# Two Stage Elections, Strategic Candidates, and Agenda Convergence

Kevin K. Banda\* The University of North Carolina at Chapel Hill kbanda@email.unc.edu Thomas M. Carsey The University of North Carolina at Chapel Hill carsey@unc.edu

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#### Abstract

Campaigns in the U.S. are two-stage events in which candidates must succeed in the primary in order to move on to the general election. We argue that the strategies employed by candidates in two stage elections depends on the electoral circumstances they face; candidates facing competitive primary elections must try to please their primary electorate before they shift their focus to the preferences of the median general election voter. Candidates who do not face competitive primaries, on the other hand, are free to run a single campaign designed to appeal to the entire electorate across both elections. We use advertising data from four U.S. Senate elections from 2002 and 2004 and show that candidates engaged in competitive primary elections respond to the advertising of their primary election opponents but not to that of their eventual general election opponents. We further find that the losing primary candidates also respond to their primary opponents. Candidates who face noncompetitive primaries, on the other hand, do not respond to the advertising behavior of their eventual general election opponents during primary campaigns, suggesting that they pursue a different strategy entirely.

<sup>\*</sup>This paper was prepared for presentation at the  $12^{th}$  Annual State Politics and Policy Conference, Houston, Texas, February 16-18, 2012. This paper represents a first cut at this particular question. You are welcome to cite the paper as is, but we would also welcome your comments and suggestions.

## 1 Introduction

Candidates make choices about their campaign strategies based on their desire to win. This requires positioning themselves ideologically in a way that maximizes their chances of securing an electoral majority (or at least a plurality). However, extensive scholarly debate exists regarding how best to achieve this goal. For example, in the spatial voting literature, proponents of proximity theory (e.g. Downs 1957) argue that candidates should converge toward the median voter while directional theorists (e.g. Rabinowitz and Macdonald 1989) argue that candidates must send clearly differentiating signals to voters. A different perspective (e.g. Riker 1990; Carsey 2000) shifts the focus from where candidates locate in a given dimension to which dimension they seek to emphasize during the campaign. While fundamental differences exist between these viewpoints, common to all of them is the notion that candidates wish to appear as representative of the majority of voters in their constituency – candidates viewed as too extreme will not do well on Election Day.

This is complicated enough for candidates facing a single general election, but choosing a campaign strategy for a candidate becomes much more complex if they must first compete in a primary election in order to secure the opportunity to participate in the general election as their party's nominee. Importantly, two things differ for candidates in primary elections compared to general elections. First, the electorate differs. Voters who participate in primaries are generally strongly committed to a their particular party or, in states where it is permitted, politically independent voters seeking a voice in the nomination process. Second, the opposition differs. In a general election, candidates generally run against the nominee of the other major party, while in a primary election, candidate face one (or more) opponents from their own party. Most U.S. elections are generally characterized by such a two-staged process, meaning that most candidates in the U.S. must consider adjusting their campaign strategies accordingly. This two stage nature of national elections in the U.S. should affect the behavior of candidates because each stage generates a different set of incentives. Candidates must satisfy relatively ideologically cohesive and extreme partisans in primary elections before facing a more heterogeneous and, on average, moderate electorate in the general election. As we will show, this affects how candidates must calculate their probability of electoral success. However, a critical factor in their calculation is the degree to which candidates can expect to face competitive elections.

In this paper, we develop a theory of campaign strategy tailored to the two-staged process of competing first in a primary and in a general election. We then test several implications of our theory using campaign advertising data for a small set of U.S. Senate elections. We focus on Senate elections because they are statewide contests that, at least when competitive, make heavy use of campaign advertising to communicate directly with potential voters. We select the specific cases we study because each contest included a relatively competitive general election where at least one of the two parties also witnessed a competitive primary contest. We consider this paper to be a first cut at the general question of candidate strategy in multi-stage electoral processes. Thus, our conclusions are tentative and made with an eye toward the next steps scholars interested in this question might take.

# 2 Candidate Strategy in Two-Stage Contests

Candidates formulate campaign strategies with the goal of maximizing their chances of winning. Within the context of a single election, their task is to develop a strategy that maximizes the probability of gaining the most votes – either a majority in a twocandidate race or a plurality in a races with three or more candidates, though the institutional arrangements governing most elections in the U.S. fosters a two party system (Cox 1997). In addition, most theoretical and empirical treatments of campaigns and campaign strategies focuses on general elections. Thus, most studies either implicitly or explicitly have in mind a candidate's utility function for a given strategy being based on what maximizes the chances of winning a single contest against a single opponent. We argue that candidates who face greater competition in primary elections face a very different electoral environment which should impact their utility for a given campaign strategy. In short, a candidate's utility for a given campaign strategy for a two-stage contest must consider how that strategy impacts both the probability of winning their party's nomination and the probability of winning the general election.

Assume that a candidate must select a strategy from a range of possible strategies in the set S. We denote the possible strategies a candidate can chose for the primary election as  $S_p$ while the possible strategies a candidate could select for the general election is denoted as  $S_g$ . Further assume that the probability of winning the primary, Prob(WP), and the probability of winning the general election, Prob(WG), are both functions of the strategy a candidate chooses. Thus:

$$Prob(WP) = f(S_p)$$

$$Prob(WG) = f(S_g)$$
(1)

We can then express the utility of a given strategy,  $U(S_i)$ , as follows:

$$U(S_i) = Prob(WP|S_p) \times Prob(WG|S_g)$$
<sup>(2)</sup>

Equation 2, then, states that the utility of a given set of strategies for the primary and general elections depends on the probability of winning the primary given the use of strategy  $S_p$  multiplied by the probability of winning the general election given the use of strategy  $S_g$ . The candidate's task is to find the strategy that maximizes this utility.

