

No. 20-16301

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UNITED STATES COURT OF APPEALS  
FOR THE NINTH CIRCUIT

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BRIAN MECINAS, CAROLYN VASKO *EX REL* C.V.; DNC SERVICES  
CORPORATION D/B/A DEMOCRATIC NATIONAL COMMITTEE;  
DSCC; PRIORITIES USA; PATTI SERRANO;  
*Plaintiffs-Appellants,*

v.

KATIE HOBBS, in her official capacity as Arizona Secretary of State,  
*Defendant-Appellee.*

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ON APPEAL FROM THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA  
Case No. CV-19-05547-PHX-DJH

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**DEFENDANT-APPELLEE'S RESPONSE TO PLAINTIFFS'  
EMERGENCY MOTION FOR INJUNCTION PENDING APPEAL**

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Dated: July 17, 2020

## **CIRCUIT RULE 27-3 COUNTER-STATEMENT<sup>1</sup>**

In response to Plaintiffs-Appellants' ("Plaintiffs") Circuit Rule 27-3 Certificate, the Arizona Secretary of State ("Secretary") provides the following information.

### **(i) Attorney Information**

On July 13, 2020, the district court granted the motion to withdraw filed by attorneys Mary R. O'Grady, Kimberly I. Friday, and Emma J. Cone-Roddy of Osborn Maledon, P.A., as co-counsel for the Secretary. ECF No. 83.

### **(ii) The Facts Do Not Support Plaintiffs' Assertion that an Emergency Exists**

The district court denied Plaintiffs' request for "the Court to issue an emergency injunction that bars [the Secretary] from utilizing the forty-year-old Ballot Order Statute[.]" A.R.S. § 16-502(E), pending their appeal. Exhibit ("Ex.")

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<sup>1</sup> Circuit Rule 27-3 requires the movant to make certain statements regarding the "existence and nature of the claimed emergency" and an explanation of why the movant failed to file the motion earlier. Plaintiffs essentially argue their case in their nine-page Certificate, which is replete with case law and alleged facts that the Secretary contested in the district court. *See* Doc. 2-1 at i-iv. The Secretary includes this counter-statement to respond to the assertions in Plaintiffs' Rule 27-3 Certificate in defending the constitutionality of Arizona's Ballot Order Statute. To avoid repeating information that the Secretary does not dispute, she includes only sections in which the Plaintiffs included significant argument or an incomplete citation to the record below.

1 at 0001; *see also* Ex. 2 (legislative history of Ballot Order Statute).<sup>2</sup> Plaintiffs will not suffer irreparable harm if the injunction pending appeal is not granted and there is not an “emergency” that entitles Plaintiffs to a mandatory injunction “to alter the status quo.” Ex. 1 at 0003-0004.

Critically, none of the Plaintiffs in this lawsuit are candidates. They are various groups and individuals who support Democratic candidates and lack Article III standing to sue, let alone obtain injunctive relief. Plaintiffs claim that Arizona’s Ballot Order Statute enacted in 1979—which provides county election officials with a neutral, efficient, and logical manner to determine the order of candidates’ names on a general election ballot—is unconstitutional because it allegedly favors Republicans. *See* Doc. 2-1 at 4-5. The district court held that this is a nonjusticiable political claim because it is premised on a psychological phenomenon that occurs in some contexts (“primacy effect”). Plaintiffs claim the primacy effect gives the first-listed candidate “a meaningful electoral advantage merely because they are listed first.”<sup>3</sup> Doc. 2-1 at 5.

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<sup>2</sup> The Secretary’s attached Exhibits 1-5 are part of the record below. For ease of reference, citations herein correspond to the bates stamp numbers on the bottom right corner of the exhibits. When citing to Plaintiffs’ motion and exhibits, the Secretary cites to the ECF page numbers on the top right corner.

<sup>3</sup> Plaintiffs interchangeably refer to “primacy effect,” “position bias,” or “primacy effect.” For consistency, the Secretary uses the term “primacy effect.”

Plaintiffs did not produce any reliable evidence in the district court to support their claim that a primacy effect exists, much less has a meaningful impact, on general elections in Arizona. Plaintiffs' emergency motion broadly alleges that "political scientists who study the primacy effect in the context of elections ... have confirmed [that] ballot order matters, and Arizona is no exception." Doc. 2-1 at 5. But, Plaintiffs' "evidence" consisted of opportunistically-designed statistical models, and analysis that Plaintiffs' own experts admitted was unreliable and incomplete.

For example, Plaintiffs' primary expert, Dr. Jonathan Rodden conducted a statistical analysis to determine whether a primacy effect exists in Arizona's general elections. *See* Ex. B at 0194. He testified that:

- his use of county-level data to determine existence of primacy effect for district-level races "definitely introduces measurement error[,]" explaining, "[i]f I try to measure something and I measure it in completely the wrong way, then the coefficient on that variable *will not be reliable*" (emphasis added), Ex. 4 at 0172;
- "there is measurement error" in Dr. Rodden's regression analysis, which Dr. Rodden created by inputting inaccurate data for demographic and party registration control variables, *id.* at 0183-0189;
- he made a separate coding error "mistake", *id.* at 0197-98;
- he is aware that the percentage of voters in Arizona registered as Independent or third-party voters "is a substantial share[,]" yet he "did not enter that into the regression" because he "wouldn't have a hypothesis about how that would help [him] explain Republican or Democratic vote share", *id.* at 0175; and

- he understands that a “substantial” portion of voters in Arizona vote by mail, but he did not examine whether primacy effect exists or is smaller when mail-in ballots are used, and could not opine one way or another, *id.* at 0204-0205.

Plaintiffs’ other expert, Dr. Jon Krosnick, did not study Arizona elections, and none of the studies he reviewed have ever analyzed whether a primacy effect occurs in Arizona’s elections. Ex. 5 at 0271, 0281. Some studies of other states’ elections actually found no primacy effect exists. *Id.* at 0276-0278. And Dr. Krosnick testified that “all other things held constant across races, ... adding the partisan affiliations of the candidates next to their names on the ballot does weaken the size of primacy effects.” *Id.* at 0282.

Moreover, the Secretary’s expert Sean Trende, who reviewed Dr. Rodden’s analysis and data, opined that the data “do not suggest a strong relationship between ballot order and vote share” in Arizona’s general elections. Ex. 3 at 0047. Mr. Trende wrote in his report, and later testified at the evidentiary hearing, about numerous flaws in Dr. Rodden’s methodology. *See id.* at 0047-0078; Ex. 5 at 0287-0343. Mr. Trende further opined:

Dr. Krosnick’s literature review is largely accurate, but it lumps diverse studies together, including studies using methods he has previously discounted; studies focusing on down-ballot races; and studies of states with an election framework different from Arizona’s. ... Even when I incorporate a strong prior belief of a large effect into my analysis of the Arizona data, I conclude that the effect is much smaller than the Rodden Report claims and that we are not justified in claiming that it is greater than zero.

Ex. 3 at 0077.<sup>4</sup>

Accordingly, the record does not support Plaintiffs' allegation that a primacy effect exists in Arizona's general elections and that this warrants a court order to enjoin enforcement of the Ballot Order Statute pending appeal. What Plaintiffs describe as an emergency is simply the operation of a forty-year-old law, implemented as a neutral, bipartisan reform to create a logical ballot order framework. *See* Ex. D at 288 n.1 (explaining that the Ballot Order Statute "was enacted in 1979 as part of a comprehensive elections code agreed to by the Arizona Democratic and Republican parties and the County Recorders Association" and that the law has been modified with the help of all of Arizona's county recorders) (citing legislative history). As the district court noted, "Democratic candidates appeared first on the ballots in every race in all 15 counties statewide" in 1984, 1986, 2008, and 2010 due to the Ballot Order Statute. *Id.* at 288 n.2. "These four elections are the only instances where a single party's candidates were listed first

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<sup>4</sup> *See* Ex. 3 at 0042-0047 (summarizing Mr. Trende's expert credentials). To the extent Plaintiffs may challenge Mr. Trende's qualifications in their reply (as they did in the district court), such arguments would be misplaced for two reasons. First, Mr. Trende has an advanced degree in applied statistics and every court to have considered the issue has found Mr. Trende to be qualified to testify on the statistical analysis of elections. *See* ECF No. 40 (discussing Mr. Trende's extensive qualifications and collecting cases). Second, it is well-established that the standards by which a court examines evidence are relaxed at the preliminary injunction stage. *See Univ. of Texas v. Camenisch*, 451 U.S. 390, 395 (1981) (noting preliminary injunction proceedings involve "procedures that are less formal and evidence that is less complete than in a trial on the merits").

on all ballots statewide since the Statute was enacted.” *Id.*; *see also* Ex. B at 202 (Figure 1 of Dr. Rodden’s report showing cross-county and time-series variation in ballot order in Arizona’s general elections from 1980 to 2018).

