

## **Rules and the Representativeness of Presidential Nominees in the Post-Reform Era**

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There is a longstanding debate in the literature on voting behavior regarding the representativeness of presidential nomination voters. Some argue that the “intense minority” of primary participants selects a nominee who does not represent the entire party and will have trouble winning the general election. The voters, however, are not the only factors contributing to the outcomes. There is an intervening variable between the potential pool of voters and the outcome that is often overlooked. That variable is the rule determining who can vote. Rules have implications for both the strategies of the candidates and the ideology of the eventual winner. Candidates position themselves to best maximize their respective utilities over the outcomes. Using a basic game theoretic application of the median voter theorem, this paper demonstrates that the rules of the game can influence candidate strategy and the outcomes in the presidential nomination campaign.

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In the 2000 Republican primary campaign, John McCain tried to take advantage of the open primary rules by luring a crossover vote from the independents and strategic-minded Democrats. His apparent strategy was to build enough momentum from early victories in open states to carry him through the closed delegate rich primaries held later in the campaign. Although he did develop some momentum, it was not enough to build the strong Republican base needed to win in the closed primaries. McCain's campaign faltered in the closed events because the rules shut out his independent base and the more conservative George W. Bush was able to win as he captured the majority of the Republican only vote.

The results from the 2000 campaign are consistent with the voting literature that suggests the post-reform nomination process advantages more extreme or non-centrist candidates over candidates that are more moderate. There has been a longstanding debate regarding the representativeness of presidential nomination voters relative to the entire pool of potential voters, including those who vote in November. Those who participate in the respective parties' caucuses and primaries are most often described as "more extreme" than general partisans (Bartels 1988; Jackson and Crotty 1985; Keeter and Zukin 1983; Key 1956; Lengle 1981; Polsby 1983; Ranney 1972; Walker 1988).<sup>1</sup> Others argue that the primary electorate is actually quite similar to those who vote in the general election if only voters, rather than potential voters, are considered (Geer 1988; Norrander 1989).<sup>2</sup> The first group of authors makes the argument that because of the "intense minority" of primary voters, the nomination process selects candidates who do not represent the general party following and should have trouble winning the general

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<sup>1</sup> For the purposes of this paper the word primary is used to represent any method of delegate selection. I acknowledge the difference between caucuses and primaries, however, the selection method is not under consideration here.

<sup>2</sup> For a more thorough literature review of this topic, see Crespin. (2001).

election. These works, however, generally neglect the rules of the game and the importance of studying the nomination process dynamically.

This paper uses a simple two candidate multi-stage application of the median voter theorem to demonstrate that it is the ideological characteristics of the voters, *combined* with the rules that stipulate who is able to participate in the primaries that can at times result in non-centrist nominees. The model shows that it is the series and order of open and closed primaries that makes it more likely for the nominee to be closer to the center of their parties and not at the middle of the general voting population. The results from the model also suggest that the rules influence candidate strategy in terms of when to compete and what ideological stances to take. Although some of the past voting literature (see, e.g., Southwell 1988; Geer 1986) studies nomination events held with both open and closed rules, it fails to capture the dynamic element of the primaries.

I have divided this paper into several sections. The first explains the theoretical aspects of the model. The second and third sections introduce the model and provide some preliminary tests of several important assumptions. Finally, I discuss the results and implications of the model along with some suggestions for further empirical tests.

## **Theory**

### *Campaign dynamics and momentum.*

Much of the research dealing with the relative representativeness of the nominees has dealt with primaries as static events, but this runs counter to much of the theory associated with the nomination process. Brams (1978) cites the importance of studying the nomination process as a dynamic event:

“Indeed, probably the most important feature of presidential primaries distinguishing them from other elections is their sequential nature; it is performance *in the sequence* – not in one primary election – that is crucial to a candidate’s success,” (Brams 1978:19, italics in original).

Aldrich (1980a:49) suggests that the rules play an intricate part in the decision making of actual and potential candidates, “the ‘rules of the game’ have tremendous import for how the game is played.” In addition, Aldrich (1980b) argues that momentum, like financial resources, media coverage and delegates, is a zero sum game. If one candidate is generating positive momentum, the other candidate must be experiencing “decay.” It is important to do well early on in the events that get the bulk of the media coverage such as Iowa and New Hampshire to really build momentum and earn increased funding (Gurian and Haynes 1993).

Bartels (1988) cites the importance of gaining momentum by winning the early events. He studies the voting behavior in the primaries and offers several models to describe voting behavior during the primaries. In some of the models, voters take into account previous results to update their beliefs about a candidate’s chances for future events.

Similar to Bartels, Abramson et al. (1992) discuss the decision-making calculus of primary voters. They argue that the primaries present situations where voters may not vote for their most preferred candidate. They call these voters *strategic* or *sophisticated* because they take into account their own preference and the candidate’s viability. These voters may be responding to changes in information based on results from earlier contests. Their model suggests that the voter’s choice depends on the comparative utilities over the candidates and the relative probabilities of outcomes. They found that voters are attuned to the chances of candidates and incorporate the perceived viability into their utility over the candidates. This suggests that if a candidate does well in early primaries and becomes more viable, voters in up-

coming primaries would receive an increased expected utility from that candidate. Aldrich (1980a) argues a similar point, suggesting that voters must take into account their preferences and the chance each candidate has to win the nomination and election. Although none of the authors use the language, they are suggesting a Bayesian approach to understanding voting behavior.

While concentrating on the dynamics is important, it is also necessary to realize that for each contest there is a different electorate determining the outcome. The outcome, I argue, is partially a reflection of the rules defining who can and cannot vote as well as the ideology of the voters. Three elements, rules, ideology and order of contests need to be combined to develop a greater understanding of the nomination campaign.

