Flip-Flopping, Intense Primaries and the Selection of Candidates*

Marina Agranov

New York University

and

California Institute of Technology

Division of Humanities and Social Sciences

MC 228-77, Pasadena CA 91125, USA

magranov@hss.caltech.edu

December, 2011

Abstract

We present a model of two-stage elections in which candidates can choose different platforms in primaries and general elections. Voters do not directly observe the chosen platforms, but rather infer the candidates' ideologies from signals made during the campaign (debates, speeches), where a larger number of signals corresponds to a higher-intensity campaign. This model captures two patterns: (1) the "post-primary moderation effect," in which candidates pander to the party base during the primary and shift to the center in the general election; and (2) the "divisive-primary effect," which refers to the detrimental effect of intense primaries on a party’s general-election prospects. These effects are obtained in spite of the fact that primary voters are forward-looking and take into account that a more extreme candidate has a smaller chance of winning the general election than a moderate one does.

1 Introduction

Political primaries, an influential institution in the American political process, require candidates to obtain a party nomination by vote in order to compete in the general election. Two established facts

---

*I would like to thank Andrew Schotter and Alessandro Lizzeri for the invaluable help and encouragement they have provided during the course of this project. I thank Alex Agranov for suggesting the idea for this paper. I also thank Alessandro Gavazza, Guillaume Frechette, Rebecca Morton, Nicola Persico, Debraj Ray, Elliott Ash, Mark Dean, Matthew Embrey, Ofer Setty, Daniel Martin, Chloe Tergiman, Anna Ingster, and seminar participants at New York University for their useful comments.
about primaries are: (1) Candidates tend to pander to the party base during primaries and moderate their platforms after securing the nomination, and (2) Hard-fought primaries influence a party’s chances of winning the election. The first observation, “post-primary moderation,” follows from the premise that primary voters hold more extreme political views than the general-election voters. The second observation, the so-called “divisive primary” hypothesis, suggests that a candidate’s prospects in a general election may be affected by the intensity of the primary race.

The two observations given above are hardly a surprise. What is surprising, however, is that the literature lacks a model that can deliver both of these results simultaneously. The reason is that most existing models use one of two extreme assumptions: either that candidates make binding commitments to electoral platforms (as in Wittman (1983) and Coleman (1972)\(^1\)), or that announcements made by candidates are purely cheap talk (as in Alesina (1988)). If a candidate commits to a platform, then the mere fact of commitment precludes moderation. If a candidate has no access to commitment technology, then his general-election prospects should not be affected by the intensity of the primary race. In either case, a model with one of these two assumptions cannot explain both the post-primary flip-flopping and the effects of an intense primary race.

In this paper we develop a model of two-stage elections that captures both the post-primary shift and the divisive-primary effect. In our model, candidates have policy preferences and a partial commitment to those policies, which is captured by incorporating costs of lying and by having the candidates’ platforms revealed imperfectly. The candidates strategically choose the platforms used to generate signals observed by the voters, and candidates’ true preferences are partially revealed through signals they send during primary and general-election campaigns. The number of signals serves as a measure of the intensity of the race and determines how much information is transmitted in the two-stage election process.

The theoretical section of the paper models the following world. Two Democratic candidates compete for office. Winning the election requires a majority vote in both a primary and in a general election in which the primary winner faces a Republican incumbent. Each candidate is equally likely to have a liberal (\(L\)) or moderate (\(M\)) ideology (type), where \(L\) is close to the position of the median Democrat while \(M\) is close to that of the median general-election voter. Candidates’ ideologies are known only to themselves. During the primaries, each candidate chooses a political platform, which

\(^1\)Wittman (1983) studies one-stage election model with policy-motivated candidates, whereas Coleman (1972) investigates two-stage election model (with primaries and general elections) with office-motivated candidates. Both models assume that at the beginning of the election candidates choose one position, which will be implemented if they get elected.
is represented by a probability distribution over positions $L$ and $M$. These platforms indicate the strength with which a candidate emphasizes different issues in his campaign. The higher the weight on position $L$, the more the candidate will stress issues that appeal to the median Democrat, as opposed to issues that appeal to the median general-election voter. A candidate who misrepresents his true ideology bears costs (costs of lying). Voters do not directly observe the chosen platforms; instead, $m_1$ signals are drawn from these platforms and publicly announced to all voters. We think of these signals as campaign events (debates, public speeches) in which candidates express their views or as issues that are raised during the campaign. Each event (each issue) provides one signal about the candidate’s ideology and the number of events is exogenously fixed. In other words, the intensity of the race represents the degree of scrutiny that candidates are subjected to, with more intense primaries involving more signals. Voters infer the candidates’ ideologies from observed signals and registered Democrats (a subset of the population) elect a nominee. In the general election, the nominee chooses a (possibly different) platform, and voters observe the sample of $m_2$ signals drawn from it. As before, a big $m_2$ corresponds to a high-intensity general election. The winner of the general election implements his preferred policy. In each stage of the election voters are fully strategic and take into account that a more extreme candidate has a smaller chance of winning the general election than a moderate one.

In equilibrium, candidates flip-flop by pandering to the median Democrat during the primary race and then shifting to the center once the nomination is obtained, while voters elect a candidate they believe is “more liberal” during the primary. More precisely, in the primary, liberal candidates always send sincere $L$ messages, while moderate candidates partially mimic liberal behavior. In the general election, in contrast, a moderate challenger always sends sincere $M$ signals, while a liberal challenger partially mimics him. The extent to which candidates mimic each other depends on the costs of lying and the intensity of each stage.

The model also predicts the divisive primary effect. An increase in the number of signals in the primary race has two effects. First, as the number of signals in the primary grows, so does the chance that a moderate candidate will send at least one $M$ message, which then reveals him as a moderate type. Because primary voters prefer liberals, moderates are therefore more likely to lose

---

2We say that a moderate candidate who puts a positive weight on position $L$ during the primary mimics liberal behavior, and this weight measures the extent of the mimicking. Since a liberal candidate always sends sincere $L$ messages, one $M$ message is enough to reveal a moderate candidate during the primary campaign.

3We characterize the sufficient conditions for the existence of this pandering equilibrium. These conditions are: (1) low intensity of the primary race, and (2) high uncertainty about the median general-election voter. Pandering equilibrium is unique if the intensity of the general election is sufficiently high (see section 6).
intense primaries. Second, the degree to which a liberal challenger “shifts to the center” depends on the reputation he has established in the primary race: the more certain voters are that a challenger is truly liberal, the less a liberal challenger will lie in the general election. Thus, intense primaries affect the behavior of moderates in the primary and of liberals in the general election. Both effects contribute to an overall decrease of Democrats’ chances to win the election when primaries are intense.