Presumably, Plaintiffs believe there to be an emergency now because in *this* upcoming election, “over 80 percent of the state’s general election ballots” will list candidates from the Republican Party rather than Plaintiffs’ party first. Doc. 2-1 at 5. The nature of the professed emergency underscores the political—not constitutional—core of this grievance. Indeed, the district court dismissed this lawsuit on two “independent ground[s,]” holding that (1) all Plaintiffs lack Article III standing; and (2) “even if a single Plaintiff had established standing ... the relief sought amounts to a nonjusticiable political question that the Court is unable to redress” under the Supreme Court’s reasoning in *Rucho v. Common Cause*, 139 S. Ct. 2484 (2019). Ex. D at 307–11.

Plaintiffs nonetheless urge that the Ballot Order Statute is unconstitutional and presents an emergency because of the Arizona Supreme Court’s holding regarding ballot order in primary elections based on the state constitution in *Kautenburger v. Jackson*, 85 Ariz. 128, 131 (1958). Doc. 2-1 at 5. But *Kautenburger* undermines Plaintiffs’ assertion that there is an emergency and is ultimately inapplicable for several reasons. First, *Kautenburger* was decided in 1958, more than *half a century ago*. If *Kautenburger* has the effect that Plaintiffs

claim—establishing that there is a “meaningful electoral advantage [for candidates] merely because they are listed first,” Doc. 2-1 at 5—then Plaintiffs’ urgency comes *sixty years* too late. Second, *Kautenburger* involved a low-level office, in a primary election, where paper ballots used name-rotation but voting machines did not. 85 Ariz. at 129-30. Instead of rotation, voting machines listed candidates by alphabetical order. *Id.* The Arizona Supreme Court held that using rotation on one type of ballot and not another in the same election violated the equal protection provisions of the Arizona Constitution by treating similarly-situated candidates differently, depending on the manner used to vote. *Id.* at 131. It is no surprise that in that situation, and where voters are deprived of other visual cues like party affiliation to guide their behavior (which *are* present here, *see* Ex. D at 288), that the Arizona Supreme Court affirmed the trial court’s order overturning the ballot order employed on voting machines.

Third, the ballot order statute struck by the *Kautenburger* court as unconstitutional is akin to the lottery name-ordering remedy that Plaintiffs request here. *See* Doc. 2-1 at 6 n.1. Plaintiffs’ request for a lottery method to choose the candidate who is entitled to first position on a ballot across an entire county (or the entire state) is reminiscent of the “disadvantage” faced by the *Kautenburger* plaintiff who prevailed because his name “would never appear first on the machine ballot.” *See id.* at 130. *Kautenburger* does not help Plaintiffs demonstrate that



continued operation of the Ballot Order Statute—which already achieves rotation of candidates’ names within each political party, *see* A.R.S. § 16–502(H)—presents any emergency to justify enjoining enforcement of the Ballot Order Statute.

The district court correctly granted the Secretary’s Motion to Dismiss without reaching any decision on Plaintiffs’ motion for preliminary injunction. Ex. D at 311; Ex. 1 at 0003. The court considered the record, including testimony spanning two days and hours of oral argument. Ex. D at 287; *see also* Ex. 4 and 5. As discussed below, the district court applied the correct legal standard to the question of Article III standing, and then grappled directly with each Plaintiff’s theory of standing. Ultimately, however—like the Eleventh Circuit in *Jacobson v. Fla. Sec’y of State*, 957 F.3d 1193 (11th Cir. 2020) and the district court in *Miller v. Hughs*, No. 1:19-CV-1071-LY (W.D. Tex. July 10, 2020)—the court below held that Plaintiffs failed to adequately allege an injury in fact. *See* Ex. D at 298–99, 303 (reasoning, *inter alia*, that Plaintiffs’ allegation that the Ballot Order Statute burdens them “because a number of other voters’ choices in the ballot box are irrational because they select the first name listed regardless of who it is” is not “a burden on them personally that is not common to all voters”) (citing *Gill v. Whitford*, 138 S. Ct. 1916 (2018)); *Jacobson*, 957 F.3d at 1206 (holding organizational plaintiffs’ “interest in [their] preferred candidates winning as many

elections as possible” is a “‘generalized partisan preference[.]’ that federal courts are ‘not responsible for vindicating,’ no less than when individual voters assert an interest in their preferred candidates winning elections”<sup>5</sup> (quoting *Gill*, 138 S. Ct. at 1933); *Miller*, No. 1:19-CV-1071-LY, at 9 (“Miller’s allegation of dilution of votes likewise fails to establish an injury-in-fact because it is based upon ‘group political interests, not individual legal rights’”) (quoting *Gill*, 138 S. Ct. at 1933).

The district court’s well-reasoned order granting the Secretary’s Motion to Dismiss, Ex. D, and subsequent order denying Plaintiffs’ Emergency Motion for Injunction Pending Appeal, Ex. 1, are entitled to deference. An injunction should not enter here unless it is clear that the district court abused its discretion because the trial court is “best and most conveniently able to exercise the nice discretion needed” to decide whether to grant a request for an injunction pending appeal. *Cumberland Tel. Co. v. Pub. Serv. Comm.*, 260 U.S. 212, 219 (1922); *see also Rhoades v. Reinke*, 671 F.3d 856, 859 (9th Cir. 2011) (“We review the district court’s denial of Rhoades’s emergency motion for preliminary injunction ... for

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<sup>5</sup> Plaintiffs inaccurately assert in *Jacobson* that the Eleventh Circuit reversed the district court’s decision “on other grounds.” Doc. 2-1 at 7–8. In *Jacobson*, the district court granted injunctive relief to voters and organizational plaintiffs that challenged Florida’s ballot order statute. *See Jacobson*, 957 F.3d at 1197–98. But the Eleventh Circuit held, “[b]ecause the voters and organizations lack standing, we vacate and remand with instructions to dismiss for lack of justiciability.” *Id.* at 1198. And if that holding were not clear enough, the Eleventh Circuit stated that the district court “erred by reaching the merits and entering an injunction against nonparties whom it had no authority to enjoin.” *Id.* at 1212.

abuse of discretion.”); *S.W. Voter Registration Educ. Project v. Shelley*, 344 F.3d 914, 918 (9th Cir. 2003) (en banc) (“We review the district court’s decision to grant or deny a preliminary injunction for abuse of discretion ... “[o]ur review is limited and deferential.”). Here, the district court acted well within its discretion when it denied Plaintiffs the extraordinary and disfavored relief of a mandatory injunction pending appeal.

**(iii) Had the Case Been Filed Earlier, the Parties and the Court Would Not Be Confronted with the Need to “Steamroll Through Delicate Legal Issues”**

Litigation delay in election cases prejudices the administration of justice by “compelling the court to steamroll through ... delicate legal issues,” *Lubin v. Thomas*, 213 Ariz. 496, 497–98 ¶ 10 (2006) (quotation marks and citations omitted), to the prejudice of the courts, candidates, election officials, and voters. *Sotomayor v. Burns*, 199 Ariz. 81, 83 ¶ 9 (2000). Plaintiffs claim that they diligently pursued their claims because they filed “over a year before the November 2020 election,” amending their complaint two weeks after their initial filing and waiting a total of 17 days after filing the first complaint to seek a preliminary injunction, which included hundreds of pages of expert reports. Doc. 2-1 at 9. The Secretary had approximately forty-five days to secure an expert witness, provide him Plaintiffs’ data, and craft a response to Plaintiffs’ expansive production on the eve of Thanksgiving. Briefing on Plaintiffs’ preliminary

injunction motion and the Secretary's Motion to Dismiss was completed in February 2020, evidence taken on March 4 and 5, and the oral argument concluded by March 10. *Id.* at 10. The court's order dismissing Plaintiffs' case was entered on June 25, 2020. Ex. D.

Simply put, Plaintiffs could have appealed sooner. Plaintiffs waited eight calendar days to file their Notice of Appeal, ECF No. 75, and another three calendar days to file their Emergency Motion for an Injunction Pending Appeal, ECF No. 77. In their Emergency Motion, Plaintiffs argued that a response from the Secretary was unnecessary because "the questions at issue are effectively the same as what the parties have briefed and argued before in the preliminary injunction proceedings." ECF No. 77 at 2 n.1. If Plaintiffs believed that the issues were so similar that a response from the Secretary was not necessary, then Plaintiffs should have been able to file their emergency motion more quickly, or at least file a Notice of Appeal within a day or two of the district court's order. Instead, Plaintiffs waited 11 calendar days to request an injunction pending appeal from the district court, then sought an order summarily denying their request to jump directly to this Court. Indeed, Plaintiffs warned that they would seek relief from this Court "by 4 p.m. on Friday, July 10," ECF No. 77 at 2 n.1, presumably whether the district court had ruled or not.

The district court called Plaintiffs' demand for a summary denial, without providing the Secretary any opportunity to respond, "unreasonabl[e]." Ex. 1 at 0001. Not only could Plaintiffs have filed sooner based on their own admission that their emergency motion for an injunction pending appeal was largely based on the same arguments that had already been fully briefed, they delayed seeking the injunction pending appeal. For this reason alone, Plaintiffs' motion should be denied. *See Earth Island Inst. v. Carlton*, 626 F.3d 462, 475 (9th Cir. 2010) ("An injunction is a matter of equitable discretion. The assignment of weight to particular harms is a matter for district courts to decide. The record here shows that the district court balanced all of the competing interests at stake.").