#### *Median voter theorem (MVT).*

This paper uses the median voter theorem in one dimension to try to explain the influence rules have on candidate strategy and outcomes.<sup>3</sup> Black (1958) and Downs (1957) built on the work of Hotelling (1929) to develop the type of model employed in this paper. They

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<sup>3</sup> When the MVT is used, the model can have either a single or multiple dimensions. When a single dimension is used, the voters use only one item to judge the candidates and select the candidate closest to their ideal point. This item can be as simple as how much money to devote to a tax cut or more complex one such as ideology. When more than one dimension is used, multiple items are used to judge the candidates. Enelow and Hinich (1984) describe candidates as offering a “package” of goods to the voters. They included in the package such concepts as policies, characteristics, past political record and ideology. Although ideology plays a large role in the package, this is not the only determinant voters use to make a decision. Voters may also make decisions based on endorsements, name recognition, past service or perceived electability or viability based on the winning of past contests. When many concepts are used to describe candidates, a multi-dimensional model is called for.

Sometimes labels such as conservative or moderate are attached to these candidate packages. The work developed here uses only these labels so the model remains in one dimension. The model using only predictive labels is also consistent with the primary voting literature and the question under study since I am only interested in candidate ideology, not other items. The literature focuses on the ideological positions of presidential nominees rather than their name recognition or personal characteristics. I also expect the results to be similar if multiple dimensions are built into the model. For these reasons the model uses only one dimension.

argue that the candidate nearest the median voter of the population in a two-candidate election in a unidimensional space wins the election. This conclusion holds if all voters participate and if utility functions are symmetric and single peaked. While many (Aranson and Ordershook 1972; Aranson, Hinich and Ordershook 1974; Enelow and Hinich 1981, 1982; Feld and Grofman 1987; Grofman 1985; Hinich and Pollard 1981; Morton and Williams 2001) use this theorem in various applications, few have applied it in the way used here. Aranson and Ordershook (1972) came the closest when they applied the MVT model to explore the strategies candidates use when they face different opponents in a single primary and then a general election. I apply the theorem to the question of sequential elections during the primaries with a changing median and the same challenger. This paper also incorporates a momentum variable to the model, something others do not. The Black and Downs result may be true for a single contest, but for a series of primaries with a changing median, the outcome may be different.

#### *Candidate movement.*

Enelow and Hinich (1984:39) assume that candidate labels cannot be changed within a single election period. Further, they argue, “that it is vastly more difficult to conceive of a candidate changing from one political ideology to another in a period of less than a year.” This may be too strong of an assumption because some movement is possible between primaries, but not without cost. Some candidates, especially the less well known ones, should have an easier time accomplishing this task while well known candidates will encounter more difficulty changing ideology.

The action by McCain in 2000 demonstrates that relatively unknown candidates, especially unknown challengers, may enter the race almost wherever they please in terms of

ideology, and that movement comes with fewer costs. A quick look at McCain's voting record clearly shows he is not a centrist. His American Conservative Union lifetime vote score was an 85, with 100 being the most conservative.<sup>4</sup> McCain was able to campaign as a centrist by emphasizing the popular issue of campaign finance.

While some movement during the campaign is possible for all candidates, the model developed below assumes that once the candidates enter the race only the challenger is allowed to change positions. If the front-runner is allowed free movement, there is nothing to stop him from moving to the median for each election and thus winning all of the contests. Not only does this sound unreasonable it also provides for a rather uninteresting model and does not contribute anything to our knowledge of the nomination process.

The challenger is allowed to move to make the model more verisimilar. Fewer voters are aware of his policy views early on due to the lack of media coverage he receives because he is the challenger. This allows for relatively little cost to be associated with movement. This model assumes the cost of movement is small enough such that all else being equal, the challenger prefers not to move. For example, if the challenger can win a primary at his current position and also win at an alternative position, then he prefers to remain at his starting position. If however, the challenger can only win by moving, he prefers that outcome to remaining in the original position and losing.<sup>5</sup>

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<sup>4</sup> Vote scores available at <http://www.conservative.org>

<sup>5</sup> These assumptions about candidate movement, and others throughout the model, are of course a simplification of reality. Candidates, even front-runners, can appear to change positions by emphasizing one issue to a particular audience and then a different issue to another audience.

## Model

This model tests how rules can change outcomes and strategy. In this case, I use the party on the right or the Republicans.<sup>6</sup> There are two players in the game, a front-runner and the challenger. Although the model only uses Republican candidates, voters are not limited to just those on the right, voters who are close to the center of the political spectrum are allowed to vote in the open primaries. While all of the candidates are rational actors, they do not all have the same strategy. Front-runners and challengers may exercise different strategies to achieve their goals and their strategy can change over time depending on their relative positioning (Gurian 1986; Gurian and Haynes 1993). Voters are assumed to have enough information to choose the candidate that maximizes their expected utility.

### *Assumptions.*

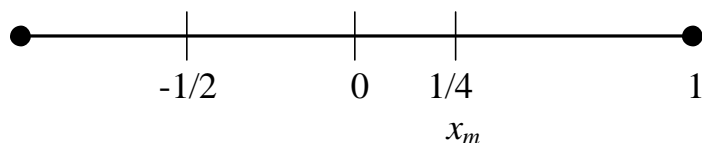
- 1) Each primary is held with either an open or closed rule

In general, there are three different types of voter eligibility in primaries. There are closed, open and modified-open rule primaries. In a closed primary or caucus, only registered members of a party may vote in that party's primary. In an open primary or caucus, any voter, regardless of party registration, may vote in the primary of either major party but not both. There is also a modified-open primary or caucus in which persons registered with one of the major parties may only vote in that party's primary. Since the results for the open and modified-open primary are similar, only the open and closed rules are used in the model.