Election intensities affect not only who gets elected but also the welfare of the Democrats. We demonstrate that when the Republican incumbent is relatively moderate, intense primaries are beneficial for the Democrats because the latter do not lose much from the Republican winning the election. On the contrary, Democrats suffer from the stricter selection that occurs in intense primaries if the incumbent is conservative.

The trade-off at the heart of the model is a classic one in political economy: the probability of winning versus the policy outcome should you win. This trade-off is the key idea in the work-horse models of Wittman (1983) and Calvert (1985). When the location of the median voter is uncertain, the payoff function of the candidates (with respect to their platform) is continuous rather than discontinuous (at least in the relevant region). This allows the candidates to move toward their ideal outcomes and still win election a large fraction of the time. The difference in this paper is that the trade-off is being made by the median voter of the democratic party rather than the candidate herself. To execute the trade-off, the democratic median has to learn the type of candidate he is nominating. This selection problem itself induces a trade-off: the democratic median wants to nominate a liberal type but as he learns whether a candidate is liberal or not, so too does the general election median. This lowers the probability further that a liberal nominee will win the general election both directly and indirectly. The indirect effect is that a candidate that is strongly perceived to be liberal will pander less to the general election median.

The rest of the paper is structured as follows. In the remainder of this section we discuss the post-primary moderation effect and the divisive-primary effect. Section 2 lays out the model. In section 3 we characterize the pandering equilibrium, in section 4 we obtain comparative statics results, and in section 5 we discuss welfare implications. In section 6 we formulate several additional implications of the model, address the question of the uniqueness of the pandering equilibrium, and present two extensions of the basic model: one in which both parties hold primary elections and one in which candidates incur costs of entry. The related literature is summarized in section 7, and, finally, in section 8 we offer some conclusions.
1.1 Post-primary moderation effect

Candidates are often accused of changing their position between the primary and the general election. “Barack Obama has been performing a more traditional manoeuvre: running to the left during the primaries, when party activists need to be wooed, then shifting to the center once the nomination is clinched” - BBC news (July 5, 2008).

For rigorous evidence of post-primary moderation, see Burden (2001), who uses U.S. congressional data and shows that candidates adopt more extreme positions in primaries than in general elections. This flip-flopping behavior is obviously optimal if primary voters are naive in the sense that they don’t take the general election into consideration and simply vote for the more extreme candidate, who is located closer to the median of the party. However, in this paper we will show that naivete is not necessary to generate the situation in which primary voters prefer a more extreme over a moderate candidate, which, in turn, explains why candidates change their platforms between the primary and the general election. In particular, we will obtain the post-primary moderation effect in a model in which voters are forward-looking and take into account that a more extreme candidate has a smaller chance of winning the general election than a moderate one does.

1.2 Divisive-primary effect

In the presidential election of 2008, the drawn-out battle for the Democratic party nomination between Hillary Clinton and Barack Obama provoked discussions about the harm that such fierce competition would have on the general election prospects of the eventual nominee. “Democrats see no early end to the Obama-Clinton battle… And a plurality of voters says this will eventually hurt their party’s chances against Mr. McCain” - NY Times (May 08).

The quote above illustrates the conventional wisdom that hotly contested primaries can damage a party’s chances in the general election. Starting with the pioneer work of Key (1953), many scholars have studied the empirical validity of this conjecture and have produced a confusing variety of results. Some studies have found that intense primaries hurt candidates in the general election (Abramowitz (1988), Bernstein (1977) and Lengle, Owen, and Sonner (1995)). Others have found a mixed relationship (Born (1981) and Hogan (2003)) or none at all (Atkenson (1998) and Kenney (1988)). And still others have found that intense primaries may actually help candidates in the general elections (Alvarez, Canon, and Sellers (1995) and Westlye (1991)). In addition to the inconclusive empirical results, there is no consensus in the literature about how to measure primary
intensity. Some studies define it using the distribution of primary votes (Bernstein (1977)), others
distinguish between two nominating processes - caucuses and primaries - and argue that caucuses
by their nature are less divisive than primaries (Lengle, Owen, and Sonner (1995)), while still others
suggest that the length of time that a presidential primary lasts is an indicator of the intensity of
the battle (see Dwyer (2009)).

In this paper, we use theoretical analysis to shed light on the relationship between the intensity
of the nomination process and general election outcomes. The mechanism studied here delivers
a negative correlation, i.e., it shows that intense primaries are detrimental to a party’s chances
of winning general elections. In our model, the intensity of a race is equivalent to the degree of
scrutiny that candidates are subjected to during the election campaign (see section 2 for the formal
definition and interpretation of the intensity measure).

2 Model

We build upon the standard one-dimensional policy location game by Downs (1957). A policy space
is the closed interval \( P = [-1, 1] \). There is a continuum of voters with Euclidean policy preferences
on \( P \). A voter is identified by his ideal point \( z_i \in P \). We denote by \( u(z_i, w) \) the utility of a voter \( z_i \)
if policy \( w \) is implemented and assume that \( u(z_i, w) = -|z_i - w| \). The position of the median voter
\( m_{\text{Pop}} \) is not known with certainty: \( m_{\text{Pop}} \sim U[-a, a] \) with \( E m_{\text{Pop}} = 0 \) and \( a \in (0, 1) \).

There are two parties: a left-wing party (Democrats) and a right-wing party (Republicans).\(^5\) A
member of one party is currently holding the office (incumbent). The incumbent will be challenged
by the nominated member of the other party in the general election. The non-incumbent party
selects its nominee by conducting a primary election. Without loss of generality, we assume that
incumbent belongs to the right-wing party; thus, it is the left-wing party that holds a primary
election to select its nominee for the general election. Moreover, to simplify matters we assume
that there are precisely two left-wing party candidates \( j = A, B \) who compete in the primary. For
a candidate \( j \), winning the office involves the defeat of the other Democrat in the primary and the
defeat of the Republican incumbent in the general election. The position of the incumbent, \( R \), is
assumed to be known because he has already served one term prior to the current election.

Each Democratic candidate \( j = A, B \) is equally likely to be liberal \( t^j = L \) or moderate \( t^j = M \).

\(^4\)Dwyer suggests that drawn-out primaries are potentially more harmful to the eventual nominee in the general
election than primaries that are quickly resolved.