Of course the theoretical model captured in Equations 1 and 2 is an over-simplification of the campaign process. First, the models in Equation 1 are under-specified. Clearly there is more involved in determining the probability of a candidate winning either a primary or a general election than simply the strategy that candidate might choose. Factors like the make-up of a particular constituency, the quality (or even presence) of any opponent(s), whether the candidate in question is an incumbent, challenging an incumbent, or running for an open seat, the level of campaign spending by the candidate in question and his/her opponent(s), the popularity of the President, and the health of the state and/or national economy constitute a number of important variables that may affect a candidate's chances of winning. Candidates should develop their strategies in the context of these various factors by trying to emphasize to voters those features of the electoral environment that benefit the candidate in question while deemphasizing those that do not (Carsey 2000).

Second, candidates must consider the strategy that their opponents adopt. Candidates do not operate independently as they work to present themselves to voters. Rather, candidates must define themselves as one alternative in a choice set that is presented to voters. Furthermore, a substantial part of the campaign strategies of candidates involves trying to define (negatively) their opponents to voters while also attempting to mute the efforts of their opponents to do the same to them. Whether candidates anticipate the actions of their opponents, react to them, or both (e.g. (Carsey 2000; Carsey et al. 2011), candidates clearly alter their strategies in response to who their opponents are and what they do (Banda 2011; Windett 2011). There is also evidence that voters respond to candidate attacks both in terms of how they view the target of the attack as well as how they view the attacker (Banda 2012).

We denote separate strategies for the primary and general election stages because we want acknowledge that candidates may have different strategic considerations for each stage of the election. Of course, it is possible that a candidate may follow the same strategy in both stages. In that case,  $S_p = S_g$ . However, for many circumstances, we would expect  $S_p \neq S_g$ . One way to think about this is that a candidates overall strategy consists of both  $S_p$  and  $S_g$ , where a single overall strategy might involve a range of behaviors that differ over the two stages of the campaign.<sup>1</sup> In fact, we suspect that most candidates would prefer to take different actions during the two phases of the campaign. As we have noted, the two phases feature different electorates and different opponents – factors that we think any candidate would want to consider in developing a campaign strategy.

Aldrich (1983b), for example, argues that party activists tend to put pressure on candidates to pull away from the general election median voter to the degree that candidates rely on the resources of activists to win a general election (see also Aldrich 1983a; Aldrich and McGinnis 1989; Layman et al. 2010; Miller and Schofield 2003). Clearly if activists pull candidates apart for a general election, their influence will only be magnified in primary contests where they make up a greater share of the electorate.<sup>2</sup> Of course, primary electorates are generally skewed to the ideological left or right of the general election median voter simply because primary electorates generally consist only of voters who identify with (or in some cases are formally registered with) a particular political party. Given the divide between Democratic and Republican party identifiers — a divide that has been growing in the U.S. in recent decades (Layman and Carsey 2002) — a primary electorate is likely to be even more distinct from a general election electorate in the contemporary period. In fact, there is a presumption in the earlier literature on presidential primaries (e.g. Aldrich 1980; Bartels 1988), as well as common folk wisdom among political pundits, that candidates who secure their party's nomination earlier are advantaged by being able to turn their attention to the general election sooner. The assumption behind this view is precisely that  $S_p \neq S_g$  in most cases.

Another feature of our theory that is not obviously reflected in Equations 1 and 2 is that

<sup>&</sup>lt;sup>1</sup>For that matter, a strategy might also include the flexibility to change behavior within the primary and/or general election period in response to changing circumstances and/or the reevaluation of the candidate's performance under the initial strategy. For this paper, however, we are focused on the basic differences between the primary election stage and the general election stage of a campaign.

<sup>&</sup>lt;sup>2</sup>Because primary elections lack a party cue for voters, participation in a primary election is likely to be concentrated among the more politically aware and engaged members of the electorate. Such voters also tend to be more ideologically extreme relative to their less engaged counterparts.

 $S_p$  and  $S_g$  are likely not independent of each other. Though the electorates change between the primary and the general election stages, they are not entirely different because those who participate in primary elections also tend to participate in general elections. Furthermore, the media, political activists, and political opponents observe the behavior of candidates during both stages. Thus, the strategy a candidate chooses for their primary contest likely constrains the choice of strategies available to her during the general election. Similarly, expectations about a candidate's preferred general election strategy likely place limits on the strategy he/she can choose during the primary. While candidates might shift what they emphasize across the two stages, they are limited in how much they can fully remake themselves from one stage to the next. A candidate touting her conservative stance on abortion during a primary election cannot expect to convince voters in the general election that she is actually a supporter of abortion rights. The result is that a candidate is unlikely to be able to select a value for  $S_p$  that would be her ideal primary election strategy because it will have consequences for her chances of winning the general election. Similarly, a candidate is unlikely to be able to select a value for  $S_g$  at her ideal location because it will be constrained by her prior behavior during the primary. The result is a pair of strategies of which neither is ideal and both represent a compromise between the need to win the primary election and the need to win the general election in order to gain office. Of course, this tension is reduced in states where the candidate's party holds an increasingly large majority. In such states, the primary electorate and the general electorate look increasingly similar. As a result, the ideal strategy for winning the primary increasingly approximates the ideal strategy for winning the general election.