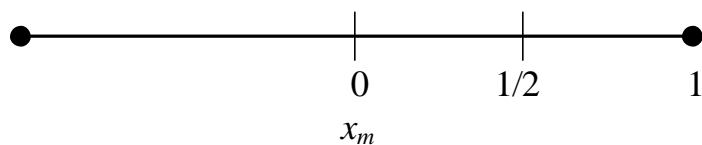
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<sup>6</sup> A similar model can be applied to the either party with only minor adjustments and the outcomes and conclusions are similar.

**Figure 1. Open Primary**



**Figure 2. Closed Primary**



- 2) The voting spectrum ranges from  $[-1/2,+1]$  for the open primary and  $[0,+1]$  for the closed primary. The density of voter preferences is symmetric and unimodal.

Figures 1 and 2 reflect the open and closed primaries respectively. When ideology is used to interpret the voting spectrum, we can assume that the further left a candidate or voter is, the more liberal they are and the further right they are the more conservative. For each primary, the median voter  $x_m$  is at the midpoint of the respective spectrum. This is  $+1/4$  for the open primary and  $+1/2$  for a closed primary. A candidate who occupies the median position, all else being equal, will win the primary.

*Players and strategies*

- 3) There are two candidates  $F$  and  $C$  each with strategy  $S = \{s, \text{n.c.}\}$  where  $s \in [-1,1]$  with  $f, c \in S$  (n.c. stands for not compete).

In each of the primaries up to two candidates may compete. The front-runner is labeled  $F$  and the lone challenger is  $C$ . Each of the candidates chooses a strategy for the primaries with  $f$  and  $c$  representing the strategies for the front-runner and challenger respectively. The strategy

for each consists of choosing a position along the ideological spectrum or the candidates can choose not to compete.<sup>7</sup>

4)  $F$  chooses a delegate-maximizing strategy,  $S = \{f, n.c.\}$  where  $f \in [-1,1]$ . Once  $F$  enters the primary with  $f \in [-1,1]$  that position is played for all contests and it cannot be changed for the next primary.

Once the front-runner enters the primaries, he must continue with the same strategy for all events regardless of what his opponent does. The front-runner essentially has a pre-set strategy that depends on the rules of each of the primaries because of his constrained movement. According to Gurian (1986) and Gurian and Haynes (1993), front-runners allocate their resources to emphasize the number of delegates awarded over trying to gain momentum. In order to win the maximum number of delegates a candidate needs to be positioned to win enough delegates to outdistance his competitor. Front-runners may be able to afford to lose one or two early contests and hang on to win later, larger contests, but front-runners generally cannot lose several contests in a row unless the strategic environment allows for it. Although the front-runner's major strategy is to win delegates, he cannot forget momentum altogether. Because front-runners need to win at least one of the early contests, momentum plays only a minor role in their campaign.

5)  $C$ , the challenger, chooses a momentum maximizing strategy  $S = \{c, n.c.\}$  where  $c \in [-1,1]$ .  $C$ , unlike  $F$ , can change strategies for the next contest.

The challenger freely picks a strategy for each primary. His strategy should be dependent on the results of past events, momentum earned and the strategy of the front-runner. Similar to the voters, the challenger updates his beliefs along the primary path. The challenger's momentum maximizing strategy means that when given a choice between earning momentum

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<sup>7</sup> Although a candidate may choose any position, the optimal positions are at the respective medians. If one

and not earning momentum or losing momentum, he chooses to earn it. For the challenger to maximize momentum in this simplified model it is imperative for him to do better than expected and win in the early contests. For the challenger, in the model, doing better than expected means beating or tying the front-runner. In real campaigns, a strong second place sometimes qualifies as doing better than expected.

Sometimes a challenger will skip an early primary altogether if he expects he will do extremely poorly and enter the race later in a primary where he can win to maximize momentum. A defeat or a poor showing in the early primary leads to a loss of momentum. When the challenger decides to skip a primary, momentum does not change but the number of delegates the front-runner accumulates does. This example of a challenger skipping an event he expects on losing is an example of the momentum maximizing strategy. Although both result in no delegates for the challenger, not entering the event does not lose any of the challenger's momentum or put him in a hole to start the campaign. Sometimes with big risks come big rewards.

There are two different threshold levels of momentum the challenger can earn that are possible. The first, called "little" momentum, is when the challenger is not able to generate enough momentum to beat or tie the front-runner; when they occupy the same position. The second, "big" momentum, is when a win for the challenger generates just enough momentum to beat or tie the front-runner if they occupy the same ideological position.<sup>8</sup> This is the level of momentum that should enable a challenger to earn the nomination.<sup>9</sup>

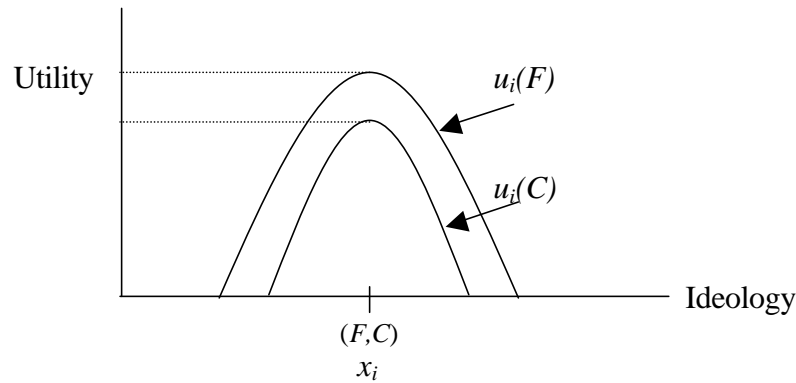
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candidate chooses any other position, the other can win the primary by choosing the median.

