

## **DRAFT: CITE ONLY WITH PERMISSION OF AUTHOR**

**Title:**

Winning from the Center: Frank Bigelow and California's Nonpartisan Primary

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**Abstract:**

In 2012, California first used a nonpartisan “top-two” primary. Early academic studies of the effects statewide have produced mixed results on the key question: does the new law make it possible for more moderate candidates to win? This study focuses on one particular California State Assembly race, District 5, from 2012 to assess the operation of the new law in detail in one same-party runoff. Republicans Frank Bigelow and Rico Oller competed against each other in both rounds; Bigelow, the more moderate Republican, won the general election. This study uses the internal Bigelow campaign polling data (three surveys of 400 voters each) to assess the dynamics of the race, revealing not just voter attitudes towards the candidates but the reasons for Bigelow campaign choices. The results suggest that although little strategic behavior took place in the first round, voters, including Democrats, tended to support the spatially logical candidate in the general election – with the advantage to Bigelow, the candidate closer to the median voter of the district.

**Notes:**

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## Introduction

Americans continue to seek improvement in their democratic institutions. Although Madison thought the “republican principle” ensured defeat for minority factions “by regular vote,” democracy turns out to be less straightforward (2003, 75). With many potential candidate choices in an election, “no one method” of voting “satisfies all the conditions of fairness that have been proposed as reasonable and just” (Riker 1982, 65). States use primary elections to narrow the number of alternatives for the general election; while no rule satisfies all the concerns of the theorists (Arrow 1951), some rules may, in practice and on average, generate more desirable outcomes. In 2012, California implemented a new “top-two” primary election law in an effort to elect more pragmatic or moderate candidates.

This paper examines how a moderate candidate defeated a more ideologically-driven copartisan and won a seat in the state legislature. In California’s very conservative 5<sup>th</sup> Assembly District, Republicans Frank Bigelow and Rico Oller advanced to the general election by earning the two greatest proportions of the votes cast for all candidates by all primary voters. These were not identical candidates; for example, while Frank Bigelow had not signed the “no-tax” pledge, Rico Oller did. I examine voter preferences between the candidates using three surveys Bigelow’s team conducted over the course of the campaign. This rich data source provides insight not only into voter behavior but also campaign strategy and the likelihood of seeing similar outcomes in the future. In AD5, the pro-reform advocates appeared to get what they wanted; the evidence from these surveys supports the conclusion that the new law will benefit moderate candidates who survive into the second round.

Existing empirical research on primary election reforms paints a mixed, if not pessimistic, picture. Earlier studies (Gerber and Morton 1998) which find some types of more “open” (greater voter choice) laws lead to the election of more moderate candidates contrast with recent findings (McGhee et al. 2014) that many primary laws do not appear to affect polarization in a meaningful or systematic way. Specifically about the top-two primary, Kousser, Phillips, and Shor (2014) find little evidence that California candidates presented themselves differently before the new primary. Ahler, Citrin, and Lenz (2014) find that voters did not seem to have enough information to adequately take advantage of the new strategic opportunities (to obtain moderation) presented by the new primary. Nagler (2013) finds little evidence for strategic voting in the first round and evidence for high “drop-off” of voters without a candidate of their party in the general election. On the other hand, Alvarez and Sinclair (2014) argue the top-two did produce more moderate winners in some highly competitive districts and Grose, Sinclair, and Yoshinaka (2014) suggest the legislature turned more

moderate after the election. The in-depth examination presented in this paper for one of the same-party runoffs, across the whole of the election cycle, helps to bridge the gaps in this existing and, at times, apparently contradictory literature.

The next section of this paper motivates the selection of this particular race as an important case study: it has many of the specific dynamics the primary-reform advocates appear to have considered as they pushed to change the electoral institutions. The subsequent section places this debate more broadly in the literature about electoral institutions and voter behavior. The data and methods section describes the Bigelow dataset, the testable hypotheses derived from the literature, and the method employed to test them. The rest of the paper presents and discusses those results.

### **Why AD5? The Tax Pledge, Moderate Candidates, and Primary Reform**

Every year throughout the 1990s and 2000s, it seemed the California budget battles got worse.<sup>1</sup> In 2008 state legislators failed to pass a budget for eighty-five days as Republicans refused to grant tax increases, Democrats refused to cut services, and a super-majority rule required compromise; the *New York Times* described the final agreement as “the most universally despised budget in the nation” (Steinhauer 2008). A 2009 mid-year budget adjustment required a “record-long floor session of nearly 46 hours” to get just six Republican votes (Steinhauer 2009). Those votes, though, would transform the California political landscape: the key centrist Republican, State Senator Abel Maldonado, demanded the legislature put primary election reform on the 2010 ballot as part of the deal.

In June 2010, California voters approved Proposition 14, switching the state from traditional party primaries to a nonpartisan “top-two” primary system. Then, in a record-breaking session before the implementation of several state reforms, the state legislature passed the 2010 budget one hundred days late (Nagourney 2010). Later that year voters also approved Proposition 25, a ballot proposition to remove the supermajority requirement in the legislature for the yearly budget (Buchanan and Berton 2010) as well as a second redistricting reform measure (York 2010).<sup>2</sup> All of these reforms, in some ways, targeted the

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<sup>1</sup> See McGhee (2007, 4). The state legislature only managed to produce an “on-time” budget a handful of times since the 1970s. Starting in the 1990s, budget battles increased in length, routinely delivering budgets over twenty days late. In a few cases these conflicts stretched on to forty or sixty days, providing yearly late-summer entertaining political reading in the local newspapers and convincing the author of this paper to become a political scientist.

<sup>2</sup> In 2008 California passed a ballot proposition to make a ‘citizen’s redistricting commission’ for the state legislature; the 2010 measure added House districts to that as well.

ability or incentives for legislators to someday surpass their ignominious 100-days-late budget record.

Proponents of the top-two primary supported it for a variety of reasons. Supporters ranged from Republicans like then-Senator Maldonado, Governor Schwarzenegger, and Charles Munger to newspapers like the Los Angeles Times and eventually to a majority of the Democratic-leaning state's voters.<sup>3</sup> Nevertheless, they likely shared some expectations in common. McGhee observes that the new primary's "advocates most commonly cite [as a reason to support the proposition] its potential to increase moderation in the state's political parties" (2010, 3).<sup>4</sup> While "moderation" can have many meanings, in the larger political context of the era, included among the most important must be the relative willingness of politicians to compromise on the state's financial policy.

In 2012 Californians got their first look at the new primary. The June primaries turned out to be a sleepy affair; with the presidential nomination contest already rendered meaningless, and no serious challengers against a well-funded incumbent U.S. Senator, all the serious primary contests took place in state legislative and U.S. House races. While it may take some years to better understand how all of these reforms affected California state politics, challengers and legislators need to make decisions now based on the evidence they have available.<sup>5</sup> In that sense, even a small number of successful moderates in the 2012 election could have an effect on future campaigns and the behavior of current legislators – either providing an incentive to jump into a race thought otherwise unwinnable or as a warning to act in such a way as to deter an opponent's entry.

Frank Bigelow defeated, with 52 percent of the vote, fellow Republican Rico Oller in California's 5<sup>th</sup> Assembly District in 2012 to set one of those precedents. Bigelow, a "soft-spoken rancher," refused to sign the Americans for Tax Reform "no-tax-increase" pledge (Mishak and York 2012). Newspaper descriptions of Oller tend to be more colorful. In the *Times*, Mishak and York would write that Oller:

“... is a conservative firebrand who quotes Ayn Rand, spits out the word ‘moderate’ like tobacco juice and finds his political

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<sup>3</sup>Charles Munger's reform efforts would place him in select company on *Salon.com* as one of “5 billionaires who are making life miserable for ordinary Americans” (Johnson, 2014). The *Los Angeles Times* called Proposition 14 a “sensible and modest step” (Editorial Staff, LA Times 2010).

<sup>4</sup>The complaints about the polarization in the legislature do not seem to be exaggerated; Shor and McCarty (2011) find that the California legislature was the most polarized in the nation.

<sup>5</sup>With redistricting, a new redistricting process, the new primary, the new budget rules, and the Democratic Party's overall success, distinguishing the partial effect of any one of the changes is very challenging.

philosophy in a quote from the 1990s film ‘Tombstone’: ‘Either fight or get out of the way.’”