The last feature of our theoretical model to which we want to draw attention centers on the importance of competitiveness in either the primary or general election stage. This relates directly the prior point about the interdependence of the choice of strategies across the two stages. Equation 2 makes clear that the determination of the utility of a particular strategy depends on the product of the probability of winning the nomination conditional on that strategy and the probability of winning the general election conditional on that strategy. As we have said, there are a number of factors that affect these two probabilities outside of the strategy a candidate chooses. A critical factor for our argument centers on whether those other factors push one or both of those probabilities away from .5 toward either zero or one.

Let us begin with a scenario in which both the primary and the general election are likely to be competitive — in other words, a situation where Prob(WP) and Prob(WG) both equal .5 prior to consideration of any strategy. In this situation, the selection of both  $S_p$  and  $S_g$ are important. The two strategies are unlikely to be equal to each other because of the differences associated with the two different stages of the election, they they will not be independent of each other.

Now, imagine a scenario where Prob(WP) increases toward 1 prior to the choice of  $S_p$ . As that happens, the choice of a primary election strategy becomes less critical to the candidate's overall chances of winning, whereas the choice of a general election strategy remains critical. In this case, we would expect a candidate's primary strategy to look more similar to his/her most preferred general election strategy — basically, a candidate secure in winning the primary can begin running their general election campaign "early."

In contrast, suppose that Prob(WP) steadily decreases toward zero. In this circumstance, winning the primary is a bigger hurdle to clear than winning the general election. As a result, candidates facing this situation will tailor their choice of  $S_p$  to trying to maximize the chances of winning the primary, but that may limit their choices on  $S_g$ , shifting their choice of a general election strategy toward the ideological location of their primary election base as a result. We would still expect  $S_p \neq S_g$ , but we would also expect that  $S_g$  under this scenario would differ from  $S_g$  under the two previously described scenarios. Of course, the number of cases we can expect to observe empirically under this scenario is small given that most who faces a low value of Prob(WP) prior to adopting a strategy are unlikely to find a strategy that dramatically improves their chances of winning the primary. Thus, most such candidates will not make it to the general election, which means for most candidates with a low value of Prob(WP) we will never observe their choice of  $S_g$ .

Similar scenarios can be discussed holding the value of Prob(WP) constant at .5 and allowing the value of Prob(WG) as measured prior to adopting a general election strategy to vary between 0 and 1. Again, most of the observable action should be in the range between .5 and 1 given that candidates who have a very low a priori probability of winning the general election may be less likely to ever get to the general election. So, for example, suppose a candidate faces a situation where Prob(WP) = .5 while Prob(WG) = .95. In this case, the serious hurdle again is winning the primary, meaning that  $S_p$  should be selected near the optimal strategy for that stage. If winning the general election is almost automatic for the candidate who wins a primary, at one level the choice of  $S_g$  approaches irrelevance. However, it seems to us that the most likely scenario in which a candidate would face this circumstance is when her party is the dominate party in the electorate. Thus, primary electorate and the general election electorate are likely quite similar. As a result, we would expect that  $S_p$  and  $S_g$  would become more similar.

Boiling this down, we can state some general propositions regarding the proximity of  $S_p$ and  $S_g$  to each other and to their ideal locations based on the level of competitiveness of the primary or general election stages:

- As the probabilities of a candidate winning each of the two stages diverge,  $S_p$  and  $S_g$  should converge toward each other and toward the ideal strategy for the stage the candidate is least likely to win.
- As the probability of a candidate winning at both stages both approach .5,  $S_p$  and  $S_g$

should diverge.

- As the probability of a candidate winning at both stages both remain equal to each other but increase above .5,  $S_p$  and  $S_g$  should converge because the ideal strategies at each stage converge.<sup>3</sup>
- As the probability of a candidate winning both stages both remain equal to each other but decrease below .5,  $S_p$  should approach the ideal location for the candidate's primary strategy, but $S_p$  and  $S_g$  should diverge.

Before moving on to specific predictions and our analysis of candidate advertising behavior, we should point out that much of what we have talked about focuses on variables that vary across campaigns. Factors like whether or not an incumbent is running, the health of the national economy, and the make-up of a constituency are essentially unchanging within a given electoral period – their impact is best revealed across elections. While the level of competitiveness is also something that varies substantially across elections, it does also generate predictions about the behavior of candidates during the course of their own campaigns that can be observed. In the most general sense, the level of competitiveness predicts whether we should see stability in a candidate's strategies across both stages of the race or whether we should observe a measurable shift in behavior during the transition from one phase to the next. As a first cut at this larger question, we will focus our attention on how competition influences the advertising strategies of candidates across the two stages of the election.