<sup>8</sup> A tie is considered a win for the challenger because he beat expectations.

<sup>9</sup> Since the "big" momentum model provides the most interesting results, it is discussed in detail. The results for "little" momentum are only reported. A comprehensive study of both levels can be found in Crespin. (2001)

**Figure 3 – Voter  $i$ 's Utility Over  $C$  and  $F$**



6) a. The voter preference rule on candidate  $F$  and  $C$  is defined as follows:

Let  $x_i$  represent voter  $i$ 's ideal point. Voter  $i$  prefers  $F$  to  $C$  if and only if

$u_i(F) > u_i(C)$  where  $u_i(F) = \mu_f - (F - x_i)^2$  and  $u_i(C) = \mu_c - (C - x_i)^2$  where  $\mu$  is the momentum that each candidate has.<sup>10</sup>

b. If two candidates occupy the same ideological position for a primary, the candidate with the higher momentum wins the primary. Assumption 6.b holds because even though the two candidates occupy the same ideological position, the voter receives a higher utility from the candidate that has more momentum. In Figure 3,  $F$  and  $C$  are both positioned at  $x_i$  with  $\mu_f > \mu_c$ , meaning the front-runner has more momentum. Voter  $i$  earns more utility from  $F$  than from  $C$  even though both candidates occupy the same ideological position because of the momentum variable.

For the first event, it is assumed the front-runner starts off with more momentum because he has advantages such as money, name recognition and media coverage that give him the advantage at the beginning of the campaign. If  $C$  chooses the same strategy as  $F$  for the first event,  $F$  wins because the voter receives more utility from the front-runner according to the

<sup>10</sup> In reality, it may be that this preference function is not symmetric. It may be skewed towards the center of the electorate with voters preferring a movement towards more centrist issue positions than a move towards the

utility functions. A voter gets more utility from this candidate because he looks viable and electable. She knows more about him or the voters may just enjoy supporting the front-runner. As the campaign proceeds, it may be possible for this situation to reverse.

This model suggests that the candidate with the higher momentum has a better chance of winning and will then get the votes. For the model, I assume all of the voters to be sophisticated utility maximizing voters. This means that part of the utility they receive from the candidate comes from ideological positioning and part comes from the amount of momentum the particular candidate has amassed. It is further assumed that voters evaluate both of these items and then choose the candidate that best maximizes their utility.

- 7) The delegates are awarded using the winner take all method and each primary is worth an equal number of delegates.<sup>11</sup>
- 8) All players are operating under the condition of common knowledge and complete information.

Each of the candidates knows the rules under which the primary is held, the number of delegates awarded, the order the events are held and the sequence of decision-making. They also know how much momentum a win will generate to carry over to the next contest.

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extremes. However, since the interest is only in the median voter, it would not change either the results or conclusions.

<sup>11</sup>There are other delegate allocation rules such as a proportional system. When the proportional rule is in place, candidates get delegates based on their percentage of the vote after achieving a certain threshold. I also ran the model with different numbers of delegates for each contest to see what the results would be. I found for example, if a large primary such as California with 162 delegates was used, the outcome was heavily dependent on the rule of the California event because the number of delegates awarded was larger than the other two primaries combined. If the large primary was open, the winner was a moderate and if closed, an extremist. The intermediate result is that changing the number of delegates awarded does change candidates' strategies and the results, but not the conclusions. A candidate, the front-runner, will position himself to win the large primary, especially if that primary has enough delegates to earn the nomination. However, the conclusions remain the same with the ideology of the winner varying by the rules. The changing of the strategies based on delegates awarded actually adds strength to the general assumption that rules play a role in determining candidate strategy.

## Sample primary seasons

To demonstrate the dynamics of the primary season and the influence of the open and closed rules over the outcomes, the model is applied to different permutations of a three-primary nomination game. There are eight ( $2^3$ ) possible arrangements of the open/closed rule over three primaries. For each of the series, only the order of the rules will change. The results for “little” momentum are discussed first followed by an the results and discussion of the “big” momentum game. An example of the game and a brief description are in appendix one.

### *“Little Mo”*

Table 1 displays the results for when momentum is “little.” The first column gives each of the eight possible permutations of the open and closed rules. The second column gives the front-runners strategy for each of the three events, followed by the challenger’s strategies for each primary. The third column gives the winner and his position and the fourth shows how many primaries the nominee won. For example, in the first series, all the events are open and the front-runner won all three events playing  $\frac{1}{4}$ , the centrist strategy. The challenger did not compete in any primaries.

The first result from the model is that the front-runner always wins but the margin of victory changes. This makes sense since the challenger does not develop enough momentum to beat the front-runner, but may he be positioned to win one primary. Secondly, the model yields either a centrist or extremist candidate, depending on the rules of the game and order of events. This supports the hypothesis that changes in rules and order can change the outcomes.

