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Has The Top Two Primary Elected More Moderates?

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Abstract

The Top Two primary is one of the most interesting and closely-watched political reforms in the United States in recent years. This radically open primary system removes much of the formal role for parties in the primary election and even allows for two candidates of the same party to face each other in the fall. An important goal of this reform has been to elect more moderate candidates to public office. In this paper, we leverage the adoption of the Top Two in California and Washington to explore the reform's effects on legislator behavior. We find an inconsistent effect since the reform was adopted in these two states. The evidence of post-reform moderation is stronger in California than in Washington, but a substantial portion of this stronger effect stems from an equally radical contemporaneous policy change—district lines drawn by an independent redistricting commission. The results validate some claims made by reformers, but question others.

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EXECUTIVE SUMMARY

The Top Two primary is one of the most interesting and closely-watched political reforms in the United States of recent years. This radically open primary system removes much of the formal role for parties in the primary election and even allows for two candidates of the same party to face each other in the fall. California and Washington have recently adopted the reform, and it is being considered in many other states as well.

Supporters typically see it as a way of weakening parties and party activists in favor of more moderate candidates. This paper tests that assumption using the most rigorous and systematic methods available. Have more moderates been elected to the legislatures of California and Washington in the wake of this reform?

- We find no clear evidence of a moderating effect for Republicans or Democrats in Washington state, or for Republicans in California.
- Democrats in California *have* become more moderate since the Top Two reform was implemented. But the 2011 redistricting explains close to half this change.
- The 2011 redistricting in California was conducted by an independent commission, rather than the state legislature, so this reform may account for about as much of the moderation among California Democrats as the Top Two.
- California's Democrats have moderated the most when viewed in context: from a very liberal starting point they have become slightly more conservative, while Democrats in other states have become much more liberal over the same period of time.

Our results are a mixed bag for reform. The Top Two's effect is inconsistent and indirectly measured, so more research is needed to firmly establish its role. The redistricting effect, while modest, is nonetheless real and more directly measured, and so seems a stronger candidate for promoting moderation in other states.

One of the most interesting and closely-watched political reforms of recent years is the so-called Top Two primary system (hereafter, “Top Two”). In contrast to a traditional closed primary election, where only voters registered with a party may participate in its nomination contests, the Top Two offers the same ballot to all voters regardless of party, and lets them choose any candidate they like for each office. The two candidates receiving the most votes--also regardless of party--then advance to the general election, raising the novel prospect of intra-party contests in the fall.

The Top Two is a specific form of open primary. Among other objectives, open primaries strive to limit the influence of each party’s base voters by making the primary electorate more closely resemble the general electorate. Among open primaries, the Top Two takes the idea further than most. It turns the primary from its current form—an opportunity for parties to choose their standard bearers—into something akin to a first-stage general election. It then carries this non-partisan logic to the fall election in the form of same-party contests. In so doing, it represents a particularly pure example of the open primary ideal.

In recent years, California and Washington have adopted the Top Two system, raising the reform’s profile and encouraging other states to consider similar changes to their systems. In this paper, we use the policy changes in these two states for analytical leverage to explore the effect of the Top Two on legislator behavior. Does the system elect more moderate legislators to public office, and might it be a useful tool for counteracting the trend toward greater partisan polarization (Barber and McCarty 2015; Poole and Rosenthal 1997)?

Our examination suggests that the Top Two has had a modest and somewhat inconsistent effect on representation since it was adopted in these two states. The evidence of post-reform moderation is stronger in California than in Washington (and even then only for Democrats), but this moderation is substantially due to a contemporaneous policy change—radically new district lines drawn by an independent redistricting commission—rather than from the Top Two itself. However, the Top Two might have helped to arrest growing liberalism among California Democrats, even as many other states have elected Democrats that are increasingly liberal. While it is still early in the policy experiment, at this point the Top Two appears to be of mixed success as a tool for mitigating polarization. At the same time, there might be a somewhat stronger case for redistricting reform.

Background

The growing political divide between the two major American parties has prompted increasing concern that the public is losing control of its representative democracy to extremists with agendas far removed from the needs of the median voter. Many blame at least part of this polarization on America's unusual system of popular primaries (Vocke 2010), which leave most decisions about party nominees to voters. Proponents of this argument point to the dismal turnout rates in primary elections and emphasize that primary voters are far more partisan and ideologically extreme than the ones who vote in general elections. When these voters are favored by primary election rules, they end up choosing like-minded candidates to represent the parties. This leaves more moderate

general election voters with a suboptimal choice between two extreme partisans, when they might have preferred a centrist.

If primaries are an important cause of polarization, the most commonly proposed reform has been to open primaries to participation by voters outside the party faithful. With open primaries, the median of the primary electorate moves closer to the median of the general electorate, making it less likely that the preferences of each party's base voters will determine the final outcome. But open primaries can come in many types, and it is not clear that we should expect all types to be equally effective at promoting the goal of greater moderation in public office. In fact, most open primaries either place limits on which voters can cross party lines in the primary, force voters to choose one party's primary and vote only for candidates of that party for every office, or both. It is easy to imagine that this would significantly discourage crossover voting, and so mitigate any moderating effect.