### 2.1 Candidate Strategy and the Selection of Issues

In this research, we focus on candidates' issue agendas – the sets of issues candidates choose to address during the campaigns. More specifically, we examine the dynamics of party

<sup>&</sup>lt;sup>3</sup>We make this claim because we assume that diminish differences between the primary electorate and the general election electorate are responsible for both Prob(WP) and Prob(WG) remaining equal and increasing above .5.

owned issue emphases over the course of primary campaigns. We are primarily interested in issues that may advantage candidates. While candidates may find that they are advantaged on some issues because of their personal characteristics or records (Sellers 1998; Brasher 2003; Damore 2004), these advantages can be fairly idiosyncratic. Issue ownership theory provides a more systematic set of expectations for candidate advantage on issues. Proponents of issue ownership argue that the Democratic and Republican parties each "own" a set of issues; they are advantaged on these issues because most citizens believe that they are better able to handle problems related to these issues than are members of the opposing party (Ansolabehere and Iyengar 1994; Petrocik 1996; Petrocik, Benoit, and Hansen 2003). Democrats, for example, tend to be advantaged on issues involving social welfare, women, and racial or ethnic groups while Republicans tend to own issues like crime, taxes, and national defense.

Given that (1) candidates should, on average, be advantaged on issues that are owned by their party relative to their eventual opponents in a general election and (2) citizens infer a candidate's ideology and position on issues from the party ownership of the issues she chooses to discuss (Banda 2010), party owned issues allow us to observe the way in which candidates shift their their strategies in an effort to appeal to different sets of voters. It may, then, make sense for candidates who face strong opposition in a primary to focus on the issues owned by their party in an effort to appeal to partisans. Once a candidate emerges from a competitive primary, they should then devote a greater share of their attention to issues that are owned by their rival's party in order to please the median general election voter, who may perceive of the candidate's initial primary election strategy as being too extreme. Candidates who do not face competitive primary elections, on the other hand, are able to run a seamless campaign between the primary and general elections. These candidates may devote a greater level of attention to the issues that are owned by their rival party so that they may get a head start on appealing to the more moderate general election electorate.

# 2.2 Competition in Primary Elections and Campaign Advertising Strategy

The propositions outlined above lead to a number of predictions regarding the advertising behavior of candidates running in two-stage election contests. Candidates who face competitive primary elections should run qualitatively different campaigns than should those who experience noncompetitive primaries. Because the probable outcome of a competitive primary is unknown, candidates should feel additional pressure to spend more time talking about issues rather than valence (Kahn and Kenney 1999). Because the issues candidates choose to discuss must appeal to the constituency to which they attempt to appeal, candidates should devote more resources to discussing issues that are owned by their party in competitive primary elections than should candidates who are not engaged in competitive primaries.

Stated more formally:

 $H_1$ : Candidates will devote a greater share of their issue agendas to issues that are owned by their own party during competitive primary elections than they will in noncompetitive primary elections.

Once a competitive primary is over, the winning candidate should alter their issue agenda in order to appear more congruent with the general election's median voter. They can do this by addressing the issues associated with their new opponent in an attempt to appear more moderate than citizens may believe them to be after a hard fought primary election. In other words, candidates should devote additional resources to engaging the set of issues that are owned by their general election opponent's party.

 $H_2$ : Candidates who win competitive primary elections should increase the share of their issue agendas devoted to issues owned by their general election opponent's party once the primary ends.

We argue that candidates who face noncompetitive primary elections will behave differently. Because their primary opponents do not pose legitimate threats to them, candidates have an incentive to ignore them and prepare for the general election. They should not waste resources attacking their opponents in the primary election because they should not find them threatening. We further argue that candidates should devote resources to engaging issues that are associated with their general election opponent's party during the primary in noncompetitive primary elections. This is because these candidates do not need to position themselves to satisfy their primary electorate's median voter; instead, they should focus on the median voter of the general electorate. By discussing issues that are owned by the other party, candidates may be able to appear more moderate.

 $H_3$ : Candidates will devote a greater share of their issue agendas to issues that are owned by their general election opponent's party during noncompetitive primary elections than they will in competitive primary elections.

Finally, if the two stage nature of elections in the U.S. constrains the ability of candidates in competitive primaries to select an ideal strategy for the general election, this should be evident in a dynamic analysis of candidate campaign behavior. One possibility that is suggested by the literature on issue convergence theory (Sigelman and Buell 2004; Kaplan, Park, and Ridout 2006; Sides 2006, 2007; Banda 2011) is that, when faced with a salient election and competitive opponents, candidates will respond to one another by devoting greater attention to one another's issues. If this is the case, we should observe that candidates engaged in competitive primaries should respond to their primary election opponents' issue agendas by increasing the proportion of their own agenda devoted to those issues. Because these primaries are competitive, candidates involved in them should do so at the expense of responding to their eventual general election opponent. A candidate who does not face a competitive primary election, on the other hand, has little electoral incentive to respond to the campaign strategies of those involved in their rival party's primary because they can make better use of their primary campaign by attempting to appeal directly to general election voters.

 $H_4$ : The level of attention devoted to one or more party owned issues by a candidate involved in a competitive primary will increase as her primary election opponents' attention to those issues increases.

 $H_5$ : The level of attention devoted to one or more party owned issues by a candidate not involved in a competitive primary will not be a function of their eventual general election opponent during a primary election if their opponent faces a competitive primary.

## 3 Data and Methods

We use U.S. Senate advertising data collected by the Wisconsin Advertising Project (WiscAds) in 2002 and 2004 to test the hypotheses generated by our theory. These data contain information about the date, time, and television station on which each airing of political advertisements ran in the 100 largest U.S. media markets, which cover about 86% of the country's population. We selected four cases on which to focus: New Hampshire's 2002 contest, North Carolina's 2002 race, the 2004 Senate election in Pennsylvania, and Wisconsin's 2004 election. We chose these cases because they each contained a competitive primary election for one of the two parties - the Democratic primary in North Carolina and the Republican primaries in New Hampshire, Pennsylvania, and Wisconsin - in which a substantial number of advertisements were aired over the course of several weeks. In addition,

the general elections following each primary were moderately to extremely competitive. Table 1 contains the names of each of the general election candidates in our data and Table 2 contains data on various measures of competition in each of our cases' primary and general elections.