**Table 1. Primary Outcomes – Little Momentum**

Series	Equilibrium Outcome	Winner	Score
1.(O,O,O)*	(1/4;1/4;1/4,n.c.;n.c.;n.c.)	Centrist/F**	3-0
2.(O,O,C)	(1/4;1/4;1/4,n.c.;n.c.;1/2)	Centrist/F	2-1
3.(O,C,O)	(1/4;1/4;1/4,n.c.;1/2;n.c.)	Centrist/F	2-1
4.(O,C,C)	(1/2;1/2;1/2,1/4;n.c.;n.c.)	Non-centrist/F	2-1
5.(C,C,C)	(1/2;1/2;1/2,n.c.;n.c.;n.c.)	Non-centrist/F	3-0
6.(C,C,O)	(1/2;1/2;1/2,n.c.;n.c.;1/4)	Non-centrist/F	2-1
7.(C,O,C)	(1/2;1/2;1/2,n.c.;1/4;n.c.)	Non-centrist/F	2-1
8.(C,O,O)	(1/4;1/4;1/4,1/2;n.c.;n.c.)	Centrist/F	2-1

\*O = open primary, C = closed primary

\*\*F = Front-runner

There are several patterns in the results that are important to point out. For example, when two or three of the primaries are open, the centrist candidate wins and when two or three are closed, the more extreme candidate wins. Other patterns point to the strategy the candidates take. For the permutations that are held using only open or closed rules, series one and five, the challenger never enters. For series two, three, six and seven, the challenger waits before entering to avoid starting with a loss. In each of these series, the last two primaries alternate between open and closed. In series four and eight, the front-runner concedes a loss in the first contest to position himself for victories in the next two primaries. In these two, the first and the second primaries alternate but the second and third are the same. This demonstrates the ability to lose an early event in order to maximize the number of delegates won over the entire nomination season. This suggests that a front-runner with a delegate maximizing strategy can absorb an early loss to be better positioned for a more primaries down the road he has a better chance of winning. Of course, these results may not hold when the challenger can generate a large enough amount of momentum to beat the front-runner.

**Table 2. Primary Outcomes and Expected Utilities – Big Momentum**

Series	Equilibrium Outcome	Winner	Score
1.(O,O,O)*	(1/4;1/4;1/4,n.c.;n.c.;n.c.)	Centrist/F**	3-0
2.(O,O,C)	(1/4;1/4;1/4,n.c.;n.c.;1/2)	Centrist/F	2-1
3.(O,C,O)	(1/4;1/4;1/4,n.c.;1/2;1/4)	Centrist/C	2-1
4.(O,C,C)	(1/4;1/4;1/4,n.c.;1/2;1/2)	Non-centrist/C	2-1
5.(C,C,C)	(1/2;1/2;1/2,n.c.;n.c.,n.c.)	Non-centrist/F	3-0
6.(C,C,O)	(1/2;1/2;1/2,n.c.;n.c.;1/4)	Non-centrist/F	2-1
7.(C,O,C)	(1/2;1/2;1/2,n.c.;1/4;1/2)	Non-centrist/C	2-1
8.(C,O,O)	(1/2;1/2;1/2,n.c.;1/4;1/4)	Centrist/C	2-1

\*O = open primary, C = closed primary

\*\*F = Front-runner, C = Challenger

*“Big Mo”*

The most notable results from the model occur when a win for the challenger generates “big” momentum, because it gives the challenger a greater chance of winning. The CLOSED, CLOSED, OPEN series is discussed first and then compared to the OPEN, CLOSED, CLOSED series. Both of these series are similar because they each have one open and two closed primaries; only the order is different. If the order of events does matter for a momentum building campaign, it should show up here. Table 2 displays the results for all the permutations.

In the, CLOSED, CLOSED, OPEN series, the front-runner wins the first two primaries by playing a non-centrist position then loses the final open event. The challenger, anticipating the losses, skips the first two primaries and enters to win the last primary. The win in the final event by the challenger is too little too late and the front-runner again earns the nomination. This shows that wins for the challenger gained late do not help the challenger build enough momentum. A challenger cannot wait to the end to enter and expect to win the nomination, a lesson Al Gore learned in 1988 when he skipped Iowa and New Hampshire and then split many of the Southern Super Tuesday states with Jesse Jackson.

For the series, OPEN, CLOSED, CLOSED, the challenger is able to win two consecutive primaries and earns the nomination. This is the first time the challenger earns the nomination. Here, the challenger skips the first primary and then plays the non-centrist position to win the final two events. The front-runner wins the first primary but is poorly positioned to win the final two. If the front-runner tried to position himself to win the final two events, as he did when momentum was small, the challenger wins the first event and then switches strategies to match the front-runner the rest of the way. It is only because of the increased momentum that makes this threat credible. For this order of events, the challenger earns enough momentum to win the nomination. Even though the first series has the same number of open and closed primaries as the second, the winner is different for each series. However, the position of the winner is the same for each.

The rest of the permutations follow similar patterns. When momentum is sufficiently large, the challenger wins half of the sequences (three, four, seven and eight) and the front-runner wins the others. The common theme of each of the four series the challenger wins is the first two primaries alternate rules between open and closed. Switching rules makes it difficult for the front-runner to win two early events in a row. The challenger has to be able to win one of the first two events to build momentum. When the front-runner wins the first two contests, there is no way for the challenger to come back in this shortened season. This follows closely the convention that a candidate needs to win Iowa or New Hampshire to build enough momentum to go on to earn the nomination.

It appears that for a challenger to take down the front-runner two things have to happen. First, the rules have to be set so the challenger can secure an early victory. Here the challenger skips the first event and wins the last two. Second, the challenger has to build enough

momentum from the victory to overtake the front-runner in the next contest. In this shortened season, (for the model) one victory is enough. In a longer season, (reality) more wins may be needed to build that kind of momentum. That is probably why the momentum-building candidate does not usually win. As Norrander (1993) states, the front-runners often go on to win while momentum based candidates place second.