Oller would go on to say that the Democrats “have to find a Republican who is more morally flexible [on taxes]. I don’t possess that degree of flexibility” (Mishak and York 2010). While Bigelow did not favor higher taxes, he did not sign the pledge and retained his own ‘flexibility.’ Local activists perceived this distinction as a real policy difference between the candidates.<sup>6</sup>

The AD5 election tests the idea that a relative moderate can emerge victorious through a top-two primary. Bigelow had to survive in a field of six primary candidates and defeat a more ideological and experienced candidate of his own party in the general election.<sup>7</sup> Moreover, Bigelow came in second in the primary.<sup>8</sup> This district can serve as a proving ground for the concept of the top-two for three main reasons: first, Bigelow and Oller differed on the very dimension on the minds of many pro-reform advocates. Second, this district has the characteristics of a sufficiently safe Republican seat that we can safely assume no Democrat would likely have emerged victorious in a more traditional general election. Third, the 2012 primary election results suggest that Oller would have won a traditional primary election.

Furthermore, the race in AD5 fits the description of the national “problem.” No less observer than President Obama commented that House Republicans, either by incentive or by inclination, tended to pay more attention to the opinions of their party primary constituents than national public opinion (Foer and Hughes 2013). George W. Bush likely had similar complaints about the Democratic members of the House – many, like former speaker Nancy Pelosi, elected from lopsided Democratic-leaning districts in California. If someone like Frank Bigelow can defeat someone like Rico Oller, if more states adopted this rule, would members of Congress become more moderate or pragmatic?

The answer to that question depends on *how* Frank Bigelow won his election. If true, voters had to be able to determine that he had a more moderate or pragmatic stance than Rico Oller. Next, voters – in particular, Democratic voters and moderate Republicans – had to decide to support Bigelow over Oller.

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<sup>6</sup> For an interesting example, see Park (2012). “RightOnDaily.com” describes itself as a “collaborative effort of several conservative activists in Placer County” and goes on to say: “the primary purpose of RightOnDaily.com is about exposing fraud in the Republican Party and the agendas of government.” This website would post several pieces opposing Bigelow and supporting Oller. The October 4<sup>th</sup> post highlighted the AFL-CIO’s Bigelow endorsement and, as “the main course,” a copy of a letter reportedly dispatched from local Democrats urging their fellow partisans to back Bigelow over Oller *because* Bigelow had not signed the pledge.

<sup>7</sup> Oller had previously served in the Assembly, served in the State Senate, and run for U.S. House.

<sup>8</sup> Bigelow (R.), 29%; Oller (R.), 34%; Lancaster (R.), 2 %, Boyd (D.), 13%; Fitzgerald (D.) 18%; Belden (No Party Preference), 4%.

For this result to be more than an anomaly, the result had to depend at least to some extent on ideology and partisanship, rather than just approval of Bigelow's trademark cowboy hat or other "valence" issues not necessarily tied to partisanship.

The anecdotal evidence supports this claim. In addition to the surveys their campaign commissioned, the Bigelow team also conducted focus group studies. The moderator put to a group of Democratic and Independent women a question about the tax pledge --

DEM. FEMALE RESPONDENT: I cannot vote for any Republican that has ever signed that little thing, "Here is the religious things I'm going to follow." I want them to step aside and say, "I'm not (inaudible) the religious right. I am going to vote on the issues, and I'm not going to follow them." Right now that scares me.

MODERATOR: What if they signed the pledge never to raise taxes?

DEM. FEMALE RESPONDENT: I wouldn't trust them.

MODERATOR: That's a deal breaker.

DEM. FEMALE RESPONDENT: That's a deal breaker.<sup>9</sup>

-- but is that enough? The focus group respondents had a moderator with them to suggest issues and provide information. Would Bigelow's more moderate stance give him a path to victory in that election cycle? Alternative stories are certainly plausible and favored by other authors in the literature: that party organization matters more than ideology, that voters have so little information as to make these results random or based on arbitrary cues, and that moderate candidates may not choose to enter the election.

### **Voter Behavior, Electoral Institutions, and Primary Reform**

Political scientists have not yet arrived at a consensus on how California's top-two primary, or any other primary election law, should affect state and national politics. The diversity of American electoral institutions, both between states and across time, complicates the study of American primaries. Furthermore, there are still formal theory questions left unanswered; in terms of framing expectations for empirical work, scholars tend to rely on the 'back of the envelope' theory that "more open" primaries should produce "more moderate" results.<sup>10</sup>

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<sup>9</sup> "Democratic and Independent Women" focus group responses, Sept. 12 2012. Focus group commissioned on behalf of Frank Bigelow and transcripts were provided to the author.

<sup>10</sup> For a sample of the diversity of theoretical approaches, see: Chen and Yang (2002), Callander (2005), Oak (2006), Owen and Grofman (2006), Adams and Merrill (2008). The difficult choice to make in these models seems to be: do you allow for strategic voters, strategic candidates, or

Most states use one of three types of primary laws, distinguished by the ability of voters to choose a party on election day: open, semi-closed, and closed.<sup>11</sup> While there are some variants of each type, these are all broadly defined “partisan” primaries. In a partisan primary, candidates of each party face candidates of their own party; in the subsequent general election, the primary winners face the nominees of other qualified parties.

In 1998 and 2000, as the result of an earlier ballot proposition, California experimented with an ‘even more open’ type of an open primary, a “blanket primary.” A blanket primary allows voters to switch between party primaries as they moved down the ballot.<sup>12</sup> Washington and Alaska used a similar rule (and had done so for some time). Nevertheless, the California political parties sued and defeated the blanket in the U.S. Supreme Court. In *California Democratic Party v. Jones* (530 U.S. 567, 2000), the Court ruled that the blanket primary violated political parties’ associational rights by making it too easy for voters who did not affiliate with the party to determine the official party nominee.

Parties do not have a right to have a state-run primary, though. In the *Jones* decision, the Court suggested that a nonpartisan primary (like the top-two) would pass constitutional tests because it does not purport to select the nominee of a political party; it is merely the first stage of a two-stage nonpartisan election process. Washington implemented the top-two primary in 2008 as an alternative to the blanket (see Donovan 2012) and California used it for the first time in 2012. While adopted with a similar *purpose* to the blanket primary (in California, also supported most prominently by moderate Republicans), it is not immediately

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both? And then: how many candidates, from how many parties, do you include? Furthermore: do you have voters merely choose based on a one-dimensional ideological space, or do you allow them to consider other characteristics? As you can readily imagine, different answers to these questions produce very different predictions from formal models of primary elections.

<sup>11</sup> Although, it is important to note, not all scholars agree on *precisely* what defines these types. In an open primary, all voters can pick the ballot of any qualified political party on the day of the election and vote for candidates of that party. In a closed primary, only voters registered with a political party can vote on that party’s ballot. In a semi-closed primary, typically unaffiliated voters can choose a party but affiliated voters must stay with their own party’s ballot. While seemingly straightforward, there are several complications: what about states that allow new voters to affiliate on election-day but not existing voters? What about states that allow unaffiliated voters to pick a party but then have those voters leave affiliated (and then ineligible, without further action, to repeat the process in the next cycle)? What about states that claim to have a closed primary but have no meaningful way to enforce their rule? And so on. The other commonplace distinction (pioneered in Kanthak and Morton 2001) separates open primaries into “pure open” (voters choose their party privately) and “semi-open” (voters choose their party publicly).

<sup>12</sup> For example, voting in the Democratic Party primary for U.S. Senate, the Republican Party primary for U.S. House, and then switching back to vote in the Democratic Party primary for all the other races on the ballot.

obvious that the two laws should have similar effects. The possibility of same-party runoffs distinguishes the top-two from the blanket primary.

The research on types of primaries beyond the top-two helps frame this study in two ways. First, aside from Washington's recent experience (Donovan 2012), Nebraska's nonpartisan legislature, and a similar (but not identical) primary system in Louisiana, there are not many American examples of nonpartisan primaries for traditionally partisan offices.<sup>13</sup> Other countries have runoff systems but typically combine them with a greater amount of party control.<sup>14</sup> To frame expectations for the top-two primary, then, the broader literature can suggest what considerations will be important. Second, literature covering other types of primaries provides the comparison: does this reform appear to work where others have failed to do so?

Gerber and Morton (1998) evaluate conventional wisdom that openness correlated directly with moderation. They find that winners of semi-closed primaries had the most moderate voting records in Congress, followed by the winners of open primaries.<sup>15</sup> In their view, unaffiliated voters provide a moderating influence in semi-closed and open primaries, somewhat offset by "raiding" partisan crossover voters in open primaries. Kanthak and Morton (2001) largely agree, although they offer a more refined distinction between types of open primaries (open and semi-open).

Not all scholars are convinced that primary rules matter very much. McGhee et al. (2014) fail to reject the null hypothesis that primary type did not explain polarization. Other recent scholarship on parties has emphasized the control parties have over the nomination process through "informal party organizations" (Masket 2011) and the "invisible primary" that takes place before any voting actually begins (Cohen et. al 2008). A study on the Nebraska nonpartisan legislature observes that the nonpartisan legislature polarized as parties figured out how to defeat an institution specifically designed to weaken their influence (see Masket and Shor 2011). Kousser, Phillips, and Shor (2014) did not find evidence that candidates moderated in the 2012 California top-two primary, which might suggest a strong tie between candidates and their party.