The Top Two primary does not suffer from these limitations. Voters can choose among all candidates for each office, just as they would in a general election, and the top two vote-getting candidates advance to the fall. This makes crossover voting no more difficult than identifying one's favorite candidate for each office and voting accordingly. Moreover, the Top Two goes farther than other such "nonpartisan" primary reforms by advancing even two candidates of the same party if they have received the most votes. When these candidates represent different factions of the party, it offers a choice to voters of the minority party in a heavily partisan district who might otherwise balk at crossing party lines. This makes the Top Two a much more aggressive effort at promoting moderation, and one that is perhaps more likely to be successful.

Until recently, the limited use of the Top Two has made it difficult to evaluate as a potential reform. Prior to 2008, only Louisiana and Nebraska used a version of the system for legislative or congressional elections. Both states' systems predate the availability of broad, national measures of state legislator ideology that would provide the number of cases and temporal variation necessary for more robust causal estimates. Furthermore, neither system is precisely what reformers have in mind when they discuss the Top Two primary today. Louisiana does not hold a follow-up election if one candidate receives more than 50 percent of the vote, which means for legal reasons the state must hold its primary election on the same day that all other states are holding their the November general election. Nebraska, for its part, does not include party labels on the ballot, thus removing a key partisan signal and putting the Nebraska system even farther into the nonpartisan category. Neither is an approach that most other states would likely be willing to take.

But in recent years, both California and Washington have adopted the Top Two as envisioned by reformers. California implemented the Top Two for the first time in 2012 and Washington adopted it in 2008, giving social scientists two and four elections, respectively, to observe outcomes under the new system. Each version of the Top Two always holds a runoff election in the fall and includes party labels on the ballot.¹ For the sake of understanding their effect on ideology, these reforms could not have come at a better time. The last several decades of research has produced tremendous advances in the measurement of ideology and the broad availability of such measures. Combined with the

¹ For legal reasons the labels are phrased as party "preferences." The systems also differ in small ways, such as the fact that California requires candidates who do not prefer a qualified party to declare "no party preference," while Washington allows candidates to list any party preference they like. But the two systems are generally quite similar because both were designed to address constitutional issues raised by the U.S. Supreme Court in *California Democratic Party v Jones* (530 U.S. 567).

policy change in both states, it offers the promise of identifying the effects of the Top Two more robustly than would have been possible before.

Nonetheless, there are still reasons why neither state is a pure test of the Top Two's effects. Washington used a very similar system, the blanket primary, for almost 70 years before it was struck down by the U.S. Supreme Court. After this change, the state used a relatively open system that allowed all voters to choose a party primary each election, albeit with the constraint that they then vote only for candidates of that party. The state used this system for just two election years—2004 and 2006—before returning to the Top Two. In addition, the Washington legislature has no term limits of any kind, which means turnover each election year is low. If we imagine that incumbents would generally find it easier to resist the influence of nomination system change, then the absence of term limits ought to dampen the magnitude of any possible effects. Put these facts together, and one could reasonably argue that Washington transitioned from a nonpartisan primary system to only a trivial degree (Donovan 2012).

The same could not be said for California. The state abandoned its blanket primary after 2000, and five election cycles intervened before the state switched to the Top Two. In the interim, it used a relatively restrictive form of Washington's system, one that only allowed independents to choose a party primary. And with some of the most restrictive term limits in the nation, California has had ample turnover during this period of time. Indeed, over 80 percent of the membership of the lower house of California's legislature has been newly elected since the Top Two went into effect. The limitations of Washington as a case study therefore do not apply to California.

But California has analytical limitations of its own. The state has been aggressively experimenting with a range of reforms to its existing system, many coming into use at the same time or within a few years of each other. Coincident with the Top Two primary in 2012, the state also began using new congressional and state legislative districts that were drawn by an independent redistricting commission instead of the legislature. The legislators elected that year and every year after have also enjoyed longer term limits from a separate initiative. These new limits arguably bolster incumbency and help each member develop an independent support coalition. And just prior to the Top Two in 2011, the threshold for passing a state budget dropped from two-thirds to a simple majority. In the midst of all these changes, it is important to think carefully about identifying the specific effect of the Top Two, and to distinguish it from the other causes that might reasonably receive credit for any changes.

Existing Research

Despite the compelling logic of a link between open primaries and moderation, the findings from the research literature have been mixed. There is some formal modeling that suggests the distinct politics of primary electorates is likely to have some effect on representation (Aldrich 1983; Aranson and Ordeshook 1972; Cadigan and Janeba 2002; Owen and Grofman 2006). But more complex models that allow for races with more than two candidates—a type common in primary elections—produce inconsistent expectations of the winner’s ideology and are sensitive to the number and characteristics of the candidates who decide to run (Chen and Yang 2002; Cooper and Munger 2000; Cox 1987; Oak 2006).