#### [Insert Table 1 here]

#### [Insert Table 2 here]

Our selection of campaigns to analyze was necessarily limited by our theory. There are data for 38 U.S. Senate races in which both parties' general election candidates ran advertisements in our data. Only 12 of the 76 primaries were at all competitive.<sup>4</sup> Within this subset of 12 competitive primaries, fewer still contained dense data; candidates in most of these races only advertised in the few days leading up to the election if at all. We were then left with the four campaigns mentioned above in which the winners of primary elections and their primary opponents ran ads during the election over the course of several weeks.

Each advertisement airing is coded for a large number of characteristics, the most important of which for this research are the issues discussed in the ads. Coders included up to four issues per advertisement and about 50 issues were included in both of the years we use.<sup>5</sup> Some of these issues were transitory in nature, but many were included in both data sets. We coded 31 of these issues as being owned by either the Republicans or the Democrats, each of which is listed in Table 3.

### [Insert Table 3 here]

 $<sup>^{4}</sup>$ Our requirement for identifying a primary election as "competitive" was that the frontrunner received approximately 15% or less of the vote more than her closest challenger.

<sup>&</sup>lt;sup>5</sup>Most advertisements were coded as mentioning only a single issue.

Next, we collapsed these advertising data by candidate and state to created a weekly time series.<sup>6</sup> In each observation we recorded the proportion of the weekly advertisements that contained at least one mention of a Democratic or Republican owned issue. The percentage of advertisements that contained Democratic and Republican owned issues for each of the candidates serve as the dependent variables in our analyses. They are also key independent variables in some of our models, as the attention given to them by a candidate's opponent should affect the former's issue agenda. Table 4 contains the summary statistics of each of the variables we use in our multivariate analyses.

[Insert Table 4 here]

### 3.1 Modeling Campaigns Dynamically

We use pooled time series data in order to capture campaign dynamics. We employ an error correction modeling framework, which allows us to calculate long and short term effects of our time serial covariates on our dependent variables in our analysis (DeBoef and Keele 2008). The dependent variable of an error correction model must be the first difference rather than the value at time t. This framework also requires the inclusion of a lagged dependent variable and both first differences and lagged levels of the remaining endogenous variables.

We specify models estimating the campaign advertising behavior of (1) candidates who win competitive primaries, (2) the advertising of losing candidates in a primary, and (3) candidates who do not face a competitive primary and eventually face the winner of a competitive primary in the general election using the advertising behavior of the other two actors as our primary covariates of interest. We do so twice for each candidate – once for

<sup>&</sup>lt;sup>6</sup>As previously mentioned, the WiscAds data records the media market in which each airing of each ad appeared. However, given the relative sparseness of advertising during primary elections, we decided that observing campaign advertising behavior at the state level was more appropriate. In addition, Banda (2011) found that candidates for U.S. Senate responded to the partian make up of their states rather than to those of the media markets in which they campaigned. This, along with Banda's similarly specified state level analysis, suggests that this decision is unlikely to alter the substantive findings of our research.

Democratic owned issues and once for Republican owned issues. An example equations follows:

$$\Delta P_W A_t = a_1 P_W A_{t-1} + b_1 P_L A_{t-1} + c_1 \Delta P_L A + f_1 G A_{t-1} + g_1 \Delta G A + h_1 Y ear + \mu_1$$
(3)

In the preceding equation,  $P_W$  represents the behavior of the competitive primary winner,  $P_L$  that of the competitive primary loser(s), and G the behavior of  $P_W$ 's general election opponent. A represents each candidates issue agenda, which in each model will be either the percentage of their agenda devoted to Democratic or Republican owned issues. Year represents a dummy variable indicating whether or not the election occurred in 2004. This allows us to control for the effects of the year of the election.

The coefficients of the lagged covariates indicate the average long term effect of the covariate on the dependent variable. The coefficients of the differenced covariates represent the short term, or contemporaneous, change in the dependent variable that results from a short-term change in the covariate.

### 4 Results

Before reporting the results of our multivariate analyses, we will first report some aggregate statistics in order to present evidence addressing  $H_1$ ,  $H_2$ , and  $H_3$ . Table 5 contains the average percentages of advertisements containing party owned issues run by candidates who won competitive primaries, who lost competitive primaries, and who won noncompetitive primaries in our data. In the rows of the table, "party owned issues" refer to issues that are owned by the party of the candidate while "opposition owned issues" refer to those that are owned by the candidate's general election opponent's party.

#### [Insert Table 5 here]

These data offer tentative support for  $H_1$ ; note that noncompetitive primary winners devote less attention overall to their own issues than do candidates who either win or lose competitive primaries. Candidates who win competitive primaries also appear to increase their attention to issues owned by their general election opponent's party once in the general election, evidence in favor of  $H_2$ . We do not, however, find any tentative support in these data for  $H_3$ . We expected noncompetitive primary winners to devote additional attention to the issues owned by their rival party. What we observe is that they devote very little attention to these issues; just under 9% of their advertisements mention issues owned by their rival party. If noncompetitive primary winners seek to appeal to the general election electorate's median voter, they do not appear to do so by devoting time to engaging issues that are owned by the opposing party.