\(^5\)We will use the terms "left-wing party" and "Democratic party" interchangeably throughout the text; we will
use the terms "right-wing party" and "Republican party" interchangeably as well.
A candidate’s ideology (type) determines his sincere political beliefs; it is innate and is known only by the candidate. We assume that \( m_{\text{Dem}} \leq L < M \leq E m_{\text{Pop}} \leq R \) where \( m_{\text{Dem}} \) denotes the position of the median voter participating in the Democratic primary (median Democrat). Moreover, the median Democrat, who will play an important role in determining the winner of the primary election, has a known position of \( m_{\text{Dem}} = -\frac{1}{2} \).\(^6\)

**During the primary**, two Democrats compete by choosing a platform, which represents the probability distribution over positions \( L \) and \( M \). Voters do not directly observe the platforms chosen by the candidates, but rather observe \( m_1 \) signals randomly drawn from each candidate’s platform. Platforms represent how strongly a candidate emphasizes positions \( L \) and \( M \) during his campaign. The more weight a candidate puts on position \( L \), the more he will stress issues that appeal to the base of the Democratic Party, and a random draw from this platform is more likely to be an \( L \) signal. Correspondingly, the more weight a candidate puts on position \( M \), the more he will raise issues that are close to the hearts of moderate voters and hence will sound like a moderate. It is the politician (and his team) that decides which issues to emphasize during main speeches and which ones to put aside.\(^7\) All voters observe signals from the primary race, but only those that belong to the Democratic party cast their votes. The winner of the primary, determined by the preferences of the median Democrat, will challenge the Republican incumbent in the general election.

**During the general election**, the challenger chooses a (possibly different) platform and \( m_2 \) signals are randomly drawn from this platform and observed by voters. As before, the number of signals \( m_2 \) is an exogenously determined parameter which measures the intensity of the general election: a higher \( m_2 \) means a higher intensity of the general election. All voters \( z_i \in P \) vote in the general election. The winner of the general election, determined by the preferences of the median voter \( m_{\text{Pop}} \), implements his preferred policy.

The platform of candidate \( j \) with type \( t^j \) in the primary race is denoted by \( \text{plat}^j_1 \) and the platform of the challenger in the general election is denoted by \( \text{plat}^j_2 \). We will use the following shortcut \((1 - w, w)\) to denote the platform with weight \( 1 - w \) on position \( L \) and the weight \( w \) on position \( M \). Each candidate derives utility normalized to 1 from winning the general election and

---

\(^6\)This assumption significantly simplifies the analysis as it guarantees that the results of the primary election provide no information about the location of the median in the general election.

\(^7\)For instance, in the primary campaign of 2008, President Obama expressed the firm intention of renegotiating NAFTA. However, there was not much talk about that issue during the general election campaign. Why is that? Presumably, the topic of NAFTA regulations is of greater concern to the Democratic base, which is the decisive force in the primary, than to the moderate voters during the general election.

7
implementing his preferred policy, and normalized to 0 from losing the election at either stage.

In addition, each candidate incurs the cost of misrepresenting his true ideology every time he does so. Specifically, we assume that a candidate \( j \) with type \( t^j = L \) (\( t^j = M \)) that runs on a platform \((1 - w, w)\) pays the cost of \(w^c \ ((1 - w)^c)\) where \(c \in \mathbb{N}\) and \(c \geq 2\). So, a candidate who puts all the weight on his true position pays no costs, while a candidate who misrepresents his type completely pays the cost of 1.

Figure 1 summarizes graphically the topography of the electoral game we study in this paper.

---

**Figure 1: Political Spectrum**

Order of moves:

1. **Information stage:** Each Democratic candidate \( j = A, B \) privately learns his ideological type.

2. **Primary stage:**
   
   (a) Democratic candidates choose their platforms: \( plat^j_1 \) for \( j = A, B \).
   
   (b) All voters observe \( m_1 \) signals drawn from candidates’ platforms and form beliefs about candidates’ true ideologies.
   
   (c) Voters that belong to the Democratic party vote for one of the candidates. The nominee, determined by the preferences of the median Democrat \( m^{Dem} \), continues the race in the next stage and will henceforth be called the challenger.

3. **General election stage:**
   
   (a) The challenger chooses a platform to run on in the general election: \( plat^c_2 \).
(b) All voters observe $m_2$ random signals drawn from the challenger’s platform and update their beliefs about his true ideology.

(c) All voters cast a ballot for either the challenger or the incumbent. The winner is determined by the preferences of the median voter $m^{\text{Pop}}$.

4. Implementation stage: The elected official implements his preferred policy, and payoffs are determined.

The dynamic electoral game described above is characterized by the following set of exogenous parameters: $(m_1, m_2)$ represent the intensities of the primary and the general election stages; $c$ is the parameter of the cost function of the candidates; $L$, $M$, and $R$ capture the candidates’ spatial locations (ideologies); and, finally, $a$ reflects the uncertainty about the general-election median voter.

2.1 Interpretations and Modeling Choices

Spatial locations of liberal and moderate candidates. The assumption that $m^{\text{Dem}} \leq L$ is not crucial, as a liberal candidate can be more left-wing than the median Democrat. What is important is that a candidate with a liberal ideology is closer to the median Democrat than a candidate with a moderate ideology; that is, $|M - m^{\text{Dem}}| > |L - m^{\text{Dem}}|$.

Position of the incumbent. By fixing the position of the incumbent, we implicitly assume that the incumbent faces no primary election. This assumption can be justified by the empirical finding that when incumbents run for re-election they are often run unopposed or face weak competition from the members of their own party in the primary election. This is why incumbents rarely lose a primary election. Beginning in the 1950s, incumbents lost their primary elections only about 1% of the time (see Ansolabehere, Hansen, Hirano and Snyder (2005)). In addition, the main results of the model do not depend on the fact that only one party holds primary election. In section 6.3 we consider the extension of this basic model, in which both parties hold primary elections and the ideologies of the candidates of both parties are unknown.

Intensity of the race. There are number of ways one can interpret intensity parameters $(m_1, m_2)$. For instance, the number of signals $m_1$ (or $m_2$) can represent the number of a candidate’s public appearances (main speeches, debates), with each event providing one independent signal about a candidate’s true position. The greater the $m_1$ ($m_2$), the higher the intensity of the primary (general election) competition. Alternatively, say each candidate, together with his team of advisors, selects
a position (liberal or moderate) on each possible issue that might be raised during the campaign period: labor rights, minimum wage, abortion, health care, foreign policy, etc. This is done before candidates know which issues will become most important during the race. Such a strategy is a necessary condition to avoid contradicting statements on the same topic that may otherwise arise and hurt the reputation of a candidate. During the campaign period some issues are discussed and others are not. When a candidate (or his spokesman) is asked about a particular issue, he simply reports the position which was decided upon in the pre-campaign strategy meetings. In this scenario, each signal represents a particular issue raised during the campaign, with the intensity of the race corresponding to the number of signals (i.e., the more signals, the more intense the race).