Interestingly, the final ideology of the winner is again dependent solely on the order of the rules and not the amount of momentum. When at least two events are open, the centrist wins and when at least two events are closed, the more extreme candidate wins. For half of the sequences, the winner is a centrist and for half a non-centrist. The resulting candidate ideology is the same under little momentum and big momentum. This suggests that the ideology of the winner is at least partially dependent on the rules of the game, not just what type of voters turn out to vote as past literature suggests. An unexpected result is that when momentum is big, the challenger always skips the first primary, letting the front-runner win. However, recall there is no loss of momentum when the challenger skips a primary so this still fits with the challenger's momentum generating strategy. Of course, the above model is a simplified version of the real primary season. Below, some preliminary tests of certain assumptions are outlined and the model is compared to three campaigns where the rules came into play.

### **Empirical Evidence**

The first key assumption that the model takes is that the average ideology of voters in states held under the open rule should be more moderate than voters in states held under the closed rule simply because the centrist voters are allowed to take part. To test this assumption, exit-poll data is used from the 2000 primary season from primaries when both Bush and McCain were still in the race. If dates were used after McCain dropped out, it is doubtful his supporters

**Table 3. Open/Closed State Ideology\***

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Rule		%Conservative
Open		50.8
Closed		58.6
F statistic	.272	
t-score	2.156	
N	18	

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\*Polling Data from Voter News Services

would have still turned out to vote. Of the 18 states where both competed and data was available, 11 were open and 7 closed. To measure ideology, voters are asked to place themselves on a five-point ideological scale ranging from very liberal to very conservative. The scores for the two more conservative levels, conservative and very conservative are then summed. The mean score for the open states is 50.8% conservative and very conservative. For the closed states, the mean is 58.6% for the same measure. An independent sample t-test reveals there is a significant difference between the two means at the 0.05 level. Of course, this test does not control for region or any other variable that may also play a role in the ideology of the voters besides the rules. Table 3 reports these results.

Now that there is some evidence suggesting that the voter pools are different depending on the rule, it will be interesting to see how the model holds up against a real campaign. If the model in any way reflects reality, certain candidates should do well in primaries with the open (closed) rule and worse in primaries with the closed (open) rule.

It is generally difficult to place presidential candidates exactly on the political spectrum, but for some campaigns, certain candidates are clearly more conservative or liberal than others.

For example, in the 1980 campaign, Reagan was more conservative than Bush and Kennedy was more liberal than Carter. The model suggests that Reagan and Kennedy should do better in closed primaries because they are closer to the median of their respective parties but further from the median of the entire electorate. Bush and Carter should do better in the open events because both are more moderate than their competitors. In this 1980 race, there were 16 closed primaries, five modified-open and 16 open events. Many of the closed events were not held until later in the campaign in May and June. In 1980, only 17% of Republicans called themselves moderates while 49% called themselves conservative. This shows that the median voter for the Republican Party is somewhere right of center. For the Democrats, 22% called themselves moderates with 24% self declared liberals.<sup>12</sup> Although not as pronounced as the Republicans, the Democrats are skewed to the right as expected.

Congressional Quarterly reported that Carter did in fact do better in the open primaries.<sup>13</sup> He won 15 of the 19 open primaries, defeating Kennedy by a margin of 20 percentage points in the cumulative vote in those states. Carter earned 55% of the total open primary vote to Kennedy's 35%. For the closed primaries, Kennedy did slightly better. He won nine to Carter's seven, however Carter still took 48% of the total closed primary vote to Kennedy's 40%. In the caucuses, which were treated as closed primaries earlier, the model does not stand up nearly as well. Carter won 11 of the 13 caucuses. This can partially be attributed to the superior staff and resources an incumbent president is able to build that are needed to do well in caucus states; a factor not added into the model. On the Republican side, Reagan did do better in closed states

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<sup>12</sup>National Elections Studies Guide to Public Opinion and Electoral Behavior  
<http://www.umich.edu/~nes/nesguide/nesguide.htm>

<sup>13</sup>Congressional Quarterly. July 5, 1980 pp 1869-75

**Table 4. Two-candidate Vote and Rule**

Year	Candidate	t-score
1980*	Reagan	.756
	Bush	-.756
	Kennedy	-.374
	Carter	.464
2000#	Bush	-2.956*
	McCain	2.890*

\*Source: America Votes 2000 and CQ, April 19, 1980

#Source: <http://www.thegreenpapers.com>

\*Sig. at 0.05

than open as expected. Bush did slightly better in open versus closed. Reagan earned 66% of the closed primary vote to Bush's 22%, and 55% of the open vote with Bush taking 25%.

To see if there is any statistically significant support for the hypothesis that more extreme candidates should do better in closed primaries and that more moderate candidates fair better in open primaries, a difference of means test is used. I test only events where both candidates competed. Table 4 gives the results. For the 1980 elections, there is no significant difference. This may be explained by two reasons. The first is that the candidates did not specifically take advantage of the rules deciding who can and cannot vote. That Carter and Bush did not go out and try to attract independents or leaners in the open primaries may have lessened their share of the vote in those primaries. The second reason has to do with the regional advantages each of the Democrats had. Although the home states of all of the candidates were excluded from the correlation, Carter did well in the South and Kennedy fared well in New England no matter what the rule was.