There is also some doubt about how biased and influential the primary electorate is when compared with the general electorate. Crossover voting in open primaries may be fairly limited, and the conditions necessary for it to be decisive (sufficient crossover voting in a race that is otherwise close) may be rare (Ahler et al. 2013; Alvarez and Nagler 2002; Salvanto and Wattenberg 2002). It is not even clear that primary electorates are able to discriminate between extremists and moderates in the primary stage (Ahler et al. 2013), though signs of such discrimination have been found in general elections (Hall 2015).

Ultimately, however, the prospect that an open primary system will produce more moderate elected officials *on average* does not logically depend on the prevalence of crossover voting, the ability of voters to discern moderates from extremists, or even a general voter preference for moderate candidates. It depends only on the willingness of moderate candidates to run for office and their ability to win votes once they do so. If moderate candidates perceive greater opportunities under an open primary system and are more likely to launch a candidacy in any given contest, then at least some of them are likely to be successful. Moreover, candidates will exploit a system to its fullest in pursuit of public office. Some experimental research has measured this strategic behavior, showing that candidates in Top Two systems reach out more aggressively to potential crossover support (Grose 2015). In the same vein, even if the electorate is entirely innocent of ideological distinctions between the candidates, moderate candidates with enough money and organizational support might draw votes through positive visibility alone, absent any ideological cues at all.

Perhaps it is not surprising, then, that the evidence for an effect of primaries on moderation *in office* is more mixed than the research focused on the electorate would

suggest. The broadest studies to date of the effect of primaries on representation have been consistent with the null effects from election research: neither the competitiveness of the primary election (Brady et al. 2007; Pearson and Lawless 2008), the extremeness of the primary electorate (Hirano et al. 2010), nor most critically, the type of primary system (McGhee et al. 2014; Kanthak and Morton 2001), seems to have much effect on the ideology of those who are ultimately elected. Yet more localized effects have been found in certain cases, especially California. Virtually every study that has looked at the effect of the state’s “blanket” primary in 1998 and 2000 has found a small but notable increase in moderation during that time (Alvarez and Sinclair 2012; Bullock and Clinton 2011; Gerber 2002; Gerber and Morton 1998; McGhee 2010; McGhee et al. 2014). There is also some evidence that the state’s “crossfiling” system from the first half of the 20th century had a similar moderating effect (Masket 2007). This raises the prospect that there is something unusual about California that makes it especially fertile ground for primary system reforms to produce the desired changes (McGhee et al. 2014).

Consistent with this idea, evidence from California’s most recent experiment with the Top Two primary has suggested some moderating effect, especially among Democrats in the legislature (Grose 2014).² Anecdotally, there is a widespread sense that the legislature’s Democratic caucus is now more business-friendly and that the Top Two primary is part of the explanation (Cohn 2014; Walters 2014). Combined with the logic for a stronger Top Two effect mentioned above, it offers reason to believe that the reform has had the desired effect in this particular case. At the same time, the matter is far from settled, even for California’s most recent experiment. At least one study concludes that

² Case studies of same-party contests on the Republican side as well that have suggested similar results (Sinclair 2015).

California's members of Congress elected under the Top Two have actually become more extreme relative to the districts they represent (Kousser et al. 2015).

In sum, the research findings are somewhat in conflict. Given the intense interest in the more recent applications of the Top Two, especially in California, it is important to resolve this discrepancy if possible. In what follows, we take a more careful look at the effect of the Top Two in both California and Washington. Has the reform had the desired effect of increasing moderation, independent of other changes over time, in either of these cases?

Data

The goal of our analysis is ultimately to leverage the policy change in Washington and California, as well as the experience of other states not subject to the same policy intervention, to help isolate the causal effect of the Top Two reform. To ensure that we do not confuse the effect of the Top Two with the effect of the similar blanket primary, we begin our study period in 2004, the first year in which no state used the blanket primary for its nominations.

To compare ideology across states and time while also accounting for other reforms, we rely on two different measures of ideology. Our primary measure is the ideal points developed by Boris Shor and Nolan McCarty (Shor and McCarty 2011). Their method first derives institution-specific ideal points from roll calls cast by all incumbents in each one. It then derives common space ideal points using the National Political Awareness Test (NPAT), a common candidate survey sent to all candidates for state or national office across the country. Using politicians who both served in office and responded to the

survey, the method then projects the roll-call based ideal points of all legislators into a common space created by responses to the NPAT. This provides a single measure of ideology that is comparable over the entire period we study here, as well as across all the institutions—both state legislatures and U.S. House of Representatives—included in the analysis.