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<sup>13</sup> There are many American elections that are nonpartisan for local offices. These differ from the nonpartisan top-two primary because they are not only nonpartisan in structure but also nonpartisan in terms of cues on the ballot. Candidates in city elections typically do not list their personal party preference, leaving voters to use cues like incumbency (Schaffner, Streb, and Wright, 2001).

<sup>14</sup> For a broader look at some of these alternatives, see Callander (2005). To make clear my point, take French Presidential Elections: all of the 10 first-round candidates in 2012 represented *different* political parties.

<sup>15</sup> They also control for nonpartisan and blanket primaries – but they only have Alaska, Washington, and Louisiana as cases.



The primary rules have to matter enough to overcome the parties' ability to use their resources and ingenuity to retain control.

Primary reforms can fail to produce more moderate outcomes not only because parties seek to control meaningful candidate entry but also because voters may not support the moderate candidates. In the top-two, moderates face challenges in both stages. In the first stage, they may be "squeezed" by other candidates, making the center an inhospitable place (and, therefore, may not even choose to run) if voters merely select the most ideologically proximate candidate (like in Palfrey 1984). Candidates either have to be very fortunate with the other candidates' entry decisions or stimulate strategic behavior in the electorate.

Many scholars have studied strategic voting in a variety of contexts. While there are many different types, proponents of the top-two would hope in particular that candidates of a weak party would abandon hopeless candidates and vote for moderates of the stronger party. There is some evidence that sizeable numbers of voters in Britain, for example, will leave behind a party that is nationally viable but locally weak to support their second choice (Alvarez and Nagler, 2000). Research into Duverger's law (see Cox 1997) would suggest that voters must be, at some level, at least somewhat strategic.

Nevertheless, the literature on voter behavior still struggles to theoretically motivate voter's choices. Riker and Ordeshook's "calculus of voting" (1968) poses the problem – the apparent individual irrationality of voting given the near-zero expected benefit and a nonzero cost – and proposes an arbitrary individual sense of duty as a solution. And while the same challenges apply to choosing to cast a strategic vote, Alvarez and Kiewiet observe that "the zero likelihood of being pivotal has led some to argue that it makes no sense to cast a tactical vote, but it is also the case that *not* casting a tactical vote has the same, utterly inconsequential impact on the outcome of a large-scale election" (2009, 269). In the top-two primary, with the unusual structure of party cues and incentives, to what duty voters feel called should affect the observed outcomes.<sup>16</sup>

Research on strategic voting in American primaries has produced nuanced results. Abramson et al. (1992) found some evidence in American presidential primaries that voters thought about candidate viability. Many of the essays in Cain and Gerber (2002), though, do not find significant evidence for meaningful strategic behavior in California's blanket primary. More on point: early studies on the top-two primary have not been very encouraging; Ahler, Citrin, and Lenz (2014) find that voters typically did not have enough information or the

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<sup>16</sup> In particular, does abandoning the party, when a candidate of the party remains available, impose some additional psychological costs on the voters? If party identification is primarily a "psychological attachment" (Campbell et al. 1960, 121), crossing the party barrier to behave strategically may have real psychological costs that within-party strategic behavior would not have.

inclination to take advantage of the opportunities the top-two ballot afforded them in the primary.

Even for voters who *wish* to behave strategically, the incentives are not necessarily clear.<sup>17</sup> Clough (2007, 313) observes that the “availability of public information” like polling data may impair voters’ ability to avoid wasting their vote; while Clough points out that many American elections are well-studied and surveyed, this seems unlikely to apply to State Assembly races. In AD5, for example, a Democrat who believed Bigelow unlikely to win the election might have little incentive to support him (rather than to try to choose the most competitive of the two Democratic candidates). Alvarez and Sinclair (2013) and Sinclair (2013) also observe that many voters even in very competitive races did not have enough information to make electoral strength judgments about all of the candidates in their district.

Notably, information *about* the candidates (ideological placement, relative electoral strength) only solves part of the information problem. Alvarez and Kiewiet (2009) found that voters in the high-visibility recall election at least had “rationalistic” preferences between pairs of candidates. In a top-two primary, though, voters have to make a judgment between many candidates at once, taking into account the information they possess and the potential strategies of others. Referencing Cox (1997, 137), Blais et al. (2011, 638) observe:

“... strategic considerations should play a weaker role in two-round elections. The point is that more information is required to vote strategically... this entails trying to anticipate the possible outcomes of the first ballot and then the probably result of the second ballot with different runoff pairings.”

Furthermore, “Blais [(2004)] found little evidence of French voters deserting their first preference because that first preference was perceived to be unviable” in French presidential elections, which have a similar structure (Blais et al. 2011, 638).<sup>18</sup> As Blais et al. note, too, voters can make what turn out to be ex-post apparently regrettable choices; not all strategic risks turn out well.<sup>19</sup> Facing a complex choice, sincere voting may be a very reasonable strategy.

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<sup>17</sup> It is also difficult to test *absence* of strategic behavior in a world of incomplete information. After all, voters could first determine that strategic behavior made little sense and then *rationally* choose to remain uninformed about alternatives.

<sup>18</sup> The original Blais (2004) book chapter appears to be written in French, so I have cited a coauthored summary written in English.

<sup>19</sup> The example used in Blais et al. (2011) and widely cited elsewhere also comes from France: the 2002 French Presidential Election. It appears that too many voters abandoned the presumed winner, the Socialist candidate, resulting in a second-stage election between a center-right and far-right candidate.

Unlike with the blanket primary, though, a moderate could still come in second place in the primary and win the election. Alvarez and Sinclair (2014) suggest that moderate candidates in the top-two primary needed at least one of these conditions to be satisfied to win: (1) sufficient strategic voting for the moderate candidate over a more partisan, but hopeless, weak party alternative; (2) enough of an advantage in spatial positioning with sincere voting to make the top-two. They suggest that most of the new law's effect (including in AD5, a race they study with their own survey) came from the second path rather than large-scale strategic voting. In AD5, for example, Bigelow made the top-two in second place in part because voters perceived the two Democratic candidates (Boyd and Fitzgerald) as ideologically similar and they split the Democratic Party vote.

It is not obvious, though, that the same party runoffs would be sufficient to generate moderation. The primary and general electorate may be very different, particularly if only one party has candidates on the ballot. Nagler (2013) found significant voter drop-off in races in which they did not have a candidate of their own party. Research tends to find low amounts of strategic voting in similar primaries, to observe that voters lacked much information about the candidates (in particular, both Ahler, Citrin and Lenz 2014 and Alvarez and Sinclair 2014), and to assess previous electoral reforms with a mixed record of moderating outcomes. Furthermore, much of the academic effort on the top-two process focused on the primary election stage rather than on the subsequent general election.

This paper fills three gaps in this literature. First, this report includes survey data of a competitive same-party runoff in great detail. Alvarez and Sinclair (2014) surveyed only in the primary in this contest; Nagler (2013) used general election data but did not have many observations from each race; and many of the other early studies on the top-two focus just on the primary election part (or on the subsequent legislative action). Second, this paper uses data from Bigelow's campaign, so the analysis here has a close connection to the decisions they made in different stages of the election. Third, this data allows us to examine an important race in its most important dimensions: did party and ideology play their expected roles, or did Bigelow win for reasons unrelated to his more moderate positions?

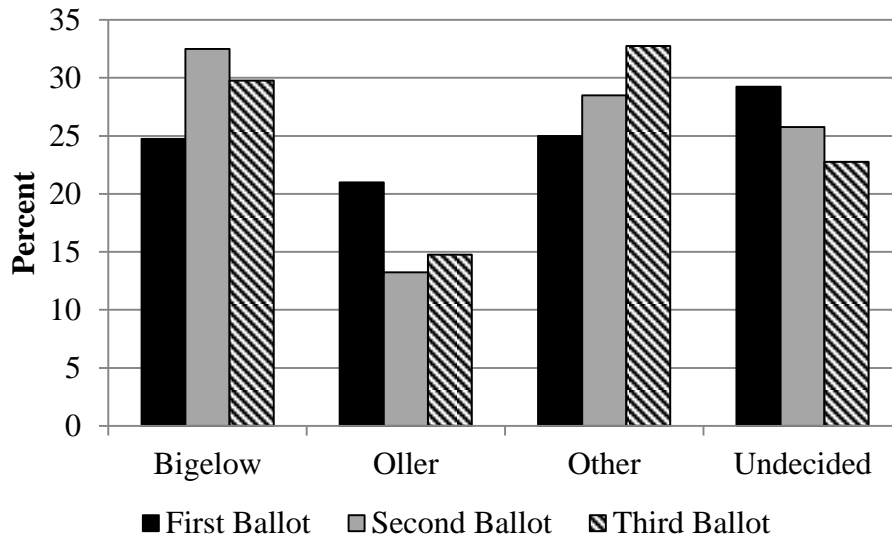
## **Data and Methodology**

The campaign consultants for Frank Bigelow provided the data for this paper. They made five distinct efforts to gather information: a preliminary survey long before the primary (April 9-10, 2012), two focus groups at the end of the summer (September 9, 2012), a survey specifically tailed to their general election (September 28), another related survey a few weeks later (October 19), and (it appears they bought access to) an additional survey in the middle of October.