Before launching into formal treatment of the model, we want to point out that the concept of intensity of elections has been largely ignored in theoretical models of spatial competition. On the contrary, the empirical studies often control for the intensity of elections, using various techniques as we describe in section 1.2. In this paper we take the first step in incorporating the concept of election intensity into the equilibrium model of elections. We start with the simplest case, in which intensity is an exogenous parameter, and assume that candidates have no impact on it.\textsuperscript{8} Measured this way, intensity of a race indicates how informative it is, where the more intense race is the one in which voters get more signals about candidates.\textsuperscript{9} Thus, in this paper we investigate how the exogenous intensity of a race affects candidates’ positioning.

**Utility of candidates.** The assumption that a candidates gets zero utility when losing the election irrespectively of who wins bears no influence on the main results. Alternatively, we can assume that the Democratic candidate derives utility of 1 if he wins the elections and implements his preferred policy, utility of $\tau^M$ or $\tau^L$ if the other Democratic candidate wins the election and, finally, utility of 0 if the Republican wins. This does not change the main insights of the model. The only thing that would change is the indifference condition of the moderate’s type, which determines how much

\textsuperscript{8}Indeed, some aspects of the campaign intensity cannot be easily manipulated by the candidates. These aspects include the capacity of voters to absorb information about candidates, how much time and resources voters decide to devote to a particular race as well as the media coverage of it. These are the aspects of a race that we call *intensity of a race*. Our main question is how these exogenous characteristics of a race affect the positioning of candidates in the equilibrium. There are of course other aspects of a race which are controlled by candidates (such as number of TV ads). In this paper we focus on the exogenous component of election intensity and leave the question of what happens when the candidates can influence it for a future research.

\textsuperscript{9}Going back to the existing measures of primary intensity, our definition is consistent with the accounts of Lengle et al. (1995) and Dwyer (2009). According to Lengle et al. the nomination process is more visible when the nominee is elected through primaries than when he is elected through caucuses; therefore, presumably voters get more information about candidates when the latter participate in primaries rather than in caucuses. Alternatively, using Dwyer’s definition, drawn-out primaries are presumably covered more in the press, which may result in more information being revealed about the candidates’ platforms.
moderates pander in the primary stage.

Costs of lying. We have assumed that a candidate that puts positive weight on the position different from his true type incurs costs of lying. These costs may arise for various reasons. First, a candidate with, for example, a true liberal ideology who decides to sound moderate on an issue might have previously (for example, through his voting record or in his college papers) indicated his true beliefs on that issue. In this situation, in order to send a credible moderate message, the candidate and his team might need to spend resources to reconcile those contradictions and be prepared to provide a coherent statement in case the issue is raised.\footnote{These costs are incurred at a stage that precedes the election campaign. We think about these costs as preventive in case an evidence contradicting the current platform of a candidate is discovered and brought to voters' attention ("burying the body before someone noticed it was missing"). Such an interpretation is necessary as both candidates start the election with the same priors regarding their types.} Second, misrepresenting the truth might require costly actions of constructing a coherent platform that stresses issues that are not the candidate's priorities, as well as preparing to support such an assumed stance. Finally, candidates might incur psychological costs from lying. Recent experimental work by Gneezy (2005) and Hurkens and Kartik (2008) documents that people have an intrinsic aversion to lying, even when the messages are purely cheap talk.\footnote{In the context of electoral competition, the psychological costs of lying seem to be a less convincing explanation than the other alternatives described above.}

The assumption about the costs of lying is not new in the signaling literature. Among others Banks (1990) and Calander and Wilkie (2007) introduce costs of lying to study electoral competition in one-stage elections. However, the interpretation of the costs of lying in these papers is different from one considered here. Both Banks and Calander and Wilkie assume that only the winning candidate bears the costs of the contradiction between "what he said" and "what he did" because voters can only observe the true ideology of the candidate that has won elections. In the current setting, costs are incurred during the election campaign (before the winner is determined) and they are incurred by all candidates who misrepresent their true ideology, as in an all-pay auction. These costs make current model a signaling model rather than a cheap-talk model.

The particular functional form chosen to represent costs of lying is not crucial for the main results of the paper. In fact, in order for the pandering equilibrium to exist, the cost function needs to satisfy the following properties: a candidate that does not lie bears no costs, the derivative of the cost function at zero is zero and cost function is "convex enough.” The convexity restriction comes from a fact that the marginal benefit of lying is a polynomial function, convex and increasing in the amount of lying which starts at zero. Thus, to obtain the interior solution, the marginal cost
of lying must be sufficiently convex. The particular functional polynomial form that is used in this paper, while not necessary, significantly simplifies the analysis and allows us to obtain an "almost" closed-form solution.

2.2 Equilibrium Concept

To analyze the outcomes of the two-stage electoral game described in section 2, we will use the standard solution concept of sequential equilibrium developed by Kreps and Wilson (1982). We will focus on symmetric sequential equilibria, in which the names of the candidates are irrelevant (if both candidates $j = A, B$ have the same ideology, they employ the same strategy as one another at each stage of the game). The objects of symmetric sequential equilibrium are: (1) the strategy of each type of candidate in the primary stage ($plat^L_1, plat^M_1$), (2) the strategy of the challenger in the general election stage ($plat^L_2, plat^M_2$), (3) the system of beliefs of voters, and (4) the voting behavior at each stage. After every history, the strategies of each type of candidate and of voters are sequentially rational, given the system of beliefs and the beliefs are consistent with the strategy profile (both on the equilibrium path and off the equilibrium path).

Voters use Bayes’ rule to update their beliefs about candidates’ ideologies. A voter that has a strict preference for one of the candidates necessarily votes for him, while a voter who is indifferent randomizes equally between the two candidates. Abstention is not allowed.