As noted in previous applications of this metric, Shor-McCarty ideal points are not dynamic: they provide a single ideal point for each politician for the entire study period. Thus, we cannot explore conversion or adaptation effects, where a policy change alters the behavior of sitting elected officials. Instead, we must focus on selection effects, where the new primary system encourages a different sort of candidate to run and helps these candidates win office. While this constrains the analysis to a certain extent, the impact is likely to be minimal. First, incumbent officeholders are arguably the least likely to change their behavior (Poole 2007), so using only newly-elected officeholders will, if anything, bias our results toward finding a significant effect for the Top Two. Second, one might be concerned that the loss of incumbent officeholders will limit the power of the analysis by removing a large portion of the data. But the Washington state legislature has been operating under the Top Two for four election cycles, offering enough cases for analysis. California, for its part, has seen extraordinary levels of turnover in the two election cycles since the reform was implemented, with well over half the legislature newly elected under the system.

We use adjusted Chamber of Commerce scores (Groseclose et al. 1999) to overcome some of these limitations. They provide the temporal comparability within each state of the Shor/McCarty ideal points, and give us leverage on the question of term limits effects

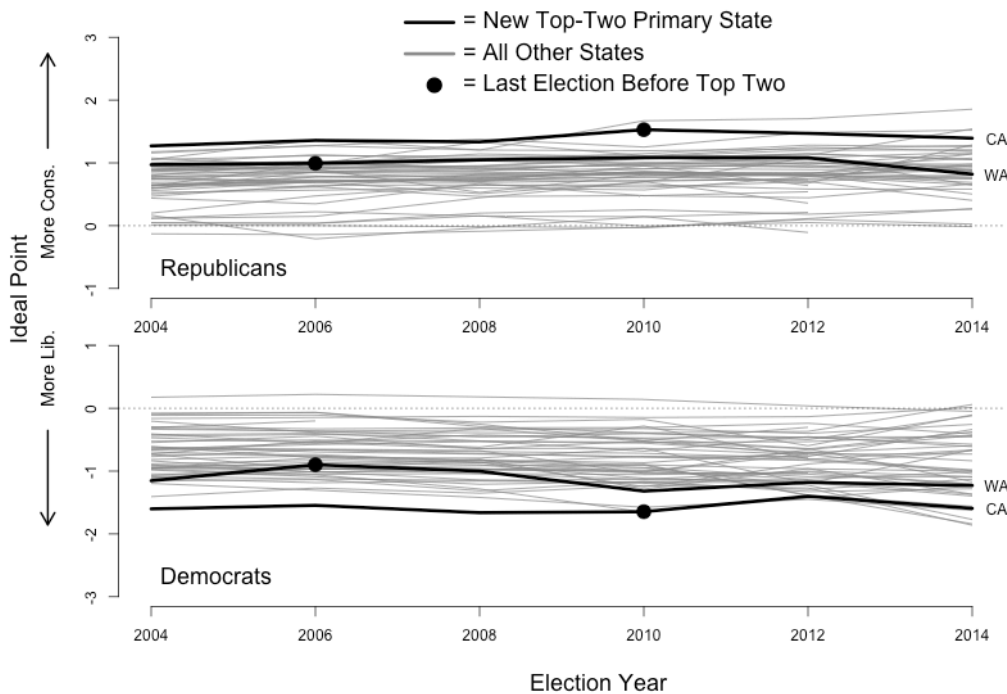
by allowing us to say something about continuing legislators. They also offer a specific policy domain to test for effects, instead of the broad range of issues in the Shor/McCarty ideal points. These advantages come at a significant cost in causal leverage, because we cannot compare states to each other on a single ideological dimension. Nonetheless, the adjusted scores will help us piece together an account of these reforms through a constellation of evidence.

Because we use ideal points derived from broad questions about multiple policy areas and large numbers of roll call votes, our goal is to identify changes in general ideological dispositions. These broad tendencies do not necessarily predict how legislators will vote on specific bills. Even the Chamber of Commerce scores, though more narrow in focus, concern broad dispositions and not concrete decisions about specific policy issues or bills.

California and Washington in Isolation

Figure 1 plots the average Shor/McCarty ideal point of the newly-elected legislators in each state over time. California and Washington, the two states that adopted the Top Two during this study period, are highlighted, and the last election each conducted before using the Top Two is identified. By convention, the ideal points are coded so that more positive values are more conservative. Thus, if the Top Two produces more moderate representation, the average Republican ideal point should be lower (more liberal) after the change, while the average Democratic ideal point should be higher (more conservative). There are some signs of these effects in California, where Republicans reached their peak conservatism just prior to implementation of the Top Two, and where the first Democrats

Figure 1. Mean ideology over time in top two states versus all others



elected under the Top Two were noticeably more conservative. At the same time, there is little sign of any change in Washington: the average ideal point after implementation of the Top Two is about the same for Republicans, and perhaps somewhat more liberal for Democrats.

These time trends are only the start of the analysis for each state. We must take seriously the possibility that some other change coincident with the Top Two either hampers or accounts for the Top Two's effect. We should pay special attention to two alternative explanations in California: a new independent redistricting commission whose radically redrawn congressional and legislative lines were first used in 2012; and longer term limits for state legislators that applied only to those who were newly-elected in 2012 or later.