**(v) Although Plaintiffs Sought an Injunction Pending Appeal in the District Court, It Was a Perfunctory Request**

Despite their 11-day delay, Plaintiffs demanded in the district court that "the Court summarily deny the motion without awaiting a response from [the Secretary] or other further briefing or argument, so that Plaintiffs may seek the same relief from the Court of Appeals." ECF No. 77 at 1. Plaintiffs then contended that the Secretary's reasonable request for a mere seven days to respond (but not Plaintiffs' 11-day delay in filing) would prejudice their ability to obtain relief. *Id.* at 1 n.1.

Furthermore, "Plaintiffs' [Emergency] Motion seeks different relief than was formerly sought." Ex. 1 at 0004. Plaintiffs initially, clearly sought "a non-discriminatory **name rotation system that gives similarly-situated major-party**

**candidates** an equal opportunity to be placed first on the ballot.” *Id.* (citing ECF No. 14 at 21) (emphasis added). Plaintiffs now seek a lottery system or rotation of all candidates’ names instead of the longstanding name-ordering procedure that will be used “for the twentieth time this year.” Ex. 1 at 0004. The district court denied Plaintiffs’ attempt to obtain “the extraordinary relief of halting the operation of a forty-year-old state voting statute through improper procedural means, all while requesting different relief than previously sought.” *Id.* Thus, while Plaintiffs did seek an injunction pending appeal in the district court, the relief they requested in their emergency motion for an injunction pending appeal was a very different injunction than the injunction on which the district court took briefing, evidence, and oral argument in March.<sup>6</sup>

I declare under penalty of perjury that the foregoing is true and correct and based upon my personal knowledge.

Executed in Phoenix, Arizona on July 17, 2020.

By: s/ Kara Karlson  
*Counsel for Arizona Secretary  
of State Katie Hobbs*

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<sup>6</sup> Plaintiffs insist that the district court’s order noting that Plaintiffs are requesting “different relief than was formerly sought” is “not accurate.” Doc. 2-1 at 6 n.1. But the record speaks for itself. Even at the conclusion of the preliminary injunction hearing, Plaintiffs’ counsel maintained that the “permanent remedy” Plaintiffs sought was for the names of only “major-party candidates” to be rotated, stating that a lottery system or rotation of all candidates’ names would only be an “interim remedy.” *See* ECF No. 64 at 275–77.

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## **I. Introduction**

Plaintiffs are not entitled to the extraordinary relief they seek here: a mandatory injunction to enjoin enforcement of Arizona’s Ballot Order Statute, within months of the 2020 general election. As Plaintiffs recognize, Doc. 2-1 at 22, they must overcome *both* of the district court’s jurisdictional holdings that Plaintiffs lack Article III standing and their claims are not justiciable. Then Plaintiffs must demonstrate that they are likely to succeed on their claims that the Ballot Order Statute is unconstitutional because of an alleged, but unsubstantiated, “primacy effect.” Plaintiffs request a judicial determination (based on flawed and incomplete statistical evidence) that some “voters’ choices are less constitutionally meaningful than the choices of other[s].” *See Libertarian Party of Va. v. Alcorn*, 826 F.3d 708, 718 (4th Cir. 2016) (affirming district court’s grant of motion to dismiss challenge to ballot-order law for failure to state a claim). Finally, Plaintiffs must show that the remaining injunction-pending-appeal factors favor them.

Plaintiffs cannot satisfy their heavy burden. They contend that “[e]very court that has reached the merits in challenges analogous to this one has found such statutes unconstitutional.” Doc. 2-1 at 22. But this ignores several courts that have correctly declined to reach the merits of ballot-order statutes because such complaints are merely general political grievances. *See Jacobson v. Fla. Sec’y of State*, 957 F.3d 1193, 1206 (11th Cir. 2020) (holding organizational plaintiffs’

“interest in [their] preferred candidates winning as many elections as possible” is a “generalized partisan preference[]’ that federal courts are ‘not responsible for vindicating’”) (quoting *Gill v. Whitford*, 138 S. Ct. 1916, 1933 (2018)); *Miller v. Hughs*, No. 1:19-CV-1071-LY, at 9 (W.D. Tex. July 10, 2020) (holding voter plaintiff “fail[ed] to establish an injury-in-fact because it is based upon ‘group political interests, not individual legal rights’”) (citations omitted); *see also Alcorn*, 826 F.3d at 717 (“[M]ere ballot order denies neither the right to vote, nor the right to appear on the ballot, nor the right to form or associate in a political organization.”).

If Plaintiffs could show that any one of them have Article III standing, *and* that their claims are constitutional and not political, Plaintiffs’ claims still depend entirely on their ability to show that the primacy effect plays a meaningful role in Arizona’s general elections. But Plaintiffs’ own experts’ testimony does not support such a conclusion. And Plaintiffs cannot rely on general social science in other contexts or cases from other jurisdictions to enjoin Arizona’s Ballot Order Statute because “there is a factual dispute as to whether ballot position sways voters, and if so, how much.” *Green Party of Tenn. v. Hargett*, 767 F.3d 533, 551 (6th Cir. 2014). Accordingly, this Court should deny Plaintiffs’ emergency motion for injunction pending appeal.

## II. Background

### A. Arizona's Ballot Order Statute

Forty years ago, a bipartisan super-majority of Arizona legislators, in agreement with the County Records Association, enacted the Ballot Order Statute. *See* Ex. 2 at 0012 (Ariz. H.R. Comm. Min., H.B. 2028 (Mar. 5, 1979)) & 0017-0019 (Ariz. House J., 591, 641, 644–45 (Apr. 20, 1979) (H.B. 2028 passed 28-2 in the Senate and 40-11-9 in the House)). The statute provides that in each general election, candidates' names are organized by party affiliation “in descending order according to the votes cast for governor for that county in the most recent general election for the office of governor[.]” A.R.S. § 16-502(E). The Ballot Order Statute also requires rotation of candidates' names within each political party. *See* A.R.S. § 16-502(H).

The Ballot Order Statute provides a neutral process that has remained unchallenged for forty years. In 12 out of the 20 general elections since the Ballot Order Statute was enacted, Democratic candidates have been listed first in the majority of Arizona's counties. *See* Ex. B at 202. Twice in the 1980's and twice in the 2000's, Democratic candidates were listed first on ballots in all of Arizona's 15 counties. *Id.* Republican candidates have never been listed first statewide. *Id.*

## **B. The Present Litigation**

Now that it appears Arizona is a politically-competitive state in a presidential election year, Plaintiffs seek “emergency” relief to enjoin Arizona’s 40-year-old Ballot Order Statute. Plaintiffs filed their Complaint initiating this action on November 1, 2019, and filed an Amended Complaint two weeks later. ECF No. 1 & 15. Three days later, Plaintiffs filed a Motion for Preliminary Injunction. ECF No. 14. The Secretary filed a Motion to Dismiss and a response to the Motion for Preliminary Injunction in January 2020. ECF No. 26 & 29. The matter was fully briefed by February 3, 2020. ECF No. 35. The district court held a two-day evidentiary hearing and oral argument in early March. *See* Exs. 4 & 5.

Plaintiffs submitted expert reports from Dr. Jon Krosnick, Ex. A, and Dr. Jonathan Rodden, Ex. B. The Secretary submitted an expert report from Sean Trende, who explained that Dr. Rodden’s data “do not suggest a strong relationship between ballot order and vote share” in Arizona’s general elections. Ex. 3 at 0047. Dr. Rodden’s report contained material errors that undermine the validity of his findings. *See id.* at 0047-0078 (discussing more appropriate variables for voter behavior in a regression analysis, demonstrating no statistically significant primacy effect in Arizona, and identifying other methodology errors); Ex. 5 at 0287-0343 (Mr. Trende’s testimony about numerous flaws in Dr. Rodden’s methodology).

Indeed, Dr. Rodden conceded at the evidentiary hearing that his analysis: (1) contained “measurement error,” which renders his results “unreliable”; (2) cannot account for nearly one-third of Arizona’s electorate—i.e., over one million Arizona voters who are registered as Independent or third-party;<sup>7</sup> (3) cannot account for approximately 80% of Arizonans who cast early ballots, *see Democratic Nat’l Comm. v. Reagan*, 329 F. Supp. 3d 824, 825 (D. Ariz. 2018); and (4) can only estimate an average primacy effect over the 40-year span of time that the statute has been in existence. Ex. 4 at 0170, 0172, 0175, 0180, 0200, 0204-0205.