Note that voters are strategic, as during the primary election they must take into account not only the policy that the challenger will implement once elected, but also the probability that the challenger will actually win the general election. This is the basic trade-off that voters face in two-stage elections, which is notably missing from one-stage election models. We will show that pandering equilibrium occurs in spite of the fact that voters are forward looking. Many scholars have explained candidates’ using a pandering strategy by assuming that primary voters are naive and vote simply for the candidate whose position is closer to theirs. The interesting feature of the current model is that even sophisticated and fully strategic voters might elect a more extreme candidate in the primary election, despite his lower chance of defeating the incumbent in the general election.\textsuperscript{12}

\textsuperscript{12}If one wishes to proceed with the assumption of naive voters, all the results of the current model will be the same with fewer restrictions on the parameters of the dynamic election game.
3 Pandering equilibrium

In this section we present the main result of the paper: a pandering equilibrium (PE), in which candidates pander to the median Democrat during primaries and shift to the center during general elections. The driving force behind this result is the need to appeal to populations with different preferences in the primary than in the general election, with the median Democrat voting in the primary located to the left of the median general-election voter. We then state the full characterization of PE and proceed to describe the main steps of the solution.

The voters’ beliefs will be denoted as follows. For $j = A, B$, the prior belief that candidate $j$’s ideological type $t_j^i = M$ is denoted by $p_{j0}^i$; the probability that a voter believes that candidate $j$ has type $t_j^i = M$ after observing the sequence of $m_1$ messages during the primary stage is denoted by $p_{j1}^i$, and, finally, $p_{j2}^i$ is the probability that a voter believes that the challenger has type $M$ after observing the sequence of $m_2$ messages during the general election campaign for a given belief $p_{j1}^i$ formed during the primary. Notice that all relevant information about candidate $j$ after the primary stage is summarized by the belief $p_{j1}^i$. Therefore, voters do not need to remember all the signals observed in the primary stage; they only need to remember the updated posterior belief $p_{j1}^i$, which incorporates everything that happened in the primary.

**MAIN RESULT.** Consider a dynamic electoral game (described above) in which $m_{\text{Dem}}^\text{Prim} = -\frac{1}{2} \leq L < M \leq Em_{\text{Pop}}^\text{Prim} = 0 \leq R$ and $-2a - L < R < 2a - M$. If intensity of a primary is sufficiently low ($m_1 < c$) and uncertainty about general election is sufficiently high ($a > -L$), then there exists a pandering equilibrium (PE) of the game which has the following properties. In the primary stage, liberal and moderate candidates play $plat_L^1 = (1, 0)$ and $plat_M^1 = (y, 1 - y)$, respectively, where $y \in (0, 1)$. After observing $m_1$ messages from the candidates’ platforms, voters update their beliefs regarding the candidates’ ideologies: $p_{j1}^i = \frac{y^{m_1}}{y^{m_1} + 1}$ if all messages of candidate $j = A, B$ were $L$, and $p_{j1}^i = 1$ if at least one message was $M$. If both candidate have the same posterior beliefs $p_{A1}^i = p_{B1}^i$, then each candidate has equal probability of winning the primary, whereas if $p_{A1}^i \in (0, 1)$ and $p_{B1}^i = 1$, then candidate $A$ wins the primary. In the general election stage, a moderate challenger plays $plat_M^2 = (0, 1)$, while the behavior of a liberal challenger depends on the intensity of the general election: if $m_2 < c$ then $plat_L^2 = (1 - x, x)$ where $x \in (0, 1)$, otherwise $plat_L^2 = (1, 0)$.

There are two conditions that guarantee the existence of PE. The first one, $m_1 < c$, ensures that a moderate candidate finds it worthwhile to mimic liberal ideology in the primary by putting
some positive weight on the $L$ position. The second condition, $a > -L$, ensures that the median Democrat supports a more liberal candidate over a less liberal one in the primary election.

We solve this game backwards, starting from the general-election stage and working toward the primary once the solution of the second stage is determined for any possible scenario (the detailed proofs are in Appendix A).

### 3.1 Behavior of voters in the general election

The behavior of voters in the general election stage can be summarized by the behavior of the median voter. Indeed, if the median voter strictly prefers a challenger (incumbent) to an incumbent (challenger), so will every voter with ideal point to the left (right) of the median voter. The behavior of median voter $m^{Pop}$ determines function $f(p_2)$, which represents the probability of winning for a challenger with expected type $p_2$. This function can be derived using the assumption about uncertain location of $m^{Pop}$:

$$f(p_2) = f_0 + f_1 \cdot p_2$$

where $f_0 = \frac{R + L + 2a}{4a}$ and $f_1 = \frac{M - L}{4a}$

The condition $-2a - L < R < 2a - M$ guarantees that the result of the general election is never a certain event no matter how much information was revealed during the election process. The condition $M > L$ guarantees that the function $f(p_2)$ is strictly increasing in $p_2$. That is, a challenger with a higher chance of being a moderate (i.e., the one that is closer to the $Em^{Pop}$) has a higher chance of winning the general election.

Figure 2 depicts two main determinants of function $f(p_2)$: the uncertainty parameter $a$ and the ideology of incumbent $R$. As shown in Figure 2 (left panel), parameter $a$ determines the slope of function $f(p_2)$: as $a$ increases, the slope decreases. If the location of a median voter in general election is relatively uncertain, liberal and moderate challengers have similar chances of winning the office. On the other hand, if the location of a median voter is more or less known, a small increase in the degree to which voters believe that the challenger has a moderate ideology ($p_2$) makes a significant difference in terms of the probability of winning. The second parameter is the ideological location of the incumbent, $R$ (right panel of Figure 2). The further away from zero $R$ is, the more conservative he is. $R$ determines the probability that a liberal challenger wins election, assuming that he has revealed himself as a liberal during the campaign. For a fixed $L$ and $M$, a greater $R$ is associated with a greater likelihood that a liberal challenger wins the general election;
this may be represented graphically as a parallel upward shift of $f(p_2)$. The location of $R$ will play a significant role in the welfare analysis (section 5).

Figure 1: Political spectrum

Figure 2: Two main determinants of the probability to win the general election function $f(p_2)$

3.2 Behavior of candidates in the general election

This subsection characterizes the behavior of a challenger in any subgame in the general election stage. A subgame is identified by the voters’ belief regarding the challenger’s ideology after the primaries $p_1$, which indicates the probability that the challenger has a moderate ideology.

**Proposition 1.** If the intensity of the general election stage is sufficiently high ($m_2 \geq c$), then the unique continuation strategy of a challenger consistent with the equilibrium is $\text{plat}_2^M = (0,1)$ and $\text{plat}_2^L = (1,0)$. If the intensity of the general election is sufficiently low ($m_2 < c$), then the unique continuation strategy of a challenger consistent with the equilibrium is $\text{plat}_2^M = (0,1)$ and $\text{plat}_2^L = (1,0)$ when $p_1 = 0$ or $\text{plat}_2^L = (1-x,x)$ when $p_1 \in (0,1)$, where $x \in (0,1)$ and $x$ solves $x^{c-m_2} = \frac{m_2 f_1}{c} \cdot \frac{p_1}{p_1 + (1-p_1)x^{m_2}}$.