Among these reforms, redistricting operates through a different mechanism than the others. Both the Top Two and the extension of term limits purport to alter the relationship between a district's partisanship and the people elected to represent it. For instance, the Top Two aims to shift the median voter in the primary election and raises the prospect of intra-party competition in the general election, potentially creating different incentives for districts of all partisan complexions. Likewise, longer term limits might make all new legislators more moderate by giving them the time horizon necessary to build a supporting coalition that is independent from the party. Redistricting reform, by contrast, seeks to change the distribution of the voters across districts, making for a larger number of competitive districts in the process. To produce more moderation, candidates elected under the new districts need behave no differently from those elected to represent districts of similar partisanship in the past.

This offers some analytical leverage for identifying the independent effect of redistricting. Conditional on district partisanship, a pure redistricting effect produces no ideological change: it is felt *only* through changes in the distribution of district partisanship. Thus, to the extent that a moderating effect remains independent of changes in district composition, we can be more confident that it is a Top Two effect (though it might also be a term limits effect, a point we return to later).

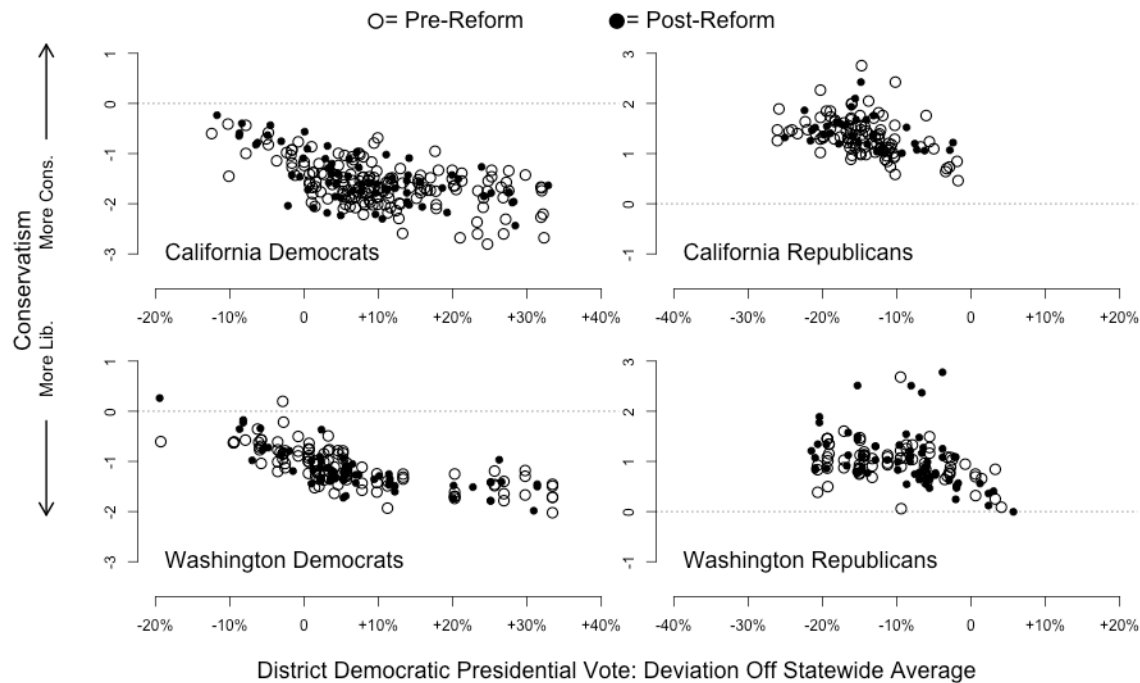
Of the two states to have adopted the Top Two, redistricting produced a much larger compositional change in California than in Washington. The California districts that elected new representatives under the Top Two were notably more competitive than the ones before, especially for Democrats and especially in 2012. Before the Top Two, California's Democrats were elected from districts that were on average 10.5 percent more Democratic

than the statewide Democratic presidential vote share. Under the Top Two, they have been elected from less Democratic districts that average 7.2 percent above the statewide mean. Effectively all of this change came in 2012, when the average new Democrat was elected from a district that was only 5.7 percent more Democratic than the rest of the state; by contrast, the 2014 class of new Democrats averaged 10.8 percent above the rest of the state, very much in line with the pre-reform status quo.

Furthermore, there are no signs of any similar change for California Republicans or new legislators from either party in Washington. The districts electing Republicans in California before the reform averaged 14.8 percent below the statewide Democratic presidential vote outcome prior to the Top Two, and 14.7 percent after. Likewise, in Washington, Democrats were elected from districts 6.2 percent above the statewide average before reform and 6.5 percent after, while Republicans were elected from districts 10.5 percent below the statewide average before and 9.3 percent after.

Figure 2 graphs legislator ideology against the district Democratic presidential vote, measured as the deviation off the statewide average. Two conclusions are visible from these charts. First, there is considerable overlap between the pre- and post-reform ideology in both states. The patterns are similar enough that it is not immediately clear that there has been any change at all. Second, the relationship between representative and constituency is notably non-linear, especially for Democrats, and the precise shape of the relationship differs somewhat by state. This suggests we should be careful to employ as flexible a modeling strategy as possible.