Primacy effect does not exist in every race for public office and can be mitigated by certain factors such as greater voter awareness. Ex. A. Dr. Krosnick conceded in his testimony that “*none of the studies* he reviewed analyzed the existence of any primacy effect in Arizona” and that “listing the party affiliation of the candidates on the ballot [which *are* included on Arizona’s ballots in general elections, *see* A.R.S. § 16-502(E)], . . . reduces the size of the primacy effects.” Ex. D at 310-11 n. 11 (quoting ECF No. 58 at 51, 62) (emphasis added); *see also* Ex. 5 at 0247-0287 (Dr. Krosnick’s testimony). Mr. Trende opined, *inter alia*, that

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<sup>7</sup> *See* Arizona Voter Registration Statistics <https://azsos.gov/elections/voter-registration-historical-election-data> (April 1, 2020) (last accessed on July 8, 2020). This Court should take judicial notice of these statistics because they are publicly available and not subject to reasonable dispute. *See* Fed. R. Evid. 201(b); *Daniels-Hall v. Nat’l Educ. Ass’n*, 629 F.3d 992, 998-99 (9th Cir. 2010) (taking judicial notice of official information posted on governmental website, the accuracy of which was not factually challenged).



“[i]n a state such as Arizona where at least 75% of votes are consistently cast as early ballots, we might expect that effect to be even smaller to the point of being negligible.” Ex. 3 at 0077.<sup>8</sup>

### C. District Court’s Decision

In an order issued on June 25, 2020, the district court granted the Secretary’s Motion to Dismiss Plaintiffs’ First Amended Complaint with prejudice. Ex. D. Specifically, the district court held that (1) all Plaintiffs lack Article III standing to challenge the Ballot Order Statute (*id.* at 294-307); and (2) even if the Plaintiffs had established standing, Plaintiffs’ claims alleging that the Ballot Order Statute operates unfairly to major-party candidates amount to a nonjusticiable political question under *Rucho v. Common Cause*, 139 S. Ct. 2484 (2019). Ex. D at 307-11. Either of these “independent ground[s],” *id.* at 311, provided the district court sufficient basis to grant the Secretary’s Motion to Dismiss. The district court also concluded the Ballot Order Statute does not present any meaningful burden on Plaintiffs’ rights. *Id.* at 310.

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<sup>8</sup> This figure is likely to increase given the current pandemic. Under Arizona law, Arizonans who elect to vote by mail have up to twenty-seven days to return their ballots. A.R.S. §§ 16-541 -542(A), (C).

As noted above, Plaintiffs first sought an emergency injunction pending appeal in the district court, albeit in a perfunctory and unreasonable fashion. The district court denied Plaintiffs' emergency motion. Ex. 1.

### **III. Plaintiffs Have Failed to Satisfy Their Heavy Burden that the Law and the Facts Clearly Favor Them to Warrant a Mandatory Injunction**

An injunction “is an extraordinary and drastic remedy, one that should not be granted unless the movant, *by a clear showing*, carries the burden of persuasion.” *Mazurek v. Armstrong*, 520 U.S. 968, 972 (1977) (quotation omitted). To obtain an injunction pending appeal, Plaintiffs must demonstrate “that they are likely to succeed on the merits, that they are likely to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in their favor, and that an injunction is in the public interest.” *South Bay United Pentecostal Church v. Newsom*, 959 F.3d 938, 939 (9th Cir. 2020) (citations omitted).

Moreover, because Plaintiffs seek a mandatory injunction to up-end a ballot order process that has been used by elections officials for decades in exchange for a ballot order that Plaintiffs believe would be more “fair,” Plaintiffs must meet a higher standard. *See Am. Freedom Defense Initiative v. King Cnty.*, 796 F.3d 1165, 1173 (9th Cir. 2015) (“Mandatory injunctions are particularly disfavored” and will only be entered if “extreme or very serious damage will result”) (quotation marks and citation omitted). Plaintiffs now ask this Court, without the benefit of the full record and time for thoughtful consideration, for the “extraordinary relief

of halting the operation of a forty-year-old state voting statute through improper procedural means, all while requesting different relief than previously sought.” Ex. 1 at 0004. Plaintiffs’ shifting positions weigh against granting their request. *See Republican Nat’l Comm. v. Democratic Nat’l Comm.*, 140 S. Ct. 1205, 1207 (2020) (“By changing the election rules so close to the election date and by affording relief that the plaintiffs themselves did not ask for in their preliminary injunction motions, the District Court contravened this Court’s precedents and erred by ordering such relief.”). They have failed to meet their heavy burden.

**A. As the District Court Correctly Held, All Plaintiffs Lack Article III Standing to Challenge the Ballot Order Statute, And Therefore Lack Standing to Seek an Injunction**

In a reasoned analysis, the district court correctly held that all the Plaintiffs lack Article III standing. Ex. D at 294-307. Specifically, “the Voter Plaintiffs have not alleged a concrete injury in fact, but rather a generalized political grievance with the Ballot Order Statute and its alleged effects.” *Id.* at 300. And the district court properly rejected Plaintiffs’ arguments that the Organizational Plaintiffs “alleged sufficient facts to establish associational, organizational, or competitive standing . . . .” *Id.* This ruling is consistent with this Court’s precedent and the Eleventh Circuit’s opinion in *Jacobson*, which held that individual voters and the same Democratic organizations that are the Plaintiffs here

lack standing to challenge Florida’s ballot order law because “none of them proved an injury in fact.” *See* 957 F.3d at 1198.

Plaintiffs unpersuasively argue the district court’s standing analysis was in error. The Organizational Plaintiffs first argue that they have standing under a “competitive standing” theory because the statute allegedly harms their “electoral prospects.” Doc. 2-1 at 26-30. But in *Townley v. Miller*, 722 F.3d 1128, 1135 (9th Cir. 2013), this Court described “[c]ompetitive standing [a]s the notion that ‘a candidate or his political party has standing to challenge *the inclusion* of an allegedly ineligible rival on the ballot . . . .’” *Id.* (citation omitted) (emphasis added). That is *not* the type of claim that Plaintiffs raised here. The district court correctly read *Townley* and declined to find that the Organizational Plaintiffs satisfy competitive standing. Ex. D at 306-07 (discussing *Townley*, emphasizing that “for competitive standing to apply, a plaintiff must allege that another candidate has been impermissibly placed on the ballot,” and collecting cases).

Plaintiffs’ reliance on *Owen v. Mulligan*, 640 F.2d 1130, 1133 (9th Cir 1981), is also misplaced. *See* Doc. 2-1 at 26-29. The district court correctly reasoned that *Owen* is distinguishable because “the ‘potential loss of an election’ was an injury-in-fact sufficient to give a *candidate* and Republican party officials standing.” Ex. D at 306. As the district court aptly put it, Plaintiffs “fail to recognize that the majority of the cases they cite to support their theories of injury

involve *candidates* as plaintiffs who were alleging the personal harm of not getting elected.” *Id.* at 298 (collecting cases).

Plaintiffs also rely on the recent federal district court decision *Pavek v. Simon*, No. 19-cv-3000, 2020 WL 3183249 (D. Minn. June 15, 2020). Doc. 2-1 at 26-29. *Pavek* appears to have sided with the now-vacated decision of a Florida district court, *Jacobson v. Lee*, 411 F. Supp. 3d 1249 (N.D. Fla. 2019). *See Pavek* at \*\*26–27. The *Pavek* court erred when it attempted to distinguish the Eleventh Circuit’s standing analysis discussing organizational standing and associational standing in *Jacobson*, 957 F.3d at 1204–07, from the case before it. *See Pavek* at \*12. Regarding the “competitive standing” discussion, the *Pavek* court noted that “[t]he Eighth Circuit does not yet appear to have addressed this theory of standing[.]” *id.* at\*12, n.12, and although it cited several cases, *Townley* was not among them. *See id.* at \*12. The district court’s erroneous decision in *Pavek* does not undermine the Eleventh Circuit’s sound reasoning in *Jacobson* or the district court’s standing analysis.

Organizational Plaintiffs further argue that the Ballot Order Statute results in a diversion of resources for purposes of an organizational standing theory. Doc. 2-1 at 30-32. Not so. Their general allegations of expending resources on “Get Out the Vote” assistance and voter persuasion efforts are insufficient to confer organizational standing on the Organizational Plaintiffs. *See Ex. D* at 304

(emphasizing Organizational Plaintiffs “do not put forth any evidence of resources being diverted from other states to Arizona” and did not “offer witness testimony on this element at the hearing”). *See Havens Realty Corp. v. Coleman*, 455 U.S. 363, 379 (1982) (“[A] setback to the organization’s abstract social interests” is insufficient basis to find standing).

Next, Plaintiffs contend the district court erred in holding that DNC failed to establish associational standing. Doc. 2-1 at 32-35. But the district court correctly reasoned that “Plaintiff DNC has failed to identify its members and their specific alleged injuries; thus, the Court is unable to determine whether ‘its members would otherwise have standing to sue in their own right,’ which is required for associational standing.” Ex. D at 302 (quoting *Hunt v. Washington State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977)). The district court explained that “the DNC does not allege any specific harm as to those alleged seven unnamed members, nor does it allege that any of the seven are candidates.” Ex. D at 302.