This paper focuses on the three 400-person samples from surveys clearly designed by the campaign, the pre-primary poll and the two “tracking” polls the campaign commissioned.<sup>20</sup>

Each of these three surveys asks slightly different questions. The pre-primary survey obviously includes more options and has many voters unsure about their candidate preference; if voters on election day know little about their State Assembly candidates, voters months ahead of time will know even less. Nevertheless, this survey asks a lot of questions about how voters will react to different pieces of information about the candidates; in particular, it includes a “push block” of negative statements about Rico Oller and then another about Frank Bigelow. Voters are actually asked to re-evaluate their candidate choice throughout the survey: first they give their initial preference, then they answer the question after the negative statements about Oller, and then lastly they give their preference after hearing the negative statements about Bigelow as well.

**Figure 1: Three “Ballots” on the Pre-Primary Survey.** Shows vote share for Bigelow, Oller, other non-Republican candidates, or Undecided. Respondents took the first ballot initially, the second after hearing negative statements about Oller, and the third after hearing negative statements about Bigelow as well (N=400).



<sup>20</sup> Although they are called “tracking” polls, it does not appear that these are panel surveys (N=400 for both). Also, these surveys targeted “likely voters,” people with a high enough vote propensity in the Political Data database from which they were drawn.

Figure 1 plots the percent of voters preferring each candidate across the three “ballots” offered in the pre-primary survey. Oller does fairly badly; by the third ballot, “undecided” leads Oller 19 percent to 15 percent. Bigelow looks to be in good shape as the leading candidate with nearly 30 percent of the vote. In any event, there are not very many Bigelow and Oller observations left; only 119 intended to vote for Bigelow and 59 for Oller out of 400 respondents. Boyd and Fitzgerald have around 14 percent of the vote each (54 and 55 observations). Belden has about 6 percent of the vote.<sup>21</sup> Table 1 might help explain why Bigelow seems so safely ahead: the survey contains more negative statements, and more serious accusations, for Oller than for Bigelow. Nevertheless, Figure 1 also highlights the instability in the preferences; with only a few additional pieces of information, Oller lost a full quarter of his potential voters.

Not all of the potential attacks resonated equally with voters. Table 1 lists the percent of respondents who replied that the listed statement would make them less likely to vote for that particular candidate. Bigelow’s campaign would put this information to use effectively in radio and television advertisements; as Table 1 would suggest, they highlighted most Oller’s per diem reimbursement (“He profited too. Rico Oller: \$200,000 just to drive to work”). Some of the other issues raised in the survey are potentially compelling and not ideological: a restraining order, his status as a ‘career politician,’ and the statement about his ‘ambition.’ If (replicable) voter behavior in the primary is to explain Bigelow’s ultimate triumph, rather than the mere accident of a divided Democratic Party vote, it needs to be the case that non-Republicans choose to consider the Republican candidates and that moderates choose Bigelow.

The third “ballot” at the end of the first survey can stand in for opinion after what voters might have heard over the course of the campaign. While they likely heard only some of these messages, and may have heard messages not mentioned here, the data can still suggest who found what compelling. In particular, this data permits testing two related hypotheses about the primary; both of these (**H1a**, **H1b**) fulfill the expectations that sincere voting will predominate in the primary. First, given the existing research, Republicans and strong conservatives should be more likely to meaningfully participate than their Democratic or unaffiliated counterparts. Bigelow and Oller are the two viable candidates for the second round; since they happen to identify as Republicans, some Democrats and unaffiliated or third-party voters will not ‘cross over’ and

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<sup>21</sup> Republican Lancaster does not appear on the survey at all. While the dynamics about who moves towards and away from candidates based on statements should be largely unchanged, the inclusion of another Republican alternative would likely alter the subsequent choice. This precise problem emerged as a public controversy in 2014 when a Field Poll failed to include a second Republican candidate, potentially coordinating the Republican vote on a single candidate, in a report on the 2014 campaign for Secretary of State (see Leubitz 2014).

**Table 1: By Attack, Percent of Voters “Less Likely” to Support Candidate.**

These are row percentages from the pre-primary survey. Respondents could report being less likely or much less likely to support the candidate in question; these percentages combine both of those responses.

Attack	%
"When Rico Oller was in the State Legislature he voted for a \$9.2 billion bond which contributed to the state budget problem we are in today."	54
"Rico Oller says he opposed raising the vehicle license fee, but in the Legislature, he actually voted to increase that tax on California drivers."	52
"Rico Oller has been described by a local newspaper as – quote - 'someone lacking ethics and fatally consumed by ambition.' "	43
"In 1988, the court issued a restraining order against Rico Oller ordering that he stay 50 yards away from his wife and children."	52
"During his 8 years as a legislator Rico Oller collected approximately \$250,000 in non-taxable per diem payments to defray daily living expenses—even though he lived within driving distance of the State Capitol."	65
"Critics point out that Rico Oller is just another Sacramento career politician and part of the problem. He has run 5 times for 3 different offices."	41
"While in the Legislature Rico Oller voted for a bill signed by Governor Gray Davis that increased pensions for state workers costing taxpayers \$400million a year."	59
"Frank Bigelow initially voted in favor of a resolution supporting the High Speed Rail project but now claims he opposes it."	32
"Frank Bigelow supported a Madera County sales tax increase and while in office took numerous trips at taxpayers’ expense."	40
"Frank Bigelow lacks the extensive legislative experience that Rico Oller would bring to the State Assembly. Frank Bigelow’s experience in office has been limited to serving as a County Supervisor in a small rural county."	24
"Frank Bigelow voted for dozens of fee increases and several deficit budgets during his 13 years on the Madera County Board of Supervisors."	30

participate. That is, not all voters who could abandon a lost cause will do so. Second, of those voters choosing between the Republicans, more moderate voters should go for Bigelow while more conservative voters should support Oller.

***H1a: Non-Republicans Waste Votes.*** Weak party or nonpartisan voters, faced with unclear strategic imperatives and incomplete information, will not overwhelmingly support the moderate strong party candidate in the first stage.

***H1b: Republicans Sort By Ideology.*** Moderates of the strong party will successfully identify and support the more moderate candidate. Ideologically committed voters will vote for the more ideologically committed candidate.

Due to the limitations of the data, I make some structural assumptions and then perform the analysis using a sequential logit model (Buis 2010). The model estimates a first-level choice between choosing one of the Republican candidates or giving some other answer – in essence: do the voters want to impact the final outcome of the general election or waste their votes? At the second level, if the voters go down the “Republican” path, the model then estimates a binary logit for choosing between Bigelow and Oller. Separately at the second level, the model estimates a binary logit for choosing one of the alternative candidates or refusing to give a candidate preference.<sup>22</sup> While this model does impose structure on the choice, this is really what reformers had in mind: in their view, some of the weak party voters should realize that their own party’s alternatives had no chance to win and then seek the least-bad alternative in the other party.<sup>23</sup>

The subsequent tracking polls focus on slightly different questions in the general election; voters now only have a choice between Bigelow and Oller in

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<sup>22</sup> Alvarez and Sinclair (2014) and Sinclair (2013) find voters tended to perceive the two Democratic candidates as virtually indistinguishable in a single liberal-conservative ideological dimension in AD5. Since *none* of the other candidates had a real chance to beat Oller in the general election in such a conservative district, what matters here is that voters are choosing *an* outside alternative not *which* outside alternative they pick.

<sup>23</sup> Fundamentally, of course, this is a multinomial choice problem best studied with a model like multinomial probit (that does not require the IIA, “independence of irrelevant alternatives” property). Alvarez and Sinclair (2014) estimate such models for the districts they study – but only with difficulty, even given a larger survey sample size. In this case, the survey does not contain appropriate “alternative-specific” variables required to estimate a MNP model. The inability to estimate MNP models in these sorts of elections is a common problem; Alvarez and Nagler (2002) resorted to using a multinomial logit model in their study of the blanket primary (a model that assumes IIA).