An important determinant of the behavior of a liberal challenger in the second stage is the voters’ belief regarding his ideology $p_1$, which summarizes all the relevant information from the primary stage.

**Corollary 1.** If $m_2 < c$ then $x(p_1)$ is an increasing function of $p_1$.

That is, a "shift to the center" by a liberal challenger in the general election is bigger when
voters believe that he is more likely to actually be a moderate. To intuit this result, consider a
liberal challenger who won the primary with a very small $p_1$. In this case, voters are fairly confident
that the challenger is a liberal. This challenger will have a hard time convincing voters that he
is actually a moderate. Given that misrepresentation is costly, such a challenger will pander less
towards the position of general election median.

Corollary 1 highlights the idea that an early resolution of uncertainty in the primary is a two-
edged sword. On one hand, it seems to be a good thing as voters can make more informed decisions
during the general election when they know more about politicians’ ideologies. On the other hand,
when too much information is revealed during the primary, the liberal challenger panders less
towards the position of general election median in the general election.

### 3.3 Behavior of voters in the primary election

Behavior of voters in the primary stage can be summarized by the preferences of the median
Democrat. Indeed, if median Democrat strictly prefers a more liberal (moderate) candidate to a
less liberal (moderate) one, then so will every voter whose ideal point is located to the left (right)
of the one of the median Democrat.

**Proposition 2.** If $a > -L$ then for any $p_{1j}^1, p_{1k}^1 \in [0, 1]$ (1) if $p_{1j}^1 < p_{1k}^1$ then candidate $j$ wins the
primary and if (2) $p_{1j}^1 = p_{1k}^1$ then each candidate has an equal chance of winning the primary.

In other words, the more liberal candidate wins the primary. The main trade-off that voters face
in a two-stage election is the need to weigh two factors: what they believe the candidate’s ideology
is, and his chances of winning the election. When uncertainty about $m_{Pop}$ is sufficiently high,
the second consideration becomes less important, because the probability of winning the general
election function $f(\cdot)$ is relatively flat.

### 3.4 Behavior of candidates in the primary stage

**Proposition 3.** If $a > -L$ and $m_1 < c$, then there exists a unique $y \in (0, 1)$ such that $plat_L^{1} =
(1, 0)$, and $plat_M^{1} = (y, 1 - y)$ is the optimal behavior of candidates in the primary.\(^{13}\)

As we have shown in section 3.2, the behavior of a liberal challenger in the general election
depends on the intensity of the general election. Therefore, we distinguish two cases:

---

\(^{13}\)The condition $m_1 < c$ is necessary for the existence of PE. As we show in Appendix A, when $m_1 \geq c$ there exists
no PE even when $a > -L$ because a moderate candidate prefers to communicate his true ideology in the primary
stage instead of mimicking liberal behavior.
• When the intensity of the general election is sufficiently high \((m_2 \geq c)\), there exists a PE such that, in the primary stage, candidates play \(\text{plat}^L_1 = (1, 0)\) and \(\text{plat}^M_1 = (y, 1 - y)\) where 
\[
\frac{c_{m_1}}{m_2} y^{c_{m_1}} = \frac{f_0 + f_1}{2},
\]
and in the general election stage, both types of challenger separate by playing \(\text{plat}^L_2 = (1, 0)\) and \(\text{plat}^M_2 = (0, 1)\).

• When the intensity of the general election stage is sufficiently low \((m_2 < c)\), there exists a PE such that, in the primary stage, candidates play \(\text{plat}^L_1 = (1, 0)\) and \(\text{plat}^M_1 = (y, 1 - y)\), and in the general election stage a challenger plays \(\text{plat}^M_2 = (0, 1)\) and \(\text{plat}^L_2 = (1 - x, x)\), where \((x, y) \in (0, 1) \times (0, 1)\) are determined by the system below:
\[
\begin{align*}
\frac{c_{m_1}}{m_2} y^{c_{m_1}} &= \frac{f_0 + f_1}{2} - \frac{f_1}{4} \cdot \frac{x^{m_2(3 - y^{m_1})}}{x^{m_2} + y^{m_1}} \\
\frac{c_{m_2}}{m_2} x^{c_{m_2}} &= f_1 \cdot \frac{y^{m_1}}{y^{m_1} + x^{m_2}}
\end{align*}
\]

To summarize, the behavior of candidates in the pandering equilibrium is consistent with the post-primary moderation effect discussed in section 1.1. Candidates cater to the median of the party in the primary campaign and once the nomination is secured, they moderate their platforms during the general election.

4 Comparative statics

In this section we describe how the behavior of candidates in PE changes with changes in primary and general-election intensities and show that these changes affect the selection of candidates and implemented policies.

**Proposition 4.** For small \(m_2 \ (m_2 < c)\), \(m_2 \uparrow \Rightarrow (1) \ y \uparrow \text{ and } (2) \ x^{m_2} \downarrow\).

That is, higher intensity in general elections has two effects: (1) a moderate candidate is more willing to lie in the primary stage and (2) a liberal challenger is more often revealed to be a liberal in the general election stage. The intuition behind these effects is as follows. Since voters observe more signals in a high-intensity general election, a liberal challenger is likely to send at least one \(L\) signal, revealing that he is a liberal. A moderate challenger, who never sends a \(L\) message, therefore has a better chance of winning a high-intensity general election. Anticipating the higher likelihood of winning the general election, a moderate candidate will be willing to mimic liberal behavior and incur more costs at the primary stage to win nomination. For large \(m_2 \ (m_2 \geq c)\), the types separate in the general-election stage, so a change in \(m_2\) does not impact primary-stage
behavior in PE.

**Proposition 5.** $m_1 \uparrow \Rightarrow (1) \ y^{m_1} \downarrow \ and \ (2) \ for \ small \ m_2 \ (m_2 < c) \ x \downarrow$.

Put in words, the higher the intensity of the primary, the harder it is for a moderate candidate to mimic a liberal ideology during that primary. As the number of signals increases, it becomes more likely that an $M$ message will emerge and reveal the moderate’s true ideology to primary voters. Moreover, after a high-intensity primary, a liberal challenger will engage in less mimicry of a moderate ideology in the general-election stage (see Corollary 1).