Figure 2. Pre- and Post-Reform Ideology in California and Washington



Toward that end, we employ matching to identify increased moderation while avoiding any particular functional form. Matching identifies similar cases on a set of covariates and calculates the average difference between these cases across the entire matched set (Diamond and Sekhon 2013). For this analysis, we match the post-reform legislators to the pre-reform legislator with the most similar district partisanship using the Matching package for R (Sekhon 2011). The smaller the matched difference compared to the simple pre-matching difference of means, the more we can say that the redistricting accounts for any observed effect.

Table 1 presents the results for each party in each of the two states. Prior to matching, there is no statistically certain difference between those elected after reform and

Table 1. Shor/McCarty ideal points before and after reform

	Pre-reform Mean	Post-reform Mean	Unmatched Difference	Matched Difference
California Democrats	-1.62	-1.47	0.15*	0.08
California Republicans	1.38	1.43	0.05	0.04
Washington Democrats	-1.01	-1.17	-0.16	-0.08
Washington Republicans	1.06	1.04	-0.03	0.01

Note: First two columns show legislator means before and after the Top Two reform.

* $p < 0.05$

those elected before in three of the four cases. Moreover, the differences, such as they are, fall in the wrong direction for California Republicans (who appear slightly more conservative) and Washington Democrats (who appear somewhat more liberal). California Democrats, however, are more conservative post-reform, as would be expected, and this difference is measured with a high degree of statistical confidence. However, once the cases are matched on presidential vote, much of the difference disappears, especially for Democrats in each state, where roughly half of the difference is accounted for by district partisanship.

One lingering question is whether this apparent effect in California actually reflects the effect of two other important changes to California politics in recent years. In 2011, the threshold for passing the state budget dropped from two-thirds to a simple majority. This might have encouraged more moderation in the Democratic caucus in particular by raising the stakes of a budget vote for Democrats from competitive districts, thus giving them more leverage to ask for lenience on other bills in exchange for loyalty on the budget package.

Also in 2011, Democrat Jerry Brown replaced Arnold Schwarzenegger as governor, returning the state to unified Democratic control for the first time since 2003. Since Brown has made fiscal issues a central focus of his governorship and he is generally recognized as a moderate in that area, his pressure might have pushed Democrats in a more moderate direction.³ In either case, the change in moderation might have come just before the Top Two, making the apparent Top Two effect nothing but an imperfect measure of the actual policy change of importance.

We tested this idea by dropping Washington and running the above analysis after treating 2011 as the critical dividing point between pre- and post-treatment California (see appendix for results). If either the budget or Jerry Brown's governorship produced the change in California, then the effect should be stronger using this dummy in place of the other. But the effect for Democrats is weaker: about two-thirds the size before matching, and wrongly-signed after matching. Moreover, the change makes Republicans appear notably more *conservative* both before and after matching.

It is possible that the results in Table 1 are a function of our outcome measure. Because the Shor-McCarty ideal points are not dynamic, they are fundamentally dependent on comparing new legislators in one year to new legislators in previous years. It is always possible that the effects of the reform are felt more strongly among continuing legislators than newly-elected ones. Moreover, the Shor-McCarty data represent a broad cross-section of roll call votes that is projected into the ideal point space as defined by the National

³ Unified partisan control might also discourage legislators from passing strongly partisan bills to appeal to the party base in the knowledge that the governor would never sign them. When the governor is of the opposing party, this strategy offers the chance to score political points, but when the governor is of the same party it only risks embarrassing the party's leader.

Political Awareness Test. It may be that the reforms have had a much more important effect on some subset of the issue space, rather than on the broad range of issues captured by the Shor-McCarty measure.

To address both concerns simultaneously, we repeated the above analysis using adjusted Chamber of Commerce scores. The Chamber of Commerce (called the Association of Washington Business in Washington) is an interest group that lobbies to support a low-tax, business-friendly regulatory environment, and the Chamber scores all legislators each legislative session, offering the prospect of dynamic scores on a focused (and very important) policy area.⁴ Because the policy agenda can change over time, and because the Chamber of Commerce itself can alter the list of bills it chooses to score for strategic reasons, we adjust the scores according to the method described in Groseclose and Snyder (Groseclose et al. 1999).

Table 2. Chamber of Commerce scores before and after reform

	Pre-reform Mean	Post-reform Mean	Unmatched Difference	Matched Difference
California Democrats	22.9	28.9	6.0**	4.2**
California Republicans	91.4	92.7	1.2 [#]	0.8
Washington Democrats	28.0	26.6	-1.4	0.0
Washington Republicans	98.8	97.3	-1.5	-1.1

Note: First two columns show legislator means before and after the Top Two reform.

** p<0.01

⁴ We calculated these scores for California only, since it has consistently exhibited the largest reform effect.