November.<sup>24</sup> Although it seems reasonable to hypothesize that not all Democrats would abandon their party in the complicated primary, political science research makes a fairly clear prediction (via the median voter theorem) about what should happen in a contest between only two candidates. Democrats, Independents, and moderate voters of all types should prefer Bigelow to Oller. During the general election phase, if ideology does not significantly distinguish Bigelow and Oller voters, then the election of the more moderate Bigelow must be an accident of other circumstances (such as the availability of effective negative personal attacks), not easily replicable in other top-two races. On the other hand, if the evidence sustains the hypothesis that more moderate voters supported Bigelow, the second round works as intended.

***H2a: Ideology and Partisanship Matter.*** In the general election, more moderate and less conservative voters will identify and support the more moderate candidate.

While ideology and party (broadly defined) are important, the tax issue is particularly interesting in AD5. While neither of the tracking polls asks exactly the right tax-pledge question, both ask related questions.<sup>25</sup> The first survey asks voters to give their view of the Tea Party; voters with favorable views of the Tea Party are typically characterized as very interested in conservative anti-tax fiscal policy. The second survey asks voters to identify whether “fiscal conservative” better described Rico Oller or Frank Bigelow; the very conservative voters who identify Oller as a fiscal conservative should be very unlikely to support Bigelow.

Information should also be important. These tracking polls do not provide as much additional information as the initial pre-primary survey did; voters are not learning much about the candidates throughout the course of the survey. Voters are asked about the extent they have a favorable or unfavorable view of Bigelow and Oller. One way to interpret the absence of a rating would be the absence of sufficient information to have an opinion. Voters should be much less inclined to vote for a candidate if they do not have enough information to even have an opinion about that candidate.

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<sup>24</sup> As Lacy and Burden (1999) observe, in every two-candidate election, you actually have three choices: candidate 1, candidate 2, and abstain. While nearly every voter in these surveys reported intending to vote (as is commonplace in survey research; and, indeed, the Bigelow campaign explicitly targeted high probability voters), the voters who gave “don’t know” or “undecided” responses may be dissatisfied with their choices in this particular race and perhaps more likely to roll off the ballot. While in the main section of the paper I address just a binary version, conditional on having a preference, I repeat the sequential logit structure with “don’t know” as an alternative and present the results in the appendix.

<sup>25</sup> The first tracking poll did ask a question about the tax pledge to half the sample (N=200).



**H2b: Voters Avoid Unknowns.** In the general election, voters will be more likely to vote for candidates they know enough to give *an* approval rating, regardless of the content of that rating.

Bigelow won the AD5 seat only by four percentage points. Testing these hypotheses gives us a better explanation for how he managed to win.

## Results

The results for the pre-primary poll are largely consistent with the findings in other research on the top-two and support **H1a** (Democrats, other registrants wasted votes) but fail to reject the null hypothesis for **H1b** (Republicans sort by ideology). Democrats and other non-Republican affiliation types tend to stay out of the main contest. With the Bigelow-Oller decision, Republicans appeared to be swayed more by the content of the attacks than by ideology. Table 2 displays the sequential logit results and Table 3 shows first differences for variables statistically significant in at least one of the choice levels.<sup>26</sup>

In Table 2, the first-level results show that Democratic and Other (non-Republican) registrants were less likely to make a decision between the Republican candidates. Instead, they are more likely to abstain from meaningful participation and either give a “don’t know” type response or support a candidate unlikely to win the general election. Table 3 suggests that these tended to be large effects; for an otherwise median voter, a Democrat would be 30 percentage points more likely to abstain from directly participating in the most meaningful choice (Oller v. Bigelow). This is not to say that their choice had no consequence. In effect, a Democrat voting for anyone other than Bigelow would marginally increase Oller’s odds of ultimate victory, as Bigelow was the only candidate likely to beat Oller in a pairwise comparison.

Very conservative voters, and voters who favored the Tea Party, were more likely to choose between the main two Republican candidates. There are issue effects at this level as well: Oller’s bond vote and Bigelow’s sales tax (at the 0.10 level) – issues that relate to the main ideological dimension, finance. Some Democratic voters did pick either Bigelow or Oller (about 20 percent) as did some Other registrants (about 40 percent); nevertheless, the remainder either did not have a firm preference or intended to support an alternative, but weaker, candidate.<sup>27</sup>

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<sup>26</sup> First differences calculated for changing the variable in question from 0 to 1 with all other variables set at their medians. This calculation was performed in STATA using the seqlogit command and the corresponding post-estimation commands authored by Buis (2010).

<sup>27</sup> Full descriptive statistics are available in the appendix.

**Table 2: Sequential Logit, Pre-Primary Survey, “Third Ballot” Vote Choice.**

The first level of the model has two branches: abstaining from meaningful participation or voting for one of the Republicans; at the second level one branch estimates coefficients for selecting Oller over Bigelow and, on the other branch, coefficients for remaining undecided over choosing a non-Republican candidate. Variables marked with a \* are significant at the 0.10 level and variables marked with \*\* are significant at the 0.05 level (N=400). For the model, the LR  $\chi^2(22)=84.05$  such that Prob.  $> \chi^2 = 0.00$ .

Variable	Other Response over Vote for Bigelow & Oller		Vote for Oller over Bigelow		Don't Know or Undecided over Other Candidate	
	Coef.	Z	Coef.	Z	Coef.	Z
Perm. Absentee	0.20	0.77	-0.21	-0.49	-0.18	-0.54
Dem. Reg.	1.24**	4.02	0.11	0.19	-1.43**	-3.63
Other Reg.	0.57*	1.64	-0.17	-0.30	-0.63	-1.38
Very Conservative	-0.56**	-2.02	0.36	0.82	0.41	0.97
Favor Tea Party	-1.22**	-4.39	-0.47	-0.98	0.10	0.25
R.O.: Voted Bond	-0.84**	-2.47	-0.02	-0.04	-0.77*	-1.66
R.O.: Fee Increase	-0.02	-0.05	-0.10	-0.20	0.55	1.25
R.O.: Unethical	0.39	1.22	-0.66	-1.16	-0.25	-0.66
R.O.: Restraining Order	0.20	0.68	-0.90*	-1.85	-0.49	-1.28
R.O.: Per Diem	0.13	0.39	-1.05**	-2.17	0.34	0.82
R.O.: Career Pol.	0.05	0.14	-1.26**	-2.10	0.33	0.77
R.O.: Pensions	-0.14	-0.44	-0.78	-1.37	-0.21	-0.55
F.B.: Fail Flip-Flop	0.36	1.10	0.47	0.78	-0.25	-0.65
F.B.: Sales Tax	0.61*	1.87	0.33	0.61	-0.70*	-1.72
F.B.: Inexperience	0.32	0.90	-0.35	-0.56	-0.47	-1.05
F.B.: Fee Increase	0.17	0.46	0.06	0.09	0.61	1.33
Constant	0.04	0.11	0.31**	1.94	1.02**	2.17

The results do not support rejecting the null hypothesis for **H1b**, that Republicans sort by ideology. From this data, within the second, Bigelow-v-Oller, level, the vote had more to do with personal characteristics in the primary. Voters who respond to the attacks on Oller’s character are much more likely to vote for Bigelow; fundamental partisan or ideological differences do not seem to matter as much. The first difference for voter sensitivity to the attack on Oller’s per-diem reimbursement indicates an 18 percentage decrease in the probability of

choosing Oller. The others are slightly smaller: the restraining order first difference is a 15 percentage point decrease and the “career politician” comment comes with a ten percentage point decrease for the probability the voter chooses Oller.

**Table 3: First Differences for Pre-Primary Sequential Logit.** This table shows the first differences computed for statistically significant variables in the model presented in Table 2. The table reports the change in probability (Y=1) give in a change in the variable from 0 to 1. The baseline probability is calculated here for an individual with all of the median characteristics.

Variable	Other Response over Bigelow or Oller	Oller over Bigelow	Undecided over Other Pref.
Baseline	0.39	0.15	0.56
Dem. Reg.	0.30		-0.33
Other Reg.	0.14		
Very Conservative	-0.12		
Favor Tea Party	-0.23		
Neg. R.O.: Voted Bond	-0.21		-0.17
Neg. R.O.: Restraining Order		-0.15	
Neg. R.O.: Per Diem		-0.18	
Neg. R.O.: Career Pol.		-0.10	
Neg. F.B.: Sales Tax	0.15		-0.17

For the other branch of the second-level estimates, Table 2 shows that Democrats were more likely to have an alternative candidate in mind when compared to everybody else who passed through the first transition as “not voting for Republicans.” The voters more upset about Oller’s bond vote and Bigelow’s sales tax tended to support one of the alternative candidates rather than end up in the undecided category. This level helps to illustrate which types of voters decided not to participate in the Bigelow-Oller choice: Democrats or individuals frustrated with the Republican options on some issues.