**Corollary 2. ”Divisive Primary Effect.”** Intense primaries decrease the chances of Democrats to win the election.

A negative relationship between an intense primary and the chances of Democratic candidates to win a general election follows directly from Proposition 5 and Corollary 1. Intense primaries decrease the chances of a moderate Democrat to win the nomination as well as the chances of a liberal challenger to win general election. Both effects are detrimental to the Democratic party.

5 Welfare of the Democrats

Intensity of the primary race affects not only the chances of Democrats to win the election but also the welfare of Democrats. To define the welfare of Democrats, we need to specify the distribution of ideal points of voters that belong to the Democratic Party. To make things simple, we will assume that registered Democrats have ideal points distributed uniformly over the interval of $[-1, 0]$, which is consistent with the position of median Democrat we assumed so far, $m_{\text{Dem}} = -\frac{1}{2}$. We denote by $W_{\text{Dem}}(p)$ the welfare of the Democratic Party when policy $p$ is implemented and by $E W_{\text{Dem}}$ the overall welfare of Democrats where the expectation is taken over the implemented policies. Then

$$E W_{\text{Dem}} = \Pr[L \text{ wins}] \cdot W_{\text{Dem}}(L) + \Pr[M \text{ wins}] \cdot W_{\text{Dem}}(M) + \Pr[R \text{ wins}] \cdot W_{\text{Dem}}(R).$$

The welfare of Democrats is the highest when a liberal candidate wins the election and the lowest when an incumbent wins: $W_{\text{Dem}}(L) > W_{\text{Dem}}(M) > W_{\text{Dem}}(R)$.

**Proposition 6.** If $m_2 \geq c$ then the expected welfare of the Democrats can increase or decrease with primary intensity, depending on the ideology of the incumbent: $m_1 \uparrow \Rightarrow E W_{\text{Dem}} \geq 0$ if and only if $R \leq \bar{R}$, where $\bar{R} = \min\{0, -1 - 2a - M - \frac{L^2 + 2a}{L + M}\}$. 18
The welfare of Democrats is determined by a balance of two countervailing effects. One the one hand, intense primaries increase the probability that incumbents will win the general election, which is naturally to the detriment of Democrats. On the other hand, liberal candidates tend to win intense primaries, which is the best possible outcome for Democrats. When the incumbent is relatively moderate \((R < \bar{R})\), the latter positive effect outweighs the former negative one because Democrats do not lose as much if the incumbent is reelected. When the incumbent is very conservative \((R > \bar{R})\), however, the negative effect dominates the positive one and Democrats suffer from an intense primary.

6 Discussion and Extensions

6.1 Further implications of the model

Current model has several more testable implications in addition to the flip-flopping behavior of candidates and the divisive primary hypothesis. The first implication is the negative relation between the chances of a candidate of any type to win the primary and to win the general election.\(^{14}\) Study of Maisel and Stone (1998) suggests that potential candidates are aware of this relation. Using the data from Potential Candidate Survey\(^{15}\) the authors study the set of potential candidates from random sample of 200 congressional districts, who consider races for the House. Among 355 potential candidates that were identified by the Informant Survey, there were 210 candidates that believe they are able to win the general election if they were nominated. We decompose this subset of 210 candidates into two groups: those that are less likely (Group 1) and more likely (Group 2) to win general election and show the distribution of their beliefs about their chances to win the primary in Table 1:

<table>
<thead>
<tr>
<th>Belief</th>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlikely - Extremely Unlikely</td>
<td>26%</td>
<td>56%</td>
</tr>
<tr>
<td>Toss-up (Somewhat Likely - Somewhat Unlikely)</td>
<td>24%</td>
<td>21%</td>
</tr>
<tr>
<td>Likely - Extremely Likely</td>
<td>50%</td>
<td>24%</td>
</tr>
<tr>
<td># of obs.</td>
<td>108 obs.</td>
<td>102 obs.</td>
</tr>
</tbody>
</table>

Table 1: Chances of winning the nomination.

\(^{14}\)The liberal type is advantageous during the primary stage, as he has a higher chance of winning the nomination compared with the moderate type. On the contrary, the moderate type is more likely to win elections once he got to the second stage compared with the liberal type.

\(^{15}\)This survey is drawn from the Candidate Emergence Study, which was designed to understand decision-making by those who consider races for the House.
More than a half of candidates from Group 2 (56%) estimate their chances of winning the nomination as (extremely) unlikely, while only 26% of Group 1 candidates hold the same belief. Similarly, half of the candidates from Group 1 (50%) believe that they are (extremely) likely to win nomination compared with only 24% of the Group 2 candidates.

The second implication has to do with the effects of the intense primary and intense general election on the selection of candidates. The current model applied to the US congressional elections predicts that:

- controlling for the intensity of the primary races, the districts with the intense general election stage will elect legislators who are more moderate;
- on the contrary, controlling for the intensity of the general election, the districts with the intense nomination process will elect legislators who are more extreme.

These two hypotheses are straightforward implications of the comparative statics results discussed in section 4. Intense general elections increase the extent to which moderate candidates pander towards the median Democrat during the primary, which increases the overall chances of the moderate candidates to win elections. On the contrary, intense nomination process drives out the moderate candidates that are more likely to lose in the primary election. It would be interesting to assess the validity of the two hypotheses above using the congressional data.

Finally, we want to mention the example of re-election of Senator Lieberman in 2006. Senator lost the Democratic Party primary election but won re-election in the general election as a third party candidate. Consistent with the current model, one of the reasons that led to the defeat of Sen. Lieberman in the primary was his relatively moderate ideological position, which was revealed to the voters too early in the election process. It is the same moderate position that helped him win in the general election stage after he was able to proceed as the third party candidate under the party label "Connecticut for Lieberman".

6.2 Uniqueness of the pandering equilibrium

The PE is unique if the intensity of the general election is sufficiently high \((m_2 \geq c)\). When \(m_2 \geq c\) both types separate in the general election. Therefore, a liberal politician gains nothing from keeping his identity hidden during the primary race and thus has no incentive to put any weight on the moderate position. When \(m_2 < c\), however, both types have an incentive to keep their identities hidden in the primary: moderate candidate does so because he wants to increase
his chance of winning the primary; the liberal candidate does so in order to enjoy a higher chance of winning the general election in the event that he wins the primary and then successfully mimics a moderate candidate in the general election. In other words, an equilibrium in which both the liberal and the moderate candidates play mixed platforms can exist only if the intensity of the general election is not too big \( (m_2 < c) \).  