The 2000 campaign held up much better. For both McCain and Bush, there was a significant difference between their percentages of the two-candidate vote in open versus closed primaries. In the 2000 campaign, McCain, the challenger, was certainly competing to the left of the front-runner, Bush, and we would expect him to do better in open versus closed primaries with the opposite holding for Bush. The evidence supports this hypothesis. There are a few reasons why 2000 holds up better than 1980. The first is the candidates knew the rules and took advantage of them. For example:

“Arizona Sen. John McCain’s campaign has benefited enormously from the fact that three of the first four primaries - New Hampshire, South Carolina, and Michigan -- have open primaries that permit any registered voter to influence the GOP primary,” (SpeakOut.com Feb. 22, 2000).

Using the bipartisan issue of campaign finance reform, he set out to attract independents and Democratic leaners. McCain campaigned strongest and declared he must do well, thus setting higher expectations, in open states such as New Hampshire, Michigan and South Carolina. In the end, however this was his downfall. When McCain lost South Carolina, the campaign was effectively over. Although South Carolina was open, it was in the South, which is generally considered more conservative than the rest of the nation.

Bush also understood the rules and knew he could wait until the large closed primaries to secure victory. “Pretty soon, these primaries are going to be decided by Republicans and like-minded independents,” Bush said in California on Wednesday. “And I’m going to win those states,” (SpeakOut.com February 25, 2000).

Another reason the model holds up so well in 2000 is that the voters were more aware of the rules. In 1980, some states were still in court when the campaign started fighting over the open and closed rules. In 2000, some Democratic voters in Massachusetts became independents

to vote in the modified-open event. Since Gore faced little competition from Bradley, some Democrats or left leaning independents who would normally vote for Gore voted for McCain because they felt he would be the weaker candidate in November. Hagen, Johnston and Jamieson (2000) support this notion, reporting that McCain was the beneficiary of crossover voting based on his viability. If all of the primaries were closed, independents and Democrats would not have had the opportunity to support McCain. Bush on the other hand, clearly was trying to appeal to the more conservative Republicans. His first campaign theme was “compassionate conservatism,” not “compassionate independent.” Bush’s visit to Bob Jones University was certainly aimed at the far right. The evidence from the 2000 campaign clearly supports the idea that moderates do better in open events and candidates further from the center do better in closed events and candidates try to take advantage of this fact.

Although the results of the empirical test do not examine the candidate strategies directly, they do provide evidence that certain candidates do better under different rules. If candidates are aware of this fact, and they probably are, they should act accordingly. The results provided here provide some evidence that the result of non-representative nominees may be a reflection of the rules and ideology rather than only the ideology of the voters.

### **Results and Implications**

After the primaries replaced the convention system as the main method to pick the presidential nominees in 1972, a debate has arisen over the relative ideology of the winning candidates. Ranney (1972) asks whether primaries should produce a moderate candidate who will win in November or one who is the favorite of the party faithful? Although these two are not mutually exclusive, the literature has often suggested that the nominees are more extreme than the median voter in the general election. Others argue that this is not true, that if only voters

are compared, rather than potential voters, the candidates are not more extreme. Ignoring potential voters, a selection bias, has some problems because it ignores the argument that some voters may not turn out precisely because the candidates are too extreme and they would rather stay home than cast a vote. Whichever side is correct, they both largely ignored an important factor of the primaries, the rules. Most of the focus of the debate only looked at voters, not the rules stipulating who can and cannot vote. Their studies were also static in nature even though nomination theories suggest the primaries need to be studied dynamically. As Aldrich (1980a) finds, the rules governing presidential primaries affect both candidate behavior and outcomes.

“Once a candidate decides to seek the nomination, explores the rules and laws of the campaign setting, and evaluates the participating citizen, the strategies to pursue are not separable pieces but related elements of a unified decision-making process,” (199).

All of these elements are included in the model to give a better understanding of the nomination process.

The model suggests that the ideology of the winner can change depending on the rules that determine who can and cannot vote and the order. When more than half of the delegates come from closed primaries, the winner is more extreme than when they came from open primaries. The model also demonstrated the importance of momentum and winning early events for both types of candidates, front-runner and challengers. When a win for the challenger does not generate enough momentum to change outcomes, the front-runner positions himself according to a delegate maximizing strategy and cruises to victory. All the challenger can do is react to the front-runner and try to earn a few delegates in contests where the front-runner is ill positioned. In real campaigns, many challengers who cannot generate momentum wait for the front-runner to stumble unexpectedly or become exposed in a scandal. For the shortened primary season in the model, a win for the challenger was impossible when momentum is little.

This may have been what happened in the 2000 race. McCain did well early in New Hampshire and carried that momentum through Michigan. However, when he got to conservative South Carolina, his momentum was not enough to overtake Bush's lead in the polls.

When momentum was big enough to change outcomes, the challenger does much better under the right circumstances, specifically when the first two events alternated in rule. If the front-runner wins the first two events, the race was over. When the challenger won either of the first two primaries, he could then reposition himself for the next events and earn the nomination.

Although the model incorporates many aspects of the primaries, there is still much more work that can be done. The first item for future research is to model more than two candidates for each party and have them winnowed out over time. While the two-candidate model does give some insight, many campaigns have more than two candidates, especially at the start of the campaign. The addition of more candidates to the field makes strategy harder to figure out. If many candidates are clustered, even around the median voter, they will end up dividing the vote and a candidate further away from the cluster may win the event. Another addition to the model could be the use of proportional delegate allocation rather than a winner-take-all rule. Both of these allocation rules are used during the primary campaign and again candidates need to act strategically depending on the rule. A candidate may be inclined to compete in a primary with a proportional allocation rule even though they predict they will do poorly just to pick up a few delegates. The winner-take-all rule gives candidates less of an incentive to compete if they predict a loss. Other aspects that are not included directly into the model are resources and media coverage. Generally, the more resources and more positive media coverage a candidate gets the greater their chances of remaining in the race and winning. However, these aspects are in the model indirectly through the momentum variable.