The sequential logit pre-primary results support some of the more pessimistic findings in the literature about the top-two. Many voters, particularly Democrats, missed the opportunity to meaningfully participate because they were too likely to support candidates of their own (seemingly) hopeless party. That supports the wasted vote hypothesis, **H1a**. There is little support for the

Republican sort hypothesis, **H1b**; at least before the primary, personal attacks beat partisanship or ideology in the choice between Bigelow and Oller. Put together, those results would suggest that Bigelow's election had more to do with the availability of negative character attacks and the pattern of candidate entry, something which does not further the idea that moderates should in general benefit from the structure of the new primary.

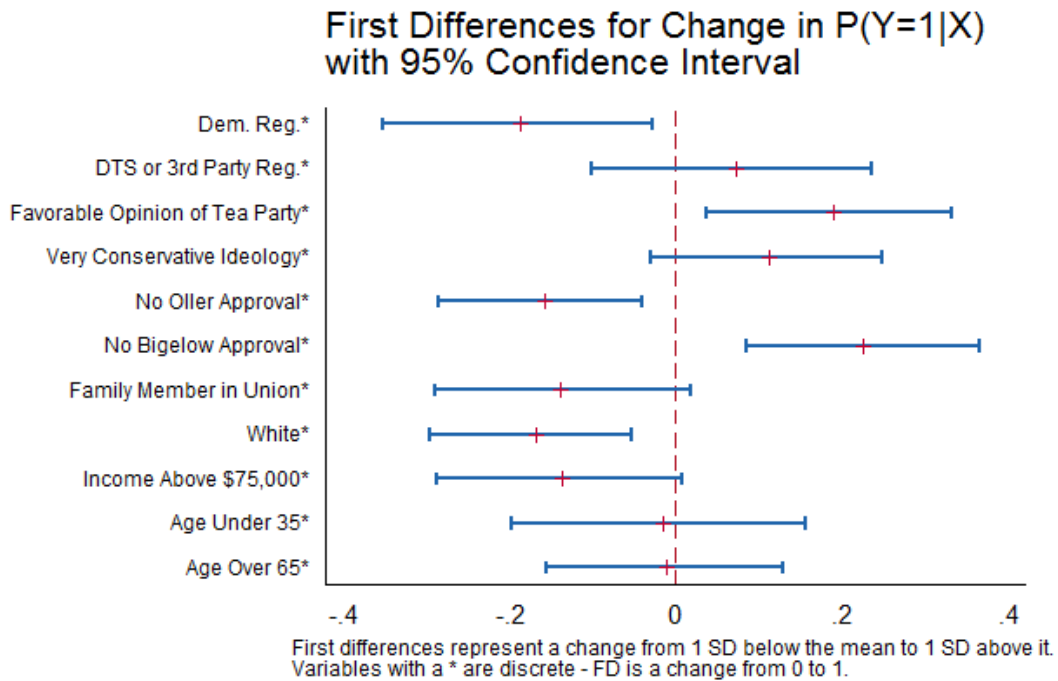
**Table 4: General Election Tracking Poll Logits.** These are two separate models showing the results for the first and second tracking polls before the general election. In both, the dependent variable is scored 0 if the voter preferred Bigelow and 1 if the voter selected Oller. Variables marked \* are significant at the 0.10 level and variables marked \*\* are significant at the 0.05 level.

Variable	First Poll		Second Poll	
	Coef.	Z	Coef.	Z
Dem. Registration	-0.78**	-2.22	-1.41**	-3.42
Other Registration	0.34	0.93	-0.64	-1.61
Favor Tea Party	0.80**	2.57		
Very Conservative	0.54	1.59	-0.33	-0.89
Vy. Cons. x Oller Fisc. Cons.			3.35**	2.71
Oller Wasted Tax Dollars			-1.18**	-3.14
No Favor. Rank for Oller	-0.79**	-2.68	-1.50**	-4.30
No Favor. Rank for Bigelow	0.95**	3.03	1.45**	4.37
Union Family	-0.57*	-1.68	0.26	0.71
White	-0.87**	-2.61	-0.36	-0.93
Income Above \$75,000	-0.58*	-1.86	-0.07	-0.19
Age: Under 35	-0.05	-0.12	-0.05	-0.12
Age: Over 65	-0.04	-0.12	-0.18	-0.52
Constant	0.40	0.86	0.75	1.55
Correctly Predicted	71%		71%	
N	270		259	

Once the campaign reached the general election phase, though, the results support a different conclusion. Table 4 shows the binary logit regression results for the first and second tracking poll; a positive and significant coefficient should be interpreted here as an increase in the probability of a vote for Oller. These results support **H2a**: ideology matters in the general election. Oller gets the Tea Party voters and the voters who found him more fiscally conservative; he does not

get the Democrats. Furthermore, the data also supports **H2b**: voters avoid unknowns. If the voter did not give a favorability ranking for Bigelow, the voter tended to pick Oller; if the voter did not give a ranking for Oller, the voter tended to pick Bigelow. Figures 2 and 3 display the first differences for these models.

**Figure 2: Tracking Poll (End of Sept.): Bigelow or Oller?** This figure shows the difference in probability of choosing Oller given a change in the variable from 0 to 1 for an otherwise median individual. (N=270).

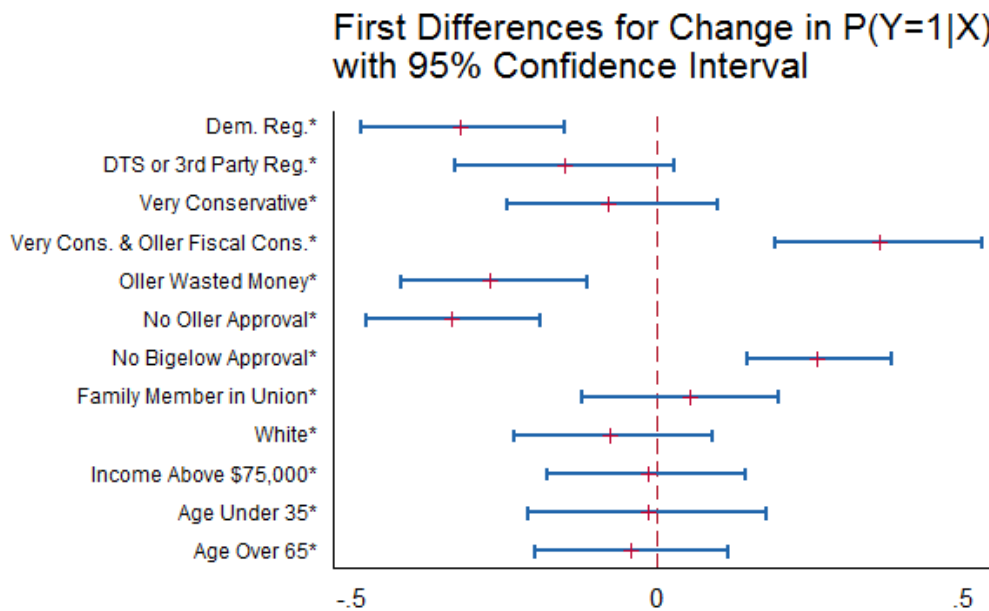


Due to slight differences in the first and second tracking poll questions, each model in Table 4 tests the ideology hypothesis slightly differently. The first survey included an approval question about the Tea Party. While voters may have differing conceptions about what it means to be “very conservative,” Tea Party approval measures something closer to the brand of politics Oller practiced.<sup>28</sup>

<sup>28</sup> For example, some individuals who supported George W. Bush would consider themselves “very conservative;” this might capture social and foreign policy preferences not necessarily aligned with the dimension of greatest importance in this race: issues about tax and compromise. Many Tea Party supporters view President Bush as too fiscally liberal: “Today Obama is the central villain in tea-party rhetoric, and Bush is hardly ever mentioned. Yet the rebellion against

Individuals who favored the Tea Party strongly supported Oller in the first tracking poll. The second survey did not include a Tea Party measurement. It did, though, allow voters to identify which candidate they thought the phrase “is a fiscal conservative” better described Oller or Bigelow. The “very conservative” voters who thought Oller was more fiscally conservative tended to support Oller. Individuals who thought Oller wasted tax dollars, though, tended to support Bigelow.

**Figure 3: Tracking Poll (End of Oct.): Bigelow or Oller?** This figure shows the difference in probability of choosing Oller given a change in the variable from 0 to 1 for an otherwise median individual. (N=259).



At least in the choice between Bigelow and Oller, the general election phase seems to have the expected ideological dynamics. Democrats who have a preference, they tend to support Bigelow. Conservatives for whom the tax dimension might be particularly salient tend to support Oller. Information plays its expected roll as well; voters are less likely to support candidates they seem to know little about; on the other hand, given rough equality in candidate resources,

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Big Government that the tea party has come to embody really began more than a decade ago with a growing sense of betrayal among conservatives over Bush’s runaway-spending habits” (Hirsh 2013).

that should wash out. These results are generally consistent with the basic ideas of spatial modeling.