6.3 Both parties hold primary elections

What happens when both parties hold primaries? It turns out that the two main predictions of the model, the post-primary moderation and intense primary effects, hold true in this case as well. To focus attention on the two primaries, we consider the extension of the basic model with relatively intense general election \( (m_2 \geq c) \) and symmetric ideological types of Democratic and Republican candidates around the expected median general-election voter. We allow the two primaries to have different intensities and characterize the unique equilibrium of this game. For the detailed analysis we refer the reader to Appendix A.

**Proposition 7.** Under some regularity conditions\(^{17}\), there exists a unique equilibrium of the two-stage election game with both parties holding simultaneous primaries, in which in the primary race candidates with extreme ideological types play the truth and moderate candidates mimic them partially, while in the general election race all types separate.

**Corollary 3.** Probability that Republicans win election decreases with the intensity of the Republican primary.

Proposition 7 and Corollary 3 demonstrate the robustness of the main results of the model with regard to the case in which both parties hold primaries. Indeed, moderate candidates cater to their party’s base during the primary only to move to the center once they secure the nomination (post-primary moderation effect) and an intense primary hurts the chances of the party engaged in it to win the election, which in turn helps the opposing party (divisive primary effect).

---

\(^{16}\)There is, however, no equilibrium in which a liberals mimic moderates who send only M messages in the primary, and also no equilibrium in which both liberals and moderates separate in the primary election. This is guaranteed by the sufficient conditions for the existence of PE: \( m_1 < c \) and \( a > -L \).

\(^{17}\)These regularity conditions are similar to the ones that guarantee the existence of pandering equilibrium in the basic model: uncertainty about median general-election voter must be sufficiently high and intensity of both primaries must be sufficiently low.
6.4 Entry of candidates

How does the intensity of the primary race affect the decision of candidates to enter the competition, if entering is costly? To answer this question we consider the modification of the basic model in which candidates incur a fixed cost $K$ of entering the primary race. To keep things simple, we focus on the situation with intense general election ($m_2 \geq c$) and exactly two candidates enter the primary. Then, for low values of costs $K$ both liberal and moderate candidates will be willing to enter the primary race, while for higher costs only liberal candidates will enter. Moreover, an increase in the intensity of the primary decreases the range of entry costs for which moderate candidates enter the primary competition (see Appendix A for the details).

7 Related literature

The model presented here belongs to the literature that studies information transmission through electoral competition. The first such model is Banks (1990) who showed that if costs of lying are above critical value, then in equilibrium extreme candidates are willing to reveal their true type, while moderate candidates pool together. Callander and Wilkie (2007) extend Banks’s model to allow candidates to have heterogeneous costs of lying and find that, although liars are favored in the elections, the honest types are not always defeated. Kartik and McAfee (2007) study a related situation, in which a fraction of candidates have a ”character” and are exogenously committed to a campaign platform. Finally, Bernhardt and Ingberman (1985) model costly movements of candidates by assuming that candidates are tied to their reputations. Ours is also a signaling model. However, we depart from the above models in that we study two-stage elections, in which candidates face electorates with different preferences in the primary and in the general election. This crucial difference raises the natural question of how much information about candidates’ true ideologies is revealed in two-stage elections, which we study in this paper.

Other papers that study how primary races affect the selection of candidates are: Coleman (1972) and Owen and Grofman (2006) who discuss the polarizing effect of primary elections when candidates are constrained to offer the same ideological position in the general election as they have in the primary, Callander (2007) who investigates momentum in voting behavior and the emergence of bandwagons, Adams and Merrill (2008) who demonstrate that candidates who have stronger campaign abilities are elected in primaries, and Alesina and Holden (2008) and Meirowitz (2005) who emphasize the advantages of remaining ambiguous in the primary election. Our paper
also relates to the recent paper by Hirano, Snyder, and Ting (2009) who consider a model of distributive politics and show that when the nominee of the party is elected through a primary election, core voters receive positive transfers, whereas they receive nothing when only the general election matters. The flavor of this result is similar to the equilibrium strategy of our candidates in the primary election. However, our paper differs from Hirano et al. in many aspects, including the main focus: we investigate information transmission and the selection of candidates in two-stage elections with candidates who have policy preferences, whereas Hirano et al. study the effect of primary elections on the distribution of public resources when candidates care only about winning the seat.

In the recent paper Hummel (2010) presents formal model of two-stage election, in which voters dislike when candidates change their positions between primaries and general elections. One of the results of Hummel paper is similar to the one obtained here: there exists an equilibrium in which candidates choose more extreme positions in the primary and move towards center in the general election, where the extent to which candidates moderate their position depends on the costs of flip-flopping. However, there are several important differences between current paper and that of Hummel (2010) both in terms of model specifications and, more importantly, obtained results. First, in Hummel (2010) as in many other models of primaries, primaries turn out to be uninteresting in the sense that in the equilibrium, symmetric ex-ante primary candidates are indistinguishable (all liberal candidates choose the same position in the liberal primaries, while all conservative candidates choose the same position in the conservative primary). In our model, candidate are symmetric as well; ex-ante each candidate is equally likely to be liberal or moderate. In spite of that, primaries are full of action, as different sequences of signals are observed from different candidates during the primary campaign. Second, the model developed in this paper provides a unified explanation for both flip-flopping behavior of candidates and divisive-primary effect and shows that both effects originate from the similar trade-offs.

Finally, our paper contributes to the experimental literature that studies mechanisms underlying behavior of candidates and voters in the spatial models of elections. For an excellent survey of experimental literature on elections and candidate competition, see section 3 in Palfrey (2005).
8 Conclusions

In this paper, we developed a signaling model of two-stage elections, in which candidates must obtain their party’s nomination before competing in the general election. In this model, candidates had policy preferences and could choose different platforms in every stage of the election; a candidate that misrepresented his true ideological type incurred costs (of lying). Moreover, we allowed different stages of the election to have different intensities, measured by the number of signals observed by voters from the candidates’ platforms, and demonstrated that intensities play an important role in the selection process of candidates.

This model provides a unified framework that allows us to examine two commonly observed patterns about primaries: (1) the "post-primary moderation effect,” in which candidates pander to the party base during the primary and shift to the center once the nomination is secured and (2) the "divisive-primary effect,” which refers to the detrimental effect of intense primaries on a party’s general-election prospects.

We finish by noting that the timing of when information is revealed is important in two-stage elections, as it affects who gets elected, which policies are implemented, and the welfare of the voters. For example, intense primaries might be dangerous for the party in the sense that they reveal too much information about their candidates too early, and this then hurts the party’s chances of winning general elections. Depending on the incumbent’s ideology, intense primaries may or may not be beneficial for the welfare of the party, since intense primaries filter out moderate candidates during the nomination process.

References