An organization’s failure to prove that its members “would otherwise have standing to sue in their own right” is fatal to associational standing. *See Jacobson*, 957 F.3d at 1204 (rejecting associational standing for DNC where “it failed to identify any of its members, much less one who will be injured by the ballot statute” and even accepting as true that the Committee’s members “include Democratic voters and candidates in Florida, the Committee still has not proved

that one of those unidentified members will suffer an injury”). Given the district court’s correct holding that all Plaintiffs failed to establish Article III standing, Plaintiffs are not entitled to an injunction pending appeal. *See Townley*, 722 F.3d at 1133 (movant must make “a clear showing of each element of standing”).

**B. As the District Court Correctly Held, Plaintiffs’ Claims Are Not Justiciable**

Plaintiffs also cannot overcome the district court’s correct holding that Plaintiffs’ claims, and the relief sought, amount to a nonjusticiable political question under the Supreme Court’s analysis in *Rucho*, 139 S. Ct. at 2484-2500. Ex. D at 307-11. Plaintiffs’ claims here hinge on notions of “fairness” to political parties; in *Rucho*, the Supreme Court “concluded that partisan gerrymandering claims are nonjusticiable political questions because they rest on an initial determination of what is ‘fair,’ and a secondary determination of how much deviation from what is ‘fair’ is permissible.” Ex. D at 308 (quoting *Rucho*, 139 S. Ct. at 2500). The district court elaborated:

The crux of Plaintiffs’ case is for the Court to determine what is ‘fair’ with respect to ballot rotation. Indeed, the specific relief requested involves this Court developing a new ballot system for Arizona’s state elections. This idea of “fairness” is the precise issue that *Rucho* declined to meddle in.

Ex. D at 309 (internal citations omitted). And as the district court noted, this Court extended *Rucho*’s reasoning “to find that claims related to climate change are

nonjusticiable.” *Id.* at 308 (citing *Juliana v. United States*, 947 F.3d 1159, 1173 (9th Cir. 2020)).

Plaintiffs’ reliance on pre-*Rucho* case law, Doc. 2-1 at 36-37, does not show that the district court’s justiciability analysis was wrong. Indeed, two other courts agree with the district court that *Rucho*’s reasoning logically extends to legal challenges to ballot-ordering laws that seek to vindicate political notions of fairness. *See Jacobson*, 957 F.3d at 1213 (“No judicially discernable and manageable standards exist to determine what constitutes a ‘fair’ allocation of the top ballot position, and picking among the competing visions of fairness poses basic questions that are political, not legal”) (Pryor, J., concurring) (internal citations omitted); *Miller*, No. 1:19-CV-1071-LY at 13 (“Plaintiffs ask this court to determine what is ‘fair’ with respect to ballot order. This request to determine what is ‘fair’ is the precise question that the Supreme Court in *Rucho* declined to address . . . to examine the alleged burden on Plaintiffs in this case, the court would have to accept Plaintiffs’ version of what is fair, which this court cannot do.”).

Plaintiffs want the courts to determine what is a “fair” way of ordering candidates’ names on ballots. Decades ago, however, both major political parties and Arizona’s Legislature reasonably concluded that relying on the votes cast in each county in the previous gubernatorial election, and providing rotation of names



within each political party, was a fair and non-partisan manner of ordering names on a general election ballot. “These questions of fairness are best left to the legislatures and not the courts.” Ex. D at 308 (citing *Rucho*, 139 S. Ct. at 2500). Plaintiffs’ failure to show that the district court’s justiciability holding was in error renders them unable to show a likelihood of success on the merits of their nonjusticiable claims.

**C. Plaintiffs’ Amended Complaint Suffers From Other Jurisdictional Defects that Preclude Relief**

Additionally, Plaintiffs’ claims are not redressable through this lawsuit and the Secretary has Eleventh Amendment immunity. *See Spokeo, Inc. v. Robins*, 136 S. Ct. 1540, 1547 (2016) (determining plaintiffs lack standing where their alleged injury is not “fairly traceable to the challenged conduct” of the defendant); *Culinary Workers Union, Local 226 v. Del Papa*, 200 F.3d 614, 619 (9th Cir. 1999) (noting that the “case and controversy” analysis is similar to the Eleventh Amendment inquiry); ECF No. 26 at 15-18. Under Arizona law, the boards of supervisors of Arizona’s 15 counties are responsible for preparing and printing general election ballots. *See* A.R.S. § 16-503. Plaintiffs are not entitled to injunctive relief because the “line of causation” between the Secretary’s actions and Plaintiffs’ alleged harm must be more than “attenuated.” *See Allen v. Wright*, 468 U.S. 737, 757 (1984), *overruled in part on other grounds by Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 572 U.S. 118 (2014); *Jacobson*, 957 F.3d

at 1207-12 (holding that “any injury [plaintiffs] might suffer” from Florida’s ballot order statute “is neither fairly traceable to the Secretary nor redressable by a judgment against her because she does not enforce the challenged law” and county boards of supervisors “are responsible for placing candidates on the ballot in the order the law prescribes”).

And the Secretary is entitled to Eleventh Amendment immunity because her only connection to the Ballot Order Statute is an indirect one. Plaintiffs’ request for an injunction pending appeal implicates the State’s “special sovereignty interests” and seeks to impermissibly interfere with Arizona’s elections. *See Idaho v. Coeur d’Alene Tribe of Idaho*, 521 U.S. 261, 281–82 (1997) (reasoning the “far-reaching and invasive relief” sought weighed in favor of finding that sovereign immunity controlled).

**D. Jurisdictional Defects Aside, the Injunction-Pending-Appeal Factors Support Denial of Plaintiffs’ Motion**

**1. Plaintiffs Are Unlikely to Succeed on the Merits**

Plaintiffs cannot prevail on their claims because they have not shown they are “prevented from exercising their right to vote or being burdened in any meaningful way.” Ex. D at 310. This is true even assuming *arguendo* that Plaintiffs can demonstrate standing *and* overcome the justiciability issues inherent in their claim for “fairness.”

The *Anderson/Burdick* framework governs Plaintiffs’ challenge to the Ballot Order Statute, and the level of scrutiny depends on the severity of the burden. *Burdick v. Takushi*, 504 U.S. 428, 433-34 (1992); *Anderson v. Celebrezze*, 460 U.S. 780, 789 (1983). Courts must weigh “the character and magnitude of the asserted injury to the rights protected by the First and Fourteenth Amendments that the plaintiff seeks to vindicate” against “the precise interests put forward by the State as justifications for the burden imposed by its rule,” taking into consideration “the extent to which those interests make it necessary to burden the plaintiff’s rights.” *Burdick*, 504 U.S. at 434 (citations omitted). Restrictions that are “generally applicable, evenhanded, politically neutral, and [that] protect the reliability and integrity of the election process” have repeatedly been upheld as constitutional. *Pub. Integrity All., Inc. v. City of Tucson*, 836 F.3d 1019, 1024-25 (9th Cir. 2016) (citation and alterations omitted). If there is no burden, the State will not be called upon to justify it. *Ariz. Libertarian Party v. Reagan*, 798 F.3d 723, 736 n. 12 (9th Cir. 2015).

As a threshold matter, the record below does not support Plaintiffs’ allegation that there is, in fact, a primacy effect in Arizona’s general elections. *See supra*, Section II(B); *Hargett*, 767 F.3d at 551 (“[T]here is a factual dispute as to whether ballot position sways voters, and if so, how much”); *New Alliance Party v. N.Y. State Bd. of Elections*, 861 F. Supp. 282, 290 (S.D.N.Y. 1994) (“Position bias

is a disputable fact because its existence is dependent upon the circumstances in which it operates.”). Putting aside that contested fact—which is critical to Plaintiffs’ claims—the *Anderson/Burdick* framework requires only a showing that the law serves a legitimate state interest because the burden here is minimal, at best. *See Burdick*, 504 U.S. at 434.

The Ballot Order Statute easily satisfies this test. It is a politically-neutral statute that was enacted with broad, bipartisan support, and applies equally to all voters. *See Ex. 2*. Throughout its 40-year history, the statute has protected the reliability and integrity of the election process by establishing logical, efficient, and manageable rules to determine the order in which candidates’ names appear on a general election ballot, at times resulting in Democratic candidates being listed first, and at other times Republican candidates. *See Ex. B* at 202. Plaintiffs cannot establish a meaningful—let alone severe—burden under the Equal Protection Clause or on Plaintiffs’ right to vote, and Arizona’s interest in enforcing the Ballot Order Statute outweighs any burden on Plaintiffs. *See Alcorn*, 826 F.3d at 716–19 (applying *Anderson/Burdick* to ballot order statute and concluding mere ballot order “does not restrict candidate access to the ballot or deny voters the right to vote for the candidate of their choice” and that the law “serves the important state interest of reducing voter confusion and speeding the voting process”).