**Table 5: Who Remains Undecided?** Row percentages for candidate preference, including “undecided” as an alternative, for the tracking polls. The first poll included two preference questions, one pre-information and one post-information. This table uses the post-information preferences.

Poll	Party	Undecided	Bigelow	Oller
Poll 1 (Post)	Dem. Reg.	38.0	41.1	20.9
	Other Reg.	35.5	29.0	35.5
	Rep. Reg.	27.0	30.3	42.7
Poll 2	Dem. Reg.	52.3	35.2	12.5
	Other Reg.	35.1	41.6	23.4
	Rep. Reg.	24.1	35.9	40.0

The summary in Table 5 helps to solve a puzzle: if Oller could only manage 34 percent of the primary vote, and voters in the general behaved in-line with their spatial expectations, how did Bigelow not win by a larger margin than 52-48? Since these surveys targeted high-propensity voters, and do not come with ‘validated-vote’ data, it is difficult to know how many of the undecided voters skipped the race. Nagler (2013) finds that many voters left without a choice in their own party did not participate. Assuming none participated is one extreme option; assigning them all to their logical choice would place another bound. The percentages in Table 5, and the analysis reported in Table 4, show the main tension in the top-two: the moderate in a same-party runoff *will* benefit from a spatial position advantage; *how much* benefit the moderate receives depends on the extent the minority chooses to abstain from participation.

## Discussion

From a theoretical perspective, the most troubling aspects of the top-two should occur at the first stage. As Riker writes, “simple majority decisions on binary alternatives requires some social embodiment of Procrustes, who chopped off the legs of his guests to fit them into the bed in his inn... [binary choice] is not democratic because its surrounding institutions must be unfair” (1982, 65). The primary chops off the candidates to fit them into a two-candidate final round. Riker’s observation, building on Arrow (1951) and others, is that the first round

must then be unfair. Odd results certainly can still happen – and do – with the top-two primary in the first stage.<sup>29</sup>

Nevertheless, the top-two would have no hope of increasing moderation if the same-party runoffs did not benefit moderate candidates in the second stage. Despite Downs' (1957) reasoning, there are plenty of reasons why that fundamental result might not hold in these types of legislative elections. Voters might not have enough information to make informed choices (as Ahler, Citrin, and Lenz 2014 find). Opposite partisans may abstain from voting in same-party races (as Nagler 2013 finds), shifting the median *participating* voter away from the median opinion in the district. Also candidates may be disinclined to represent themselves as, or enter as, moderates (in the spirit of Kousser, Phillips, and Shor 2014), potentially leaving voters with a choice between two nearly identical candidates. In this context, affirming that the basic principles of the median voter theorem operate actually helps to establish that the top-two might achieve some of what its supporters hoped.

Of course, in the long run, it also matters if Bigelow votes moderately. In the earliest available analysis of the roll call voting data, Bigelow votes roughly in the center of the Republicans in the state legislature (Grose, Sinclair, and Yoshinaka 2014). Given the conservative nature of the district, and his opponent, it seems that Bigelow's election probably did generate slightly more moderate voting behavior in the legislature than would have occurred otherwise (under the old primary).

Does this mean the top-two will fulfill all the hopes of the reformers? No, not necessarily. The California Republican Party did not oppose Bigelow with its full strength; while the race contains many elements of an effective case study, it is not a perfect example.<sup>30</sup> As Masket and Shor (2011) point out, parties eventually managed to polarize the Nebraska nonpartisan legislature; given the existing partisanship in the California legislature, it may be difficult to shift it to the center, or shift it very much. Additionally, while Bigelow is *more* moderate than Oller would likely have been, Bigelow is not exactly "a moderate." The middle of the few Republicans remaining in the California legislature is still very conservative.

The absence of mass strategic voting in the first round should interest scholars in continuing this research. Why did more voters not abandon the

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<sup>29</sup> The most serious example of this happened in CD31, a district that should likely have gone to a Democrat in 2012. Instead, several Democratic candidates split the vote – and two Republicans did as well. As a consequence, in a Democratic-leaning district, voters could choose between Republicans Gary Miller and Bob Dutton on election day in November. Miller, who won the seat, was not likely the Condorcet winner (if one even did exist).

<sup>30</sup> Unusually, Bigelow acquired outside expenditures on his behalf even though he would have little opportunity to cast pivotal votes in the legislature. These dynamics may be more commonplace in elections for individuals in the legislative majority.



candidates of the Democratic Party? There are a number of alternatives, not all of which are possible to test with this particular dataset. In particular, in contrast to settings with more established strategic voting (like Britain), the California election takes place with a long time-delay between the June primary and the November general election. In those several months, the frontrunner has many opportunities to slip up. Could it be that voters also apply the reasoning behind the “rational turkey” hypothesis (Banks and Kiewiet 1989) to these lopsided districts? If they most care about building majorities in the legislature, rather than the ideology of their particular legislator, it may be reasonable to desire to include a candidate of your own party – no matter how hopeless it seems. That candidate may only be one (admittedly ex-ante unlikely) arms-trafficking arrest away from victory.<sup>31</sup>

Nevertheless, these results do help to highlight how the top-two can promote moderation. First, it helps if the race happens in a lopsided district, with enough voters on the majority-party side to distribute between their candidates to put both in the top-two. Second, it helps if the weaker-party divides in the primary, giving the strong-party moderate a lower threshold to make the general election. Third, it helps if the strong-party moderate has other tools available beyond ideology: effective attacks along some additional dimension. Finally, once the moderate survives to the general election, then the moderate can obtain the benefits of a more central spatial position. This fact pattern will happen in other districts. These data suggest that, if the top-two really does achieve its potential, it will be from voters in a weak party picking the “least bad” of two candidates from the other party in the general election once Procrustes has already completed his work.

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<sup>31</sup> California State Senator Yee was recently arrested for trafficking in illegal arms several months before the primary for Secretary of State. Had this occurred *after* the primary, but *before* the general election, and had he made the top-two, his opponent would likely win the election easily. While the precise circumstances may be unlikely to repeat themselves, the near-endless capacity for human folly, and the fragility of human life, makes no election a completely safe bet (Richman et al. 2014).

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## Appendix 1: Pre-Primary Supplemental Data

Table A1-1, below, contains the full descriptive statistics uses in the pre-primary model. More Democrats support Bigelow than Oller, as do more “Other” registrants. Analytically, though, this is problematic to distinguish from a generic preference for Bigelow since more Republicans (by 2-1 margin) also support Bigelow on the “third ballot” of the pre-primary survey. Oller does hold on to a larger share of the “very conservative” vote; this is not enough (or the sample size is too small) to distinguish as an effect in the models.

**Table A1-1: “Third Ballot” Descriptive Statistics.** This figure shows row percentages for the vote choice of individuals with characteristics included in the pre-primary models in the main section of the paper.

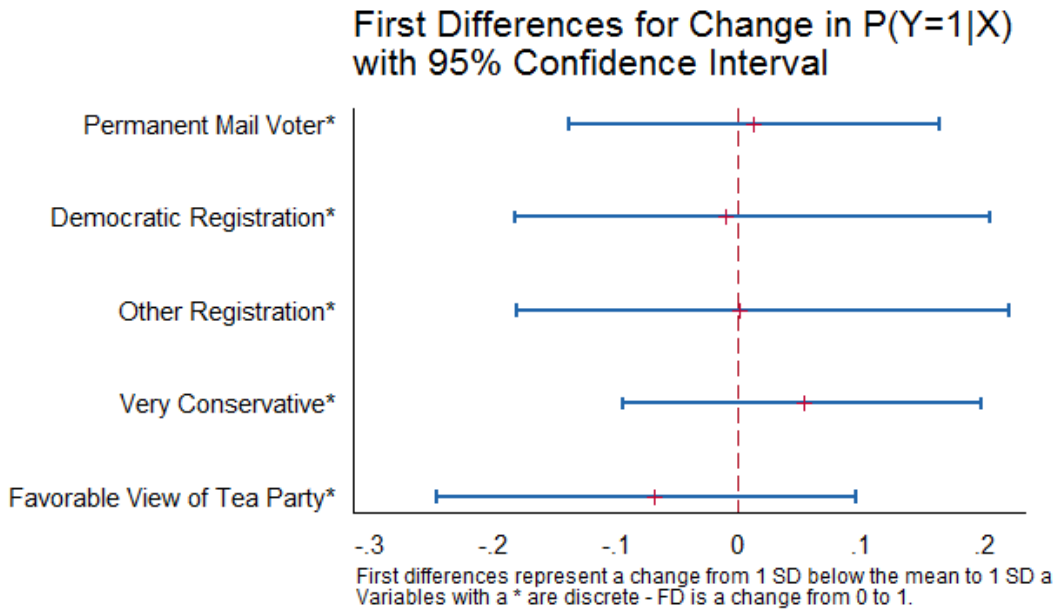
Third Ballot	Bigelow	Oller	Other Cand.	DK / Undec.	N
Baseline Support %	29.8	14.8	32.8	22.8	400
Perm. Absentee Voter	27.1	14.2	34.6	24.2	240
Dem. Reg.	13.2	6.3	58.3	22.2	144
Other Reg.	26.7	13.3	33.3	26.7	60
Rep. Reg.	42.9	21.4	13.8	21.9	196
Not Very Conserv.	20.8	9.4	44.9	24.9	245
Very Conservative	43.9	23.2	13.6	19.4	155
Favors Tea Party	48.1	22.2	14.6	15.2	158
Oller, Voted Bond	39.7	10.3	32.2	17.8	214
Oller, Raised Fees	37.3	9.1	31.6	22.0	209
Oller, Lacked Ethics	33.3	4.1	42.1	20.5	171
Oller, Restr. Order	33.8	4.8	39.6	21.7	207
Oller, Per Diem	36.1	7.4	34.9	21.7	258
Oller, Career Pol.	39.9	3.7	35.0	21.5	163
Oller, Pension Vote	37.7	11.0	30.5	20.8	236
F.B., Rail Flip-Flop	20.3	10.2	46.9	22.7	128
Neg F.B., Sales Tax	28.0	9.3	41.0	21.7	161
Neg F.B., Inexperience	25.3	8.4	44.2	22.1	95
Neg F.B., Fee Increase	26.1	9.2	40.3	24.4	119