The final point we will note in the data reported in Table 5 is that once candidates reach the general election, they both devote greater attention to their own party's issues along with those of the opposing party. They greatly increase their attention to opposition owned issues, likely in response to one another (see Banda 2011 for a more detailed examination of this phenomena).

We plot each of our time series of interest in Figure 1. We report the percentage of advertisements in each week that mentioned Democratic or Republican owned issues for candidates who faced competitive primaries – both those who won and those who lost – and for the candidate who faced the winner of the competitive primaries in the general election. These plots are visual representations of the issue agendas of the candidates. The vertical solid black line in each plot represents the cut-point between the primary and general elections.

[Insert Figure 1 here]

The general pattern of these data suggests that candidates in competitive primaries pursue similar strategies by emphasizing the same sets of issues in close to the same time periods as their opponents during primary elections. It appears that primary winners and losers on average increase or decrease their attention to both Democratic and Republican owned issues at similar times, perhaps in response to one another. It further appears that the strategies of the candidates who do not have to run in a competitive primary are disconnected from those employed by candidates engaged in competitive primaries. Once the primary ends, the strategy of both candidates appears to shift; both candidates alter their strategies in response to the presence of a new opponent and, in the case of a candidate who just won a hotly contested primary, a different electorate. Both nominees of the major parties appear to respond to one another's issue agendas during the general election.<sup>7</sup> They also appear to spend more time discussing issues owned by both of the parties.

We report the results of several error correction models in Table 6. These models allow us to test  $H_4$  and  $H_5$ . The first three columns report the results of models estimating the degree of attention devoted to Democratic owned issues while the last three columns do the same for Republican owned issues. We report models estimating the advertising behavior of the winner of competitive primaries, the loser(s) of competitive primaries, and the general election opponents of competitive primary winners who faced little to no competition in their own primary elections.<sup>8</sup> Each row is labeled as being one set of opponent's agendas. In all cases, that agenda matches the ownership of the issues being estimated. For example, for the model listed in the first column of results, the competitive primary opponent's issue agenda is their Democratic owned issue agenda. Similarly, in the third column of results,

<sup>&</sup>lt;sup>7</sup>This is precisely what Banda (2011) finds.

<sup>&</sup>lt;sup>8</sup>We treat all of the losing primary candidates as a single entity. While this may seem questionable, this decision was necessary in order to estimate a single model for all of our cases. From a theoretical perspective, it at least makes sense from the point of view of the winning primary candidate, who must defeat all of their opponents in order to move on to the general election.

this is their Republican owned issue agenda.<sup>9</sup>

#### [Insert Table 6 here]

Note first that the estimated coefficients for the lagged dependent variables are all negative and significantly ( $p \le .05$ ) different than zero, indicating that the causal flow in these models is dynamic rather than strictly contemporaneous. The rate of error correction over future time periods ranges from about .25 to about .41 across equations.

Next, we address the question of the degree to which candidates in competitive primary elections respond to one another's issues agendas. Our expectation is that candidates engaged in these kinds of primaries will increase the degree of attention they devote to party owned issues as their primary election opponents increase their own attention to owned issues. The results produced by our error correction models suggest that this is the case both for winning and losing candidates in competitive primaries. Looking first at the first column of results, we observe that competitive primary winners respond to their primary opponents' Democratic issue agendas by increasing the proportion of their own issue agendas devoted to Democratic owned issues. The coefficients for both the contemporaneous and over time effects of the agendas of a primary winner's opponent's Democratic issue agenda on the primary winner's Democratic issue agenda differ significantly ( $p \leq .05$ ) from zero. A one percentage point increase in the primary opponent's Democratic issue agenda on average leads to an immediate increase of 0.335% in the primary winner's Democratic issue agenda. Similarly, this one percentage point increase also leads to a smaller increase in the winning candidate's Democratic issue agenda over future periods. For example, over the first three

<sup>&</sup>lt;sup>9</sup>We also ran these models in several different ways, none of which altered our results: (1) we used daily rather than weekly data; (2) we estimated random intercepts for the year of the election and that state in which it took place; (3) we estimated these same models using a seemingly unrelated regression framework; (4) we estimated models of party owned and opposition owned issues rather than Democratic and Republican owned issues; and (5) we interacted each candidate's Democratic and Republican owned issue agenda with time. This final analysis suggested that candidates do not on average alter the degree to which they respond to their opponents as time passes during the primary election.

time periods following the shock, the average increase in the primary winner's percentage of ads devoted to Democratic owned issue agenda is 0.076%, 0.045%, and 0.027%.<sup>10</sup> Last, note that neither of the estimated coefficients produced for the strategy of the primary winner's eventual general election opponent differ significantly from zero at a traditional level, which suggests that primary winners facing competitive primary elections do not respond to their eventual general election opponents during primaries.

The fourth column of presents the results of a similar model which estimates the effects of primary winners' primary and eventual general election opponent's Republican owned issue agendas on their own emphasis of Republican issues in their advertising behavior. Note that the second coefficient in this model of indicates that primary winners immediately increase their attention to Republican owned issues at a rate of 0.168% for each additional percentage point that their opponent devotes to these issues and that this effect is significantly different than zero. The third coefficient of -0.009 indicates that the long term effect of their primary opponents' strategy flows in the direction that we did not expect. However, this coefficient is not significantly different than zero. In other words, primary winners respond to their primary opponents' Republican issue agenda by immediately increasing their attention to these same issues, but on average there is no long term effect. Once again, note that primary winners do not appear to respond to the Republican owned issue agenda of their eventual general election opponent during the primaries.