These adjusted Chamber of Commerce scores, presented in Table 2, show few differences from before and after the Top Two reform in each state. As before, only California Democrats show a notable change in the direction that would be expected, registering as 6 points more conservative. Meanwhile, California Republicans are 1.2 points more conservative, Washington Republicans are 1.5 points more liberal, and Washington Democrats are 1.4 points more liberal. As before, controlling for district partisanship through matching weakens these effects in all cases, though somewhat less than for the Shor/McCarty ideal points. It also leaves a robust difference of 4.2 points for California Democrats, suggesting we can more confidently speak of greater moderation in that caucus.

Because the Chamber of Commerce scores include both newly elected and continuing legislators, they allow us to explore the effect of term limits reform on the changes in California. Continuing legislators are still covered under the old limits, while newly elected members have run under the new, more relaxed limits. Table 3 separates the numbers from Table 2 into these two groups. The newly elected legislators in this table comprise the entire universe of cases for the Shor/McCarty data. Thus, it is not surprising that those numbers compare closely to those in Table 1: there is no sign of any change for Republicans, whether controlling for redistricting or not, while Democrats are notably more moderate. Most important, as with the Shor/McCarty ideal points, almost half the observable change is apparently due to redistricting.

Table 3. California Chamber of Commerce scores before and after reform, continuing and newly-elected

	Pre-reform Mean	Post-reform Mean	Unmatched Difference	Matched Difference
Democrats				
Continuing	22.6	27.1	4.4*	3.7*
Newly-elected	23.4	31.4	7.9***	4.8*
Republicans				
Continuing	91.0	93.2	2.2*	0.3
Newly-elected	92.2	91.8	-0.4	0.9

Note: First two columns show legislator means before and after the Top Two reform.

* p<0.05; *** p<0.001

If terms limits have been an important factor behind the Democratic moderation, then we would expect continuing Democrats to show little if any sign of change once redistricting is controlled through matching, since they have not been affected by the term limits reform. Instead, after accounting for district composition, continuing and newly elected Democrats appear to have moderated to an almost identical degree. Meanwhile, continuing Republicans do show signs of greater conservatism, but this effect disappears after controlling for district composition.

In sum, a more careful examination of the individual cases of California and Washington finds inconsistent evidence of an effect for the Top Two primary. The main exception is California Democrats: not only have they moderated, but redistricting explains only about half the change and term limits almost none. Since our estimate of a Top Two

effect amounts to a residual difference after other explanations are controlled, there might certainly be some other effect at work that we have not measured directly. But the Top Two must remain a plausible and sensible explanation for the residual differences we have found.

Difference-in-Differences Design

The evidence to this point suggests that the effect of the Top Two primary on moderation is inconsistent, but that there may be some effect in California. But are these observed changes unique to California, or are they common to other states that have not adopted the same political reforms?

To address this issue, we place the policy change in California and Washington in context with a classic difference-in-differences (DID) design (Ashenfelter and Card 1985; Angrist and Pischke 2009). A DID design identifies a policy effect by comparing the post-treatment change in the state of interest to similar changes in states that did not adopt the treatment. In moving to the DID design, we do not want to abandon the flexibility of the matching approach. Instead, we combine the two methods by first matching pre- and post-treatment legislators separately for each state. The treatment period is always defined as the period during which the treatment state used the Top Two—2008 and later for Washington, and 2012 and later for California. We then compare the difference for the treated state to the average difference for all other states.⁵ For this exercise we use the

⁵ The average of all other states excludes the other treated Top Two state—California in the case of Washington and vice versa. We estimate standard errors of the DID effects by simulating 1000 random draws from the mean and standard errors of each state's matched difference.

Table 3. Difference-in-differences estimates with matching

	Unmatched DID Estimate	Matched DID Estimate
California Democrats	0.24***	0.14*
California Republicans	-0.03	-0.04
Washington Democrats	-0.07	-0.04
Washington Republicans	-0.11	-0.08

Shor/McCarty ideal points, since the adjusted Chamber of Commerce scores do not offer a common space for cross-state comparisons.

When placed in the context of other states, California Democrats stand out even more. Prior to matching, the DID estimate is larger than the simple difference of means from Table 1 (0.24 versus 0.15). Matching shrinks the DID estimate to 0.14, but this is still larger than the comparable estimate of 0.08 from Table 1. In short, while Democrats in California have grown slightly more conservative, Democrats in other states have grown more liberal. This relative effect makes the Democratic moderation in California even more notable. However, there is still no clear sign of a moderating effect for the other groups. The matched DID effect for Washington Republicans is of modest size and in the correct direction, but far too noisy to inspire much confidence ($p=0.75$). And the other effects are small and statistically insignificant.

Discussion

Political reformers have paid much attention to the recent experiments with primary reform in Washington and especially California. Yet there has been relatively little empirical attention to quantitative evidence of its effects. This paper represents the first attempt to do so. We examined each of these states both in isolation and in broader national context. The results of these analyses suggest virtually no effect of the Top Two in Washington or for Republicans in California. The same analyses do, however, suggest some effect among Democrats in California, though almost half of this effect appears to be a function of the redistricting that occurred coincident with the Top Two.