Alvarez and Sinclair (2014) obtain slightly different results for the pre-primary phase of the campaign than those presented in this paper. They find (i) that voters



did perceive Bigelow as more moderate than Oller and (ii) that voters are less likely to support ideologically distant candidates (e.g., ideology matters). Removing the specific attack variables and using the “first ballot” preferences allows for a cleaner ideology test in this data. Does it support **H1b**? It does not, as shown in Figure A1-1, below.<sup>32</sup>

**Figure A1-1: Binary Logit Model for the Choice Between Bigelow (=0) and Oller (=1) with Restricted Independent Variables.** Unlike the main model, this model does not use any of the information about the negative attacks on Bigelow or Oller. It uses the “first ballot” before respondents hear that information. No variables predict why voters pick one over the other. For this model, N = 178.



What is the explanation for the divergent results? The key most likely lies with the different timing and purpose of the surveys. The Alvarez and Sinclair (2014) survey took place right before the election, with a much larger sample size (1000+), and was designed to test these theories with a multinomial probit model.

<sup>32</sup> Neither does repeating this exercise using the last ballot, the ballot after all the attacks. Furthermore, *that* model is actually nested in the main model. A likelihood ratio test indicates that the main model does significantly better fit the data.

This survey, from the campaign, had to take place early enough for the campaign to use it to make strategic decisions.

The Bigelow pre-primary data has several more severe analytical drawbacks. Since they do administer the survey early in the campaign season, and this is a low salience race, only 178/400 voters had a preference between Bigelow and Oller. The ideology measures (approval of the tea party, the standard ideology scale) may not work well in this setting in which many voters are quite conservative. Alvarez and Sinclair (2014) use more sophisticated rescaling techniques to place both candidates and voters into a common space, which this survey data does not permit.

The Bigelow campaign data in general draws strength from its repetition and its insight into their internal processes: three snapshots of the same race at different points in time asking questions the campaign believed relevant. The detailed information about the types of people who found each attack effective, and their vote choices, helps to explain why the campaign made its strategic choices – detailed district and candidate specific information missing from surveys designed for use and comparisons across multiple districts. Importantly, also, despite its weaknesses the pre-primary Bigelow data helps to strongly emphasize that Democrats tended to stay out of the Bigelow-Oller primary race.

## Appendix 2: Pre-General Election, Sequential Logits & Alternative Models

Even though the general election contained only two candidates, it still contained three choices (Lacy and Burden 1999): Bigelow, Oller, or Neither (“undecided” or “not voting in this race”). Again, given the data limitations, this data can best be analyzed using a sequential logit model: voters first choose to participate or not and then choose between the two candidates. The estimates at the second level, the choice between the candidates, are identical to those from a logit model that just drops the unsure or the unwilling, the analysis in this section focuses on the binary choice.<sup>33</sup> In the first tracking poll, 205 of 400 voters had a preference between the Republicans; Bigelow slightly trailed Oller, 48 to 52 percent. After some additional information, 270 had a preference, bringing Bigelow even with Oller at 50 percent each. In the second, later, tracking poll 259 voters had a preference for one of the two Republican candidates; Bigelow led Oller 57 to 43 percent.

**Table A2-1: Sequential Logit Model, General Election 1<sup>st</sup> Tracking Poll.** In this model, the first level 1=picked between Republicans; at the second level 1=support for Oller. Variables marked \* are significant at 0.10; variables marked \*\* are significant at 0.05. N=400.

Variable	Republicans v. Undecided		Oller v. Bigelow	
	Coef.	Z	Coef.	Z
Dem. Registration	-0.43*	-1.66	-0.74**	-2.05
Other Registration	-1.18**	-4.14	-0.59	-1.30
Favor Tea Party	0.20	0.84	-0.18	-0.54
Very Conservative	0.20	0.74	0.28	0.80
Union Family	-0.12	-0.47	-0.44	-1.19
White	-0.15	-0.59	-0.59	-1.59
Income Above \$75,000	0.06	0.24	-0.26	-0.79
Age: Under 35	-0.25	-0.83	0.20	0.44
Age: Over 65	0.23	0.95	-0.11	-0.32
Constant	0.41	1.23	1.04	2.16

The specification in Table A2-1 does not use the Bigelow and Oller favorability variables (included in the main text of the paper). Those are highly correlated at level 1 with political party. This model is broadly consistent with the overall story: at the first level, Democrats and Other registrants are more

<sup>33</sup> Unsurprisingly, and consistent with Nagler’s (2013) findings, partisanship matters for passing through the first transition: Democrats are less likely to have a preference.

likely to remain undecided; at the second level, Democrats are less likely to go for Oller than they are for Bigelow. Note, though, that the Tea Party variable drifts out of significance; this remains a low-information election with a small-N survey: the randomness generated by different information can overcome all but the largest effects.

Furthermore, the specification in Table A2-1 uses the *initial* preference question from the 1<sup>st</sup> tracking poll. The first tracking poll included two questions, one before and one after some additional information. The binary logit included in the paper uses the post-information response. This pairs well with the single question used in the second tracking poll because the information tested in this poll is precisely what the campaigns went out and told voters over the next few weeks.

**Table A2-2: Sequential Logit Model, General Election 2<sup>nd</sup> Tracking Poll.** In this model, the first level 1=picked between Republicans; at the second level 1=support for Oller. Variables marked \* are significant at 0.10; variables marked \*\* are significant at 0.05. N=400.

Variable	Republicans v. Undecided		Oller v. Bigelow	
	Coef.	Z	Coef.	Z
Dem. Registration	-1.59**	-4.92	-1.44**	-3.55
Other Registration	-0.78**	-2.10	-0.54	-1.38
Very Conservative	0.37	1.09	0.12	0.37
Oller Wasted Tax Dollars	1.05**	2.67	-1.04**	-2.88
No Favor. Rank for Oller	-0.89**	-3.21	-1.64**	-4.80
No Favor. Rank for Bigelow	-2.54**	-7.83	1.51**	4.70
Union Family	0.19	0.60	0.30	0.81
White	-0.18	-0.50	-0.30	-0.76
Income Above \$75,000	0.13	0.42	-0.15	-0.46
Age: Under 35	0.24	0.61	-0.06	-0.15
Age: Over 65	0.47	1.48	-0.02	-0.07
Constant	3.08**	5.96	0.65	1.34

Table A2-2 generates slightly different effects at the second, Bigelow-v-Oller, level than the logit in the main section of the paper. The “Very Conservative interacted with Oller Fiscally Conservative” variable is not identified at the first level of the model (everyone in that category picked between the Republican candidates). Presenting this model serves two purposes: one, it highlights that again Democrats are more likely not to have an opinion (and hence

probably less likely to vote, as noted in Nagler 2013); two, it demonstrates the added empirical value of the interaction to the second level of the model. In this more limited model, the tax dimension is only modeled with the significant “Oller wasted tax dollars” variable.

### Appendix 3: Translating Survey Data into Action

The survey materials did end up directly informing the campaign's message choices. Figure A3-1 captures a view of the screen at 0:24 in an add Bigelow's campaign designed to use against Oller. It prominently features the (measured) most effective attack from the pre-primary survey; the add asks: "\$200,000, just to drive to work?"

**Figure A3-1: Bigelow Campaign Advertisement (Screen capture, 0:24)**