The second and fifth columns of of results contain the coefficients generated by models estimating the Democratic and Republican owned issue agendas of the candidates who lost competitive primaries. The first and second coefficients in the Democratic owned issue agenda model are positive and differ significantly ( $p \le .05$ ) from zero, indicating that as competitive primary winners increase their attention to Democratic owned issues, so too

<sup>&</sup>lt;sup>10</sup>These over time effects are calculated by multiplying the coefficient of the lagged value of the primary opponents' Democratic owned issue agenda by the lagged dependent variable, which in error correction models identifies the rate of decay.

do primary losers, both contemporaneously and in the long term. A one percentage point increase in the attention paid to Democratic issues by a primary winner on average leads to an immediate 0.334% increase in the attention paid to the same issues by losing primary candidates. Over the three time periods following the shock, this same one percentage point increase leads to increases of 0.078% in time t + 1, 0.05% in time t + 2, and 0.032% in time t + 3. As in the models for the behavior of primary winners, the advertising behavior of primary winners' eventual general election opponents does not on average inform the Democratic issue agenda of candidates who lost competitive primaries.

Turning now to the results of the model estimating the Republican owned issue agenda of losing primary candidates, we observe that the first two coefficients reported in the fifth column of results indicate once again that candidates involved in competitive primaries increase the attention they pay to party owned issues in response to their primary election opponent's issue agendas. In this case, only the contemporaneous effect of losing primary candidates' opponents Republican owned issue agendas differs from zero at a traditional level. A one percentage point increase in the attention paid to Republican owned issues by primary winners on average leads to a 0.247% increase in the attention paid to these issues by candidates who eventually lost their bid for their party's nomination. Finally, we note once more that the issue agenda of the opposition party's candidate does not on average affect the Republican issue agenda of losing primary candidates involved in competitive nomination races.

The models reported in the third and sixth columns of results allow us to test our final hypothesis. We expect that candidates who are not involved in competitive primary elections will select a strategy designed to appeal to the general electorate rather than their primary electorate because they have little or no competition for their own party's nomination. We further expect that these candidates will not bother to engage with candidates who are running in competitive primaries because (1) it may not be clear who is going to win and (2) candidates running in competitive primaries should choose a strategy designed to win the support of their own party's partisans, a group of people who are likely to have relatively extreme preferences in the opposite direction of those held by candidates who are not members of their party. In other words, we expect that candidates running in noncompetitive primaries will not respond to those who are engaged in a competitive primary before the general election campaign begins, regardless of whether or not those candidates eventually win the nomination. This is precisely what we find; none of the estimated coefficients for primary candidate winners or losers' issue agendas are significant predictors of the Democratic or Republican owned issue agendas of candidates who do not face competitive primaries. These candidates appear to pursue a different strategy entirely.

## 5 Conclusions

This research provides us with a tentative understanding of how candidates form strategies across two stage elections in the U.S. by observing (1) the average level of attention that candidates devote to Democratic and Republican owned issues in both primary and general elections and (2) the patterns of response among the winners and losers of primary elections and the former's eventual general election opponent. Our findings suggest first that candidates alter their issue agendas as they transition from primaries to general elections and second that candidates involved in competitive primary elections respond to one another's advertising strategies while candidates who do not face competitive primaries ignore those who do when forming their own issue agendas during primary elections.

We did not find support for our expectation that candidates engaged in noncompetitive primaries would devote higher levels of attention to the issues owned by their rival party. Instead, we found that these candidates virtually ignored rival owned issues during primary campaigns, focusing instead on their own party'd issues.<sup>11</sup> It is possible that these candidates behaved this way in an attempt to make the issues that tend to favor them – those that their party owns – more salient and thus creating an advantage for themselves in the general election.

Our data do not allow us to test our theory under all of the conditions that might be of interest. We do not, for example, have data on any races in which both parties' primaries were competitive. Advertising tends to be relatively sparse during primary elections when neither primary is competitive, which also limits our ability to fully examine the universe of U.S. Senate primary elections. Finally, while the candidates in our data who did not face a threat in the primary election would likely have felt little if any pressure to engage with their weak opponents, we do not have any data for their behavior because they did not produce an advertisements, probably because they lacked adequate funding. This means we were unable to estimate the effects of losing candidate's issue agendas on the agendas of winning primary candidates in noncompetitive primary elections.

These preliminary results lead to two implications. First, competition is key during primary elections. Leading candidates have little incentive to respond to the agendas put forth by their primary election opponents if they do not feel electorally threatened. Thus candidates likely cannot be induced to select a strategy  $S_p$  that differs from  $S_g$  unless the probability that they will win their primary election decreases. A second and related implication is that candidates who do not face a competitive primary election are able to focus on exactly the set of issues that they prefer during the primary election season. When Prob(WP) approaches one, candidates do not need to target their primary election electorate and may instead focus on appealing to the electorate of the general election.