## 2. Plaintiffs Have Not Established Irreparable Harm

Arizona's Ballot Order Statute will not irreparably harm Plaintiffs. It is well-established that a mere "possibility of irreparable harm" does not justify enjoining enforcement of a statute. *See Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7, 22 (2008). As the district court reasoned, Plaintiffs' alleged injuries "that their votes for Democratic candidates are diluted whenever Republican candidates are listed first . . . are not actual and concrete." Ex. D at 310. A "candidate's electoral loss does not, by itself, injure those who voted for a candidate. Voters have no judicially enforceable interest in the outcome of an election." *Jacobson*, 957 F.3d at 1202 (citing *Raines v. Byrd*, 521 U.S. 811, 819 (1997)).

The Organizational Plaintiffs allege they would suffer irreparable harm, speculating that a second-place ballot position on some ballots would decrease their ability to elect Democratic candidates, including "the Democratic candidate for Senate in the 2020 election" Mark Kelly. Doc. 2-1 at 14.<sup>9</sup> This also is not a judicially cognizable harm, much less an irreparable one.

The district court's determination that Plaintiffs did not show they suffered a judicially-cognizable harm is entitled to deference, particularly given the rushed review the Plaintiffs are requesting. *See Sw. Voter Registration Educ. Project v.*

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<sup>9</sup> While Plaintiffs assert that candidate Mark Kelly's electoral chances are reduced by the Ballot Order Statute, the candidate is not a party to this lawsuit, and Plaintiffs' assertion is nothing more than speculation.

*Shelley*, 344 F.3d 914, 918 (9th Cir. 2003) (stating this Court’s review of a ruling on request for injunction “is limited and deferential”). And as discussed above, Plaintiffs’ allegation of a primacy effect is fact-intensive and was rigorously contested in the evidentiary hearing before the district court.

It is undisputed that *one* candidate must be listed first on the ballot. Plaintiffs’ complaint is with how that order is determined. However, the process Plaintiffs requested in their preliminary injunction motion before the district court is impossible for the machines currently in use in Arizona.<sup>10</sup> *See* Doc. 30-2 at ¶ 4. Thus, Plaintiffs have altered the nature of their requested relief. Ex. 1 at 0001-0004. But it is far from clear that random selection of a candidate to receive the first position on the ballot by lottery—which could still result in Republican candidates being listed first on the majority of ballots in Arizona—would *still* not create the alleged harm of giving an “advantage” to the first-listed candidate. Plaintiffs have not shown the concrete, particularized harm required to warrant a court order enjoining the Ballot Order Statute and implementing an entirely new and untested method of listing candidates on Arizona’s ballots. The Ballot Order Statute has allowed Democratic and Republican candidates to obtain the first

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<sup>10</sup> This is one of the reasons that working in conjunction with county election officials, as the legislature did when drafting the Ballot Order Statute, is so important. County elections officials, not the Secretary, are directly responsible for printing and counting ballots, and understand the technical and logistical requirements and capabilities of the different machines in use in each county.

position on the ballot in various counties for 40 years. It is the quintessential “neutral, even-handed regulation” regularly upheld by courts, *see Pub. Integrity All., Inc.*, 836 F.3d at 1024-25, not an irreparable harm to Plaintiffs.

### **3. The Balance of Equities and Public Interest Do Not Support an Injunction Pending Appeal**

The balance of equities weigh strongly in favor of maintaining the Ballot Order Statute, rather than overriding the legislature’s measured judgment crafted in conjunction with a bi-partisan group of election administrators to ensure the orderly administration of elections in Arizona. Concern with modifying election laws are heightened as the election draws near, *Purcell v. Gonzalez*, 549 U.S. 1, 4-5 (2006). “Confidence in the integrity of our electoral processes is essential to the function of our participatory democracy.” *Id.* at 4.

This is particularly true when, as here, the law imposes no burden on Plaintiffs. Unlike the cases cited by Plaintiffs that guaranteed a specific party or the incumbent a top slot on the ballot, Arizona’s neutral Ballot Order Statute allows either party to obtain the first position in any county. Indeed, only Democratic candidates have ever enjoyed the first position on all ballots in the state in the last thirty years. Ex. D at 202. And even in counties where the Republican candidate appears first, the Democratic candidate appears directly below that candidate. Moreover, in partisan races (the only races in which the Ballot Order Statute applies), it is clearly marked on the ballot which candidate

belongs to which party. A.R.S. § 16-502(C). Voters who prefer to vote for Democratic candidates can easily vote for a Democratic candidate if they wish, whether that candidate appears first or second on the ballot. That a small number of voters *may* choose to vote for the first candidate is not a constitutionally cognizable burden any more than voters who may choose to vote for only one party, non-incumbents, or by flipping a coin. *See Alcorn*, 826 F.3d at 719 (“[A]ccess to a preferred position on the ballot . . . is not a constitutional concern.”).

The Secretary undeniably has an interest in ensuring that all ballots are “comprehensible and manageable” with rules that were decided in a non-partisan manner before the election. *See New Alliance Party*, 861 F. Supp. at 296. The Ballot Order Statute provides a method for ordering candidates on general election ballots that is facially-neutral, manageable, and cost-efficient. *See Buckley v. Am. Constitutional Law Found., Inc.*, 525 U.S. 182, 191 (1999) (“States ... have considerable leeway to protect the integrity and reliability of ... election processes generally”). Random ordering would force voters to spend more time to “decipher lengthy, multi-office, multi-candidate ballots to find their preferred candidates.” *See Alcorn*, 825 F.3d at 719-720 (noting that election officials have a good reason for designing ballots that minimize confusion).



And contrary to Plaintiffs' contention, there is harm to the State whenever it "is enjoined by a court from effectuating statutes enacted by representatives of its people[.]" *Coal. for Econ. Equity v. Wilson*, 122 F.3d 718, 719 (9th Cir. 1997) ("[A] state suffers irreparable injury whenever an enactment of its people or their representatives is enjoined."). Allowing the Ballot Order Statute to stay in effect while this lawsuit is pending is thus in the public interest. *See Virginian Ry. Co. v. Sys. Fed'n No. 40*, 300 U.S. 515, 552 (1937) (observing that legislation "is in itself a declaration of the public interest."). The equities and public interest favor the Secretary.

#### **IV. Conclusion**

For the foregoing reasons, Plaintiffs' emergency motion for injunction pending appeal should be denied.

Respectfully submitted,

s/ Kara Karlson

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## CERTIFICATE OF COMPLIANCE

This Response contains 5,095 words, excluding the items exempted by Fed. R. App. P. 32(f). The brief's type size and typeface comply with Fed. R. App. P. 32(a)(5) and (6). I certify that this Response complies with the word limit in Fed. R. App. P. 27(d)(2)(A), and this certificate is filed pursuant to Fed. R. App. P. 32(g)(1).

/s/ Kara Karlson

**CERTIFICATE OF SERVICE**

I hereby certify that I electronically filed the attached document with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on July 17, 2020. I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

/s/ Kara Karlson

### Index of Exhibits

<b>Exhibit</b>	<b>Description</b>
<b>1</b>	July 10, 2020 Order denying Plaintiffs' Emergency Motion for Injunction Pending Appeal
<b>2</b>	Legislative History of A.R.S. § 16-502(E)
<b>3</b>	January 20, 2020 Expert Report of Sean Trende
<b>4</b>	Excerpt of Preliminary Injunction Hearing Transcript – March 4, 2020 (Day 1)
<b>5</b>	Preliminary Injunction Hearing Transcript – March 5, 2020 (Day 2)

# **EXHIBIT 1**

1 NOT FOR PUBLICATION  
2  
3  
4  
5

6 **IN THE UNITED STATES DISTRICT COURT**  
7 **FOR THE DISTRICT OF ARIZONA**  
8

9 Brian Mecinas, et al.,  
10 Plaintiffs,  
11 v.  
12 Katie Hobbs,  
13 Defendant.  
14

No. CV-19-05547-PHX-DJH  
**ORDER**

15 This matter is before the Court on Plaintiffs’ Emergency Motion for Injunction  
16 Pending Appeal. (Doc. 77). Therein, Plaintiffs request the Court to issue an emergency  
17 injunction that bars Defendant from utilizing the forty-year-old Ballot Order Statute  
18 pending their appeal, to prevent irreparable and severe harm to Plaintiffs. The Court  
19 previously granted Defendant’s Motion to Dismiss and closed the case on June 25, 2020.  
20 (Doc. 73). Plaintiffs filed a Notice of Appeal to the Ninth Circuit on July 3, 2020.  
21 (Doc. 75). The pending Motion was filed on July 6, 2020. (Doc. 77).

22 As an initial matter, Plaintiffs request that if the Court is not inclined to grant their  
23 Motion it should “swiftly deny it,” asking the Court to rule by 4:00 p.m. on Friday, July  
24 10, 2020. (Doc. 77 at 2). To that end, Plaintiffs unreasonably request a ruling on the  
25 Motion “without awaiting a response from Defendant Arizona Secretary of State Katie  
26 Hobbs (the “Secretary”) or other further briefing or argument, so that Plaintiffs may seek  
27 the same relief from the Court of Appeals with the benefit of the Court’s ruling.” (*Id.*)  
28 Nevertheless, Defendant has filed a Response (Doc. 80) and the Court will proceed to

1 consider the Motion without waiting for Plaintiffs to file a Reply.