Our analysis also helps to rule out possible effects from other sources. Relaxed term limits went into effect at the same time as both the Top Two and the redistricting, but continuing legislators who were not affected by the new term limits also showed some signs of moderation. Moreover, the timing of the moderation we have discovered does not coincide with other changes in the political environment, such as the lower threshold for passing a state budget or the return of unified Democratic control under the leadership of Jerry Brown. Thus, our analysis suggests that redistricting and the Top Two primary receive the most empirical support, and these effects are limited to Democrats in California alone.

It is worth noting the limits of our analysis. We feel relatively more confident about the important role of redistricting and the null role for term limits in our findings, since we have measured the sources of those effects more directly—district partisanship in the case of redistricting, and legislative tenure in the case of term limits. By contrast, at this point our results do not conclusively demonstrate that the Top Two primary is the cause of the

residual effect we have found. It certainly gives pause that there has been no similar effect among either California Republicans or Washington legislators of either party.

Nonetheless, the evidence here is certainly consistent with an effect from the Top Two for California Democrats. And as mentioned at the outset, there are reasons to think that the Top Two's effect in Washington would be limited, since the state's experience with a more partisan system was transitory and turnover in its legislature is relatively low. There are also reasons to add a note of caution about the California results, since the state has only experienced two election cycles under the Top Two thus far. Different patterns of behavior might emerge as candidates and voters come to learn the system better over time.

It is important to reiterate that our goal has been to identify broad ideological tendencies by observing behavior across a wide range of bills and issue areas. We do not identify whether the probability of passing any given bill has changed, because it is very rare for exactly the same bill to come to consideration across multiple election cycles. To the extent that some bills are more important than others, there might still be more moderation in a way that is difficult to conclusively detect. Legislators might be more inclined to take moderate positions on significant bills and vote with the extremes on minor bills as a way of satisfying those interests. Of course, the opposite could also be true: legislators might seek to appear moderate by voting across party lines on minor bills but then standing with their own party on the most politically important issues. This is a more difficult issue to resolve and one we do not address here.

On the other side of the ledger, it is also reasonable to express caution about the long-term impact of the redistricting effects we have uncovered in California. The redistricting effect we have identified is generally for newly elected politicians. The

districts they were elected from were not necessarily representative of the broader universe of districts. In fact, the legislators elected in 2012 came from a set of districts that was unusually competitive relative even to the more competitive set of districts in the new plan. Those elected in 2014, by contrast, came from a much more typical set of districts. The redistricting effect, such as it is, might gradually settle into a new equilibrium that is slightly, but not dramatically, more moderate than the old. Unlike with the unusual Top Two primary system, there is no learning required to represent competitive districts—politicians have plenty of experience with the practice.

The evidence for a redistricting effect but an ambiguous Top Two effect fits well within some strands of the existing research but not others. Much of the extant research supports the idea of limited primary effects. Explanations for this limited effect are speculative at this point, but may include anything from fundamental voter loyalty to parties, to the gatekeeping powers of party activists and donors, to the surprisingly contingent logic of open primaries (dependent as it is on candidate emergence decisions). The evidence presented here does not allow us to favor one of these explanations over another, but it does help us confirm the contingent nature of a primaries effect. Even a radically open system like the Top Two appears to have made at best a modest difference in the behavior of representatives, at least at this point in the policy experiment.

In contrast to these more congruent findings, the evidence for a redistricting effect in California might seem inconsistent with some research showing null effects of redistricting, at least on congressional representation (McCarty et al. 2009). But this research has never claimed that the correlation between district partisanship and representation is zero, only that the changes in district composition attributable to

redistricting have not been significant enough to account for much of the observed growth in polarization over time. The larger correlation between district partisanship and representative ideology in California, combined with the unusually competitive set of districts that elected new representatives and legislators there in 2012, might have helped produce more notable effects in this case.

On balance, then, the findings presented here offer something for both supporters and opponents of political reform. For supporters, we have found evidence, however preliminary, that redistricting reform can have the moderating effects that might be hoped for it. Given growing interest in this style of independent redistricting commission and the explicit sanction the U.S. Supreme Court has recently given to such an approach, some might take this as a green light to explore the possibility elsewhere. We have also found some sign of a Top Two primary effect, though more research is necessary to confirm it. For opponents of reform, on the other hand, the size of the Top Two effect is fairly modest, it is limited to one party in one state, and it is strongest only when considered in the context of a Democratic party that is moving leftward everywhere else.

These results are preliminary, and do not necessarily speak to the merits of these reforms more generally, since moderation was not the only benefit supporters claimed for them. But the effects are conditional enough to broaden the conversation to these other benefits as possible reasons for supporting reform as well.

Appendix

Table A1. California-only matched difference with budget threshold/Brown governorship as treatment

	Pre-reform Mean	Post-reform Mean	Unmatched Difference	Matched Difference
California Democrats	-1.61	-1.51	0.09	-0.04
California Republicans	1.31	1.47	0.16*	0.25**

Note: First two columns show legislator means before and after the Top Two reform.

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