU parliamentary elections as the election for the less important institution and national parliamentary elections as the election for the more important institution and then draw upon country-level variation in the sequencing of these

¹For more on EU Parliamentary elections, see Perrineau et al. (2002).

elections.² The advantage of such a test is that it would allow us to hold one of our variables—the relative importance of the two institutions—constant and therefore focus the test directly on the effect of the sequencing variable. Thus we would expect to see greater divergence in EU parliamentary election results and national election results in countries where the EU election preceded the national election than in cases where the EU election followed the national election.³

A second possible empirical test would draw on the universe of countries in which both presidents and parliaments are popularly elected.⁴ Unlike the EU example, this type of study would feature variation in both variables of interest: the relative importance of institutions to voters and the sequencing of elections. We could therefore assess both whether strategic voting occurs more often when the election for the less important institution precedes the election for the more important institution as well as if it occurs more often as the divergence in importance between the two institutions increases. While the variation in both key variables makes this a richer empirical test, it would also introduce substantial demands in terms of data collection and coding.

A third possibility is to test the model indirectly. As the divergence between election results for presidents and parliaments increases, we are likely to find parliaments in presidential systems that are increasingly less sympathetic to the wishes of presidents.⁵ This may lead to greater discord in relations between the two branches.⁶ Thus the variables identified by our model—sequencing of elections, the relative importance of different institutions to voters and the costs of responding—could also be used as causal variables to predict discord between presidents and parliaments.

²EU elections occur simultaneously, but national parliamentary elections are called on a country by country basis.

³To the extent that there is variation in importance accorded to EU parliamentary elections across different countries, this would also provide an opportunity for testing the model, although it would simultaneously necessitate taking account of this variation while testing the sequencing hypothesis; we thank an anonymous reviewer for highlighting this point. Fully specifying such an empirical test would also require controlling for institutional variation across national elections (e.g., electoral rules, presidential versus parliamentary systems, numbers of parties, etc.).

⁴This would include all democratic presidential systems, as well as parliamentary systems with a directly elected president (e.g., Slovakia).

⁵Conversely, in parliamentary systems we might be more likely to find obstructionist presidents.

⁶Shugart and Carey (1992) also make a similar point about the link between sequencing of elections in presidential systems and the degree of compatibility between presidents and parliaments (see Chapter 12).

Indicators of this discord could include votes of no confidence in the government, attempts to impeach the presidents, rejection of key pieces of legislation (e.g., budgets), and rejections of presidential nominees for government positions.⁷

Another strategy would be to pursue tests of the model using microlevel data. Following up on the point raised in footnote 15 of the main text, one could use microlevel data to attempt to distinguish between strategic voting to not waste one's vote and strategic voting to send a message. Using party feeling thermometers or likes/dislikes scales, researchers could identify voters who did not vote for their most preferred party. Strategic voting not to waste one's vote would predict that these voters should be supporters of smaller parties with little chance of gaining representation voting for larger parties. Strategic voting to send a message, however, would predict that these voters should be supporters of larger, viable parties voting for other parties, which could include parties unlikely to gain representation. As a follow up, one could also examine whether these voters were among the more dissatisfied with aspects of their preferred party's performance. Moreover, consistent with the model presented in the paper, we would only expect to find such effects given the appropriate sequence of elections. Consequently, a related empirical test could involve examining whether or not this strategic voting to send a message pattern—supporters of larger, viable parties voting for other parties—was more prevalent under the institutional arrangements identified by the model (e.g., an election for a less important institution preceding an election for a more important institution) than other institutional arrangements.

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⁷We thank Robert Bates for this suggestion.