We plan to continue working on this research question in the future by increasing the <sup>11</sup>It is also highly likely that these candidates chose to run a large number of positive advertisements in which they eschewed issues entirely, focusing instead on valence. number of cases in our analyses. We can do so in several ways. First, we can make use of WiscAds data collected in 2000 and 2008. While the number of cases we have may not increase dramatically with the addition of two more years worth of data, the additional cases should provide us with more variance and different environments in which to test our theory. A second possible future strategy is to expand the scope of our project to include gubernatorial advertisements. Because of the precedes of term limits in many states, there may be a larger universe of competitive primaries leading up to elections for governorships. A final option is to expand the scope of our project to examine the campaign strategies of presidential candidates across primary and general elections. Such a project would add an additional wrinkle to our analyses because presidential primaries occur across states at different times and often against different candidates as some drop out over time or fail to make it onto the ballots in some states.

Taken as a whole, these preliminary results suggest that candidates shift their behavior in response to the situations they face. When candidates face competitive primaries, they respond to the issue agendas of their primary election opponents but not that of their eventual general election opponents. Candidates who do not face a threat during their primaries choose a strategy that is not dependent on those employed by candidates running in their rival party's primary. Candidates, then, respond strategically to the contexts of their elections and pursue different strategies in each stage of the election. Scholars should therefore take care when studying the behavior of candidates during campaigns because the strategies candidates elect to pursue in the general election may be informed by those that they implemented either on their own or in response to their opponents during the primaries.

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	200	)2	2004	
	Democrat	Republican	Democrat	Republican
New Hampshire	Jeanne Shaheen	John Sununu		
North Carolina	Erskine Bowles	Elizabeth Dole		
Pennsylvania	-	-	Joe Hoeffel	Arlen Specter
Wisconsin	-	-	Russ Feingold	Tim Michels

Table 1: General Election Candidates Included in These Data by State and Year

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Democratic	Republican
Minimum wage	Taxes
Farming (friend of)	Government spending
Union (friend of)	Business (friend of)
Affirmative action	Capital punishment/Death penalty
Civil liberties/privacy	Moral/family/relig
Education/schools	Immigration
Health care	Terrorism
Child care	Assisted suicide
Other child related issues	Creationism
Social Security	Crime
Medicare	Narcotics/drugs
Welfare	Gun control
Prescription drugs	Defense/military
Women's health	Missile defense
Environment	Veterans
Civil rights	

Table 3: Coding Scheme: Issue Ownership

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	Mean	Standard deviation	Minimum	Maximum
Competitive primary winners				
Democratic issues	28.02	35.91	0	100
Republican issues	36.41	38.53	0	100
Primary election opponents				
Democratic issues	17.27	35.75	0	100
Republican issues	26.78	40.09	0	100
General election opponent				
Democratic issues	16.16	35.07	0	100
Republican issues	11.89	30.94	0	100
Year: 2004 indicator	0.54	0.50	0	1

 Table 4: Summary Statistics

	Primary elections	General elections
Competitive primary winners		
Party owned issues	53.60(12.23)	56.75(24.94)
Opposition owned issues	28.46(23.87)	41.94(24.56)
Primary election opponents		
Party owned issues	67.03(38.39)	
Opposition owned issues	20.52(36.66)	
Noncompetitive primary winners		
Party owned issues	43.56(32.82)	52.81(16.20)
Opposition owned issues	8.98(10.38)	36.82(28.19)

Table 5: Total Attention to Owned Issues

Note: cell entries are means. Standard deviations are reported in parentheses.

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		Democratic issues			Republican issues	
	Competitive	Competitive	General	Competitive	Competitive	General
	primary winner	primary opponents	election opponent	primary winner	primary opponents	election opponent
$\Delta$ Competitive primary winner's		$0.334^{*}$	-0.152		$0.247^{*}$	-0.061
issue agenda		(0.113)	(0.138)		(0.143)	(0.111)
Competitive primary winner's	$-0.410^{*}$	$0.219^{*}$	-0.014	$-0.261^{*}$	0.047	-0.074
issue $\operatorname{agenda}_{t-1}$	(0.092)	(0.101)	(0.121)	(0.074)	(0.098)	(0.074)
$\Delta Competitive primary opponents'$	0.335*		-0.204	$0.168^{*}$		-0.027
issue agendas	(0.114)		(0.138)	(0.097)		(0.091)
Competitive primary opponents'	$0.186^{*}$	-0.355*	-0.015	-0.009	$-0.246^{*}$	-0.001
issue $\operatorname{agendas}_{t-1}$	(0.102)	(0.095)	(0.121)	(0.071)	(0.081)	(0.065)
$\Delta General election opponent's$	-0.113	-0.151		-0.072	-0.047	
issue agendas	(0.103)	(0.102)		(0.130)	(0.158)	
General election opponent's	-0.055	-0.082	$-0.291^{*}$	-0.075	-0.025	$-0.318^{*}$
issue $\operatorname{agendas}_{t-1}$	(0.074)	(0.074)	(0.079)	(0.105)	(0.127)	(0.089)
Year: 2004	-4.835	-6.124	-1.106	8.005	4.128	-6.215
	(5.413)	(5.382)	(6.316)	(5.710)	(7.001)	(5.285)
Intercept	9.578*	5.640	5.313	5.531	4.171	9.793*
	(5.189)	(5.261)	(6.135)	(5.411)	(6.589)	(4.886)
N	92	92	92	92	92	26
BIC	698.777	698.442	721.386	709.433	738.676	697.063

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Table 6:

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Note: cell entries are estimated coefficients generated using error correction models. Standard errors are reported in parentheses.  $* = p \leq .05$  (one tailed)



Figure 1: Party Owned Issue Agendas and Campaign Advertising