Besides additions to the model, future research needs to provide a better way to test the model. To do this, the first thing that needs to be done is come up with a precise measurement for candidate positions from state to state. This may be available from state polls, done around the time of the primaries asking voters to place the candidates on an ideological spectrum. Also needed is a measure of momentum based on results. One way to grasp momentum is to measure the change in state polling both before the previous contest and then afterward. If momentum is gained, candidates who exceed expectations should see an increase in state polls for the next primary. These elements, along with the rules and results need to be combined in order to provide an empirical test. Although no direct empirical test of the model is given, some important insight into the nomination process are still gained and several important aspects of the nomination process are modeled. The representativeness of the nominee should no longer be based solely on the types of voters that participate in primaries because some voters, specifically the voters that occupy the center, are not allowed to vote because of the closed primary rule. It is important to study the rules of the game and the dynamics of the campaign to find out why some nominees seem not to represent the rank-and-file voter. Finally, potential candidates for future campaign need to take notice of the rules and plan their strategy accordingly if they want to represent their party in November.

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Appendix One

OPEN CLOSED CLOSED – “Big Mo”

First Primary

$c=1/4$     $c=1/2$     $c=n.c.$

(1)

$f=1/4$	1,-1	1,-1	1,0
$f=1/2$	-1,1	1,-1	1,0
$f=n.c.$	-2,1	-2,1	0,0

Second Primary

$f=1/4$

$f=n.c.$

$f=1/2$

(2a)  
 $f=1/4$

$c=1/4$	$c=1/2$	$c=n.c.$
1,-1	-1,1	1,0

Third Primary

(3a)  
 $f=1/4$

$c=1/4$	$c=1/2$	$c=n.c.$
-1,1	-1,1	1,0

(2b)  
 $f=1/4$

$c=1/4$	$c=1/2$	$c=n.c.$	
-1,1	-1,1	1,0	
$f=1/2$	1,-1	-1,1	1,0
$f=n.c.$	-2,1	-2,1	0,0

Third Primary

(3b.1)  
 $f=1/4$

$c=1/4$	$c=1/2$	$c=n.c.$
-1,1	-1,1	1,0

(3b.2)  
 $f=1/4$

$c=1/4$	$c=1/2$	$c=n.c.$	
-1,1	1,-1	1,0	
$f=1/2$	1,-1	-1,1	1,0
$f=n.c.$	-2,1	-2,1	0,0

(2c)  
 $f=1/2$

$c=1/4$	$c=1/2$	$c=n.c.$
1,-1	-1,1	1,0

Third Primary

(3c)  
 $f=1/2$

$c=1/4$	$c=1/2$	$c=n.c.$
1,-1	-1,1	1,0

(3b.3)  
 $f=1/2$

$c=1/4$	$c=1/2$	$c=n.c.$
1,-1	-1,1	1,0

Above is an example of the game used to derive the results reported in the text. Specifically, this game represents the OPEN, CLOSED, CLOSED series with big momentum. First, I want to discuss the choices and payoffs for each of the candidates. In the first round, each candidate has three choices, compete  $\frac{1}{2}$ , compete  $\frac{1}{4}$  or not compete. Once the front-runner assumes a position, he is stuck with that choice for the rest of the game. Notice that *F*'s choices are limited at some nodes after the first, while *C* has the same choices to make at each node. The front-runner's choices are limited because of his lack of movement once he chooses a position in an earlier event. *F* only gets all the choices when he does not compete in the prior event. The challenger has all the strategies to choose from at each node because he is able to change positions throughout the campaign. Remember, though, that if the payoffs are the same, the challenger prefers to keep the same position as he played in the last event. The front-runner, *F*, receives a score of 1 if he wins, 0 if neither competitor competes, -1 if both compete and he loses and -2 if he does not compete and loses. The challenger, *C*, receives 1 if he wins, 0 if he does not compete and -1 if he competes and loses.

When repeated play is limited to a finite number of games, the equilibrium can be found by using backwards induction from the last play. The first step to finding the equilibrium is to use backwards induction, solving back from each the last nodes until the first game is reached. The third nodes are all under the headings "Third Primary." At each of the nodes, the best move for each candidate is found and then the payoffs from that round are incorporated into the next until the first node is reached. Then the resulting payoffs are then summed and the highest result for *F* is the equilibrium. *C*'s choice for that scenario is then determined based on what *F* does.

For this series, the equilibrium path is from 1? 2a? 3a. To find this equilibrium, first solve the game at 3a. The front-runner is stuck playing  $\frac{1}{4}$  and the challenger plays  $\frac{1}{2}$ .<sup>14</sup> The payoff is  $-1$  for the front-runner and  $+1$  for the challenger. Next, add these payoffs to each of the choices in 2a and again the front-runner plays  $\frac{1}{4}$  and the best choice for the challenger is  $\frac{1}{2}$ . Next, move up to the first node labeled 1 and add the payoffs from 2a and 3a across the row for  $F = \frac{1}{4}$ . This then needs to be done solving back from the other end nodes. When the payoffs are incorporated into the first node and that node is solved the solution for the game presents itself. The other seven games are solved with the same logic.

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<sup>14</sup> Although  $c = \frac{1}{4}$  at 3a also gives the same result, at the previous event the challenger plays  $c = \frac{1}{2}$  in response to  $f = \frac{1}{4}$ . Since the challenger prefers not to change position if the results are the same, he plays  $c = \frac{1}{2}$  at 3a.