## 2 **I. Background**

3 The Court dismissed this matter finding lack of Article III Standing as to all  
4 Plaintiffs, holding that to reach the merits would result in an unlawful advisory opinion.  
5 *See Summers v. Earth Island Inst.*, 555 U.S. 488, 493 (2009) (quoting *United States v.*  
6 *Richardson*, 418 U.S. 166, 188 (1974)) (For a court to step in where plaintiffs have not  
7 established that a need to do so exists, “would significantly alter the allocation of power .  
8 . . away from a democratic form of government”). Though the Court questioned the  
9 fairness of the relief sought, and noted that the Ballot Order Statute was enacted over forty  
10 years ago,<sup>1</sup> it avoided the constitutional question because it was satisfied that it lacked the  
11 jurisdiction to do so. The Court alternatively held that, even if Plaintiffs had standing, it  
12 was prevented from rendering an opinion on the merits because the relief sought amounted  
13 to a nonjusticiable political question. (Doc. 73 at 25). Notably, the parties stipulated that  
14 the hearing conducted by the Court did not constitute a trial on the merits. (Doc. 70).

## 15 **II. Rule 62(d)**

16 Plaintiffs now invoke Federal Rule of Civil Procedure 62(d) (“Rule 62”) and request  
17 an injunction, relief that was not previously addressed by the Court based on the finding of  
18 no standing. Rule 62(d) provides: “While an appeal is pending from an interlocutory order  
19 or final judgment that grants, continues, modifies, refuses, dissolves, or refuses to dissolve  
20 or modify an injunction, the court may suspend, modify, restore, or grant an injunction on  
21 terms for bond or other terms that secure the opposing party’s rights.”

22 “In general, filing of a notice of appeal confers jurisdiction on the court of appeals  
23 and divests the district court of control over those aspects of the case involved in the  
24 appeal.” *Marrese v. Am. Academy of Orthopaedic Surgeons*, 470 U.S. 373, 379 (1985).  
25 However, “it is well-settled that a court retains the power to grant injunctive relief to a  
26 party to *preserve the status quo* during the pendency of an appeal . . .” *Hawaii Hous.*

27  
28 <sup>1</sup> As noted in the Court’s Order, the Ballot Order Statute was enacted in 1979 “as part of a  
comprehensive elections code agreed to by the Arizona Democratic and Republican parties  
and the County Recorders Association.” (Doc. 73 at 1).

1 *Auth. v. Midkiff*, 463 U.S. 1323, 1324 (1983) (emphasis added).

2 “Rule 62(d) is a purely procedural mechanism to preserve the status quo during a  
3 stay pending appeal of a district court decision . . . .” *Bass v. First Pac. Networks, Inc.*, 219  
4 F.3d 1052, 1055 (9th Cir. 2000); *see also Ribbens Int’l, S.A. de C.V. v. Transp. Int’l Pool,*  
5 *Inc.*, 40 F. Supp. 2d 1141, 1144 (C.D. Cal. 1999) (“The framework of Rule 62(d) represents  
6 a balancing of both parties’ interests, in that it *preserves the status quo* while also  
7 protecting the appellee’s rights.”) (emphasis added). “Rule 62(d) does not restore  
8 jurisdiction to the district court to adjudicate anew the merits of the case.” *Martinez Banos*  
9 *v. Godfrey*, 2019 WL 2357871, at \*2 (W.D. Wash. June 4, 2019); *see also Mitchell v.*  
10 *United States*, 2019 WL 4141063, at \*2 (D. Ariz. Aug. 30, 2019). (Where plaintiff’s request  
11 for an injunction would alter the status quo rather than preserve it, Rule 62(d) does not  
12 provide a basis for exercising jurisdiction).

### 13 **III. Analysis**

14 Here, Plaintiffs argue that the Court should enter an injunction, staying the operation  
15 of the Ballot Order Statute during the pendency of the appeal. (Doc. 77). Plaintiffs state  
16 that “the questions at issue are effectively the same as what the parties have briefed and  
17 argued before in the preliminary injunction proceedings.” (*Id.* at 1). While they argue that  
18 such injunction would *preserve* the status quo, it would actually serve to *alter* the status  
19 quo for a number of reasons. Defendant correctly points out that the Court did not reach  
20 the merits of Plaintiffs’ Motion for Preliminary Injunction. (Doc. 73). In fact, because the  
21 Court dismissed the case for lack of standing, it did not reach any decision on the Motion  
22 for Preliminary Injunction because so doing would have amounted to an unlawful advisory  
23 opinion. *See DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 341 (2006) (“No principle is  
24 more fundamental to the judiciary’s proper role in our system of government than the  
25 constitutional limitation of federal-court jurisdiction to actual cases or controversies.”); *see*  
26 *also Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 101 (1998) (A suit brought  
27 by a plaintiff without Article III standing is not a “case or controversy,” and an Article III  
28 federal court therefore lacks subject matter jurisdiction).



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Moreover, as Defendant notes, Plaintiffs’ Motion seeks different relief than was formerly sought. Previously, Plaintiffs sought an injunction that would require Arizona’s fifteen counties to “implement a non-discriminatory *name rotation system* that *gives similarly-situated major-party candidates* an equal opportunity to be placed first on the ballot.” (Doc. 14 at 21) (emphasis added). Plaintiffs now state that they would accept an injunction requiring the Secretary “to rotate *all candidates* for any given office” or to *implement a lottery system* to determine the first position on the ballot. (Doc. 77 at 15) (emphasis added). Moreover, as the Court noted in its Order dismissing the case, the Ballot Order Statute was enacted in 1979 and will be utilized for the twentieth time this year. Issuing an injunction as Plaintiffs request would certainly disrupt the status quo, one which has been present throughout Arizona since 1979.

Therefore, the Court finds that Plaintiffs do not seek to preserve the status quo. Rather, they seek the extraordinary relief of halting the operation of a forty-year-old state voting statute through improper procedural means, all while requesting different relief than previously sought. As the Court did not previously rule on the merits of the Motion for Preliminary Injunction based on a lack of Article III Standing, the Court must again decline to reach the merits of Plaintiffs case and will deny the Motion.

Accordingly,

**IT IS HEREBY ORDERED** that Plaintiffs’ Emergency Motion for Injunction Pending Appeal (Doc. 77) is **denied**.

Dated this 10th day of July, 2020.

  
\_\_\_\_\_  
Honorable Diane J. Humetewa  
United States District Judge

# **EXHIBIT 2**

# SESSION LAWS STATE OF ARIZONA



## Thirty-Fourth Legislature FIRST REGULAR SESSION

Convened—January 8, 1979

Sine Die—April 21, 1979

# 1979

FIRST REGULAR SESSION—1979 **Ch. 209**

**ELECTIONS AND ELECTORS**

**CHAPTER 209**

**HOUSE BILL 2028**

An Act relating to elections and electors; prescribing a new elections code; making conforming changes; repealing title 16, Arizona Revised Statutes, except chapter 11; amending the Arizona Revised Statutes, by adding a new title 16; transferring title 16, chapter 11, Arizona Revised Statutes, for placement in the new title 16, Arizona Revised Statutes, as chapter 8; transferring title 16, chapter 11, article 1, Arizona Revised Statutes, for placement in the new title 16, chapter 8, Arizona Revised Statutes, as article 1 and renumbering sections 16-1401 as 16-1101, 16-1402 as 16-1102 and 16-1403 as 16-1103; amending sections 1-305, 9-822, 9-823, 9-1001, 15-471, 15-472.01, 15-473.01, 15-478, 19-101, 19-112, 19-205, 19-212, 22-426, 36-305, 41-1205, 41-1348, 45-1519.01 and 45-1649, Arizona Revised Statutes, and providing for conditional enactment.

*Be it enacted by the Legislature of the State of Arizona:*

**Section 1. Purpose**

The legislature intends by this act to provide for a substantial and orderly relocation of existing provisions of law relating to elections and electors within title 16, Arizona Revised Statutes, to make certain substantive amendments to those and related provisions and to prescribe conforming amendments to sections within other titles of Arizona Revised Statutes.

**Sec. 2. Repeal**

Title 16, Arizona Revised Statutes, except chapter 11, is repealed.

Sec. 3. Arizona Revised Statutes are amended by adding a new title 16, to read:

**TITLE 16**

**ELECTIONS AND ELECTORS**

**CHAPTER 1.—QUALIFICATION AND REGISTRATION OF ELECTORS**

**ARTICLE 1. QUALIFICATIONS FOR REGISTRATION**

**§ 16-101. Qualifications of registrant**

Every resident of the state is qualified to register to vote if he:

1. Is a citizen of the United States.
2. Will be eighteen years or more of age prior to the regular general election next following his registration.
3. Will have been a resident of the state fifty days next preceding the election, except as provided in §§ 16-126 and 16-127.
4. Is able to write his name or make his mark, unless prevented from so doing by physical disability.
5. Has not been convicted of treason or a felony, unless restored to civil rights, is not under guardianship, non compos mentis or insane.

deletions by strikeouts

## Ch. 209

## 34th LEGISLATURE

used for placing the ballots in correct reading positions in counting devices. The code marks or punched holes shall not be used in any way that will reveal the identity of the voters voting the ballot.

C. The titles of offices may be arranged in vertical columns or in a series of separate pages and shall be printed above or at the side of the names of candidates so as to indicate clearly the candidates for each office and the number to be elected. In case there are more candidates for an office than can be printed in one column or on one ballot page, the ballot label shall be clearly marked that the list of candidates is continued on the following column or page, and insofar as may be practicable, the same number of names shall be printed on each column or page.

D. In primary and nonpartisan elections the names of candidates for each office shall appear on the ballot or ballot labels so that each candidate occupies each position on the ballot or ballot labels substantially the same number of times insofar as may be practicable.

E. In primary elections for a judicial office if there are two or more candidates of the same political party their names shall be alternated on the ballots so that the name of each candidate shall appear substantially an equal number of times in each possible location on the ballot.

F. Five sample ballots, which shall be facsimile copies of the official ballot or ballot labels, shall be provided for each polling place and shall be posted on election day as provided for paper ballots. Sample ballots may be printed on a single page or on a number of pages stapled together.

### § 16-467. Method of voting on ballot

A. At primary elections there shall be provided a separate ballot for each party entitled to participate in the primary.

B. Each party ballot shall be designated by the name of the party, and the voter shall be given by the judge of election one ballot only of the party with which the voter is affiliated as it appears in the precinct register.

C. If a person is nominated on more than one ticket, he shall forthwith file with the officer in charge of the preparation of election ballots a written declaration indicating the party name under which his name is to be printed on the official election ballot, and his name shall be printed only under the party name.

## ARTICLE 6. BALLOTS AND SUPPLIES; GENERAL

### § 16-501. Compliance with primary election law as prerequisite to printing name on ballot

No person shall have his name printed on the official ballot as a candidate in a general election unless he has complied fully with the provisions of law applicable to primary elections.

### § 16-502. Form and contents of ballot

A. Ballots shall be printed with black ink on white paper of sufficient thickness to prevent the printing thereon from being discernible from the back, and the same type shall be used for the names of all candidates. The ballots shall be headed "Official Ballot" in heavyfaced plain letters, not smaller than long primer nor larger than great primer, with a heavy rule above and

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below the heading. Immediately below shall be placed the words "Election, (date of election)", and alongside these words shall be placed the name of the county and the name or number of the precinct in which the election is held. No other matter shall be placed or printed at the head of any ballot, except above the heading there shall be a stub which shall contain the words "Stub No. \_\_\_\_\_ to be torn off by inspector." The stub shall be separated from the ballot by a perforated line, so that it may be easily detached from the ballot. The official ballots shall be bound together in blocks of not less than twenty-five nor more than one hundred.

B. Immediately below the ballot heading shall be placed the following:

"Section One

Nonpartisan Ballot

1. Put an 'X' opposite the name of the candidate for each nonpartisan office for which you wish to vote.
2. If you wish to vote for a person whose name is not printed on the ballot, write such name in the blank space opposite the office for which he is a candidate and put an 'X' in the square opposite the name so written.
3. Put an 'X' in the square preceded by the word 'Yes' (or for) for each proposition or question you wish to be adopted. Put an 'X' in the square preceded by the word 'No' (or against) for each proposition or question you wish not to be adopted."

C. Immediately below the instructions for voting in section one shall be placed the names of the candidates for justice of the supreme court, judges of the court of appeals, judges of the superior courts, school district officials and other nonpartisan officials in a column or in columns without partisan or designation except the title of office.

D. All proposed constitutional amendments and other propositions or questions to be submitted to the voters shall be printed immediately below the names of candidates for nonpartisan positions in such order as the secretary of state, or if a city or town election, the city or town clerk, designates, and each amendment, proposition or question shall be followed by the words "Yes" and "No" or "For \_\_\_\_\_" and "Against \_\_\_\_\_" as the nature of the amendment, proposition or question requires, and at the right of and opposite each of such words shall be placed a square of the size of those placed opposite the names of the candidates, in which the voter may indicate his vote for or against such amendment, proposition or question by the mark "X".

E. Immediately below section one of the ballot shall be placed the following:

"Section Two

Partisan Ballot

1. Put an 'X' in the square after the name of each candidate for each partisan office for whom you wish to vote.
2. If you wish to vote for a person whose name is not printed on the ballot, write such name in the blank space opposite the office for which he is a candidate and put an 'X' in the square opposite the name so written."

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F. Immediately below the instructions for voting in section two there shall be placed, in columns, the names of the candidates of the several political parties. At the top of each column shall be printed, in boldfaced letters, the name of the political party. Below the columns and running across the ballot there shall be a heavy line, and below the line shall be printed in each column the names of the candidates of each of the political parties for the several offices. At the left of the several columns shall be printed the heading "name of office to be voted for", and below and in regular order the names of the offices to be filled. At the head of each column shall be printed in the following order the names of candidates for:

1. Presidential electors.
2. United States senator.
3. Representatives in congress.
4. The several state offices.
5. The several county and precinct offices.

G. The names of candidates for the offices of state senator and state representative along with the district number shall be placed among the candidates for state offices and immediately below the candidates for the office of governor. The number of the supervisorial district of which a candidate is a nominee shall be printed in brackets immediately to the right of the name of each candidate for supervisor.

H. The lists of the candidates of the several parties shall be arranged with the names of the parties in descending order according to the votes cast for governor for that county in the most recent general election for the office of governor, commencing with the left-hand column. In the case of political parties which did not have candidates on the ballot in the last general election, such parties shall be listed in alphabetical order to the right of the parties which did have candidates on the ballot in the last general election. The names of all candidates nominated under the provisions of § 16-341 shall be placed in a single column at the right of the party columns and shall bear the heading in boldface type: "Other Candidates", and immediately under such heading the words: "Vote separately for each office." Immediately above the name of each candidate, in parenthesis, shall be printed the designation prescribed in the candidate's certificate of nomination.

I. Immediately below the designation of the office to be voted for shall appear the words: "Vote for not more than \_\_\_\_\_" (insert the number to be elected).

J. In each column at the right of the name of each candidate and on the same line there shall be an eighteen point square. Below the name of the last named candidate for each office there shall be as many blank lines as there are offices of the same title to be filled, with a square after each line. Upon the blank line the voter may write the name of any person for whom he desires to vote whose name is not printed, and in the square opposite the name so written he shall designate his choice by the mark "X" as in the case of printed names.

K. When there are two or more candidates of the same political party for the same office, or more than one candidate for a judicial office, the

## FIRST REGULAR SESSION—1979

## Ch. 209

names of all such candidates shall be so alternated on the ballots used in each election district that the name of each candidate shall appear substantially an equal number of times in each possible location.

**§ 16-503. Duty to prepare and provide ballots; cost of printing ballots and instruction cards as public expense**

A. The board of supervisors, and in city and town elections, the city or town clerk, shall prepare and provide ballots containing the names of all persons whose certificates of nomination have been filed with them. The ballots shall be printed and ready for inspection by the candidates and their agents at least ten days before a general election and at least five days before a city or town election.

B. All ballots cast in elections for public office within the state, and the cards of instruction to voters, shall be printed, delivered and distributed at public expense and shall be a county charge, but when used at local elections shall be a charge against the city or town in which the local election is held.

**§ 16-504. Form of ballots; lever machines**

Ballots for voting machines shall be printed in black ink and, for use in a general election, on clear, white material of such size as will fit the ballot frame, and in as plain, clear type as the space will reasonably permit and as otherwise provided in § 16-502.

**§ 16-505. Procedure for excessive size of ballot**

Where voting machines are used and the number of partisan offices and propositions or the number of political parties makes the ballot too large to fit on the voting machine, the board of supervisors may have the propositions printed on a separate paper ballot.

**§ 16-506. Ballot and ballot labels; electromechanical**

A. In all elections the ballots shall provide a means whereby each elector may vote for the candidates of his choice.

B. Immediately below the designation of the office to be voted for shall appear the words: "Vote for not more than \_\_\_\_\_" (insert the number to be elected).

C. In general elections for the state house of representatives the names of the candidates of the same political party shall be alternated on the ballots used in each district so that the name of each candidate shall appear substantially an equal number of times in each possible location on the ballot as may be practicable.

**§ 16-507. Presentation of presidential electors on ballot**

When presidential electors are to be voted for, the candidates therefor of each party shall be grouped and printed together, arranged in each group in alphabetical order, and the entire group of electors of each party shall be enclosed in a scroll or bracket to the right and opposite the center on which shall be printed in bold type the surname of the presidential candidate represented. To the right of and on a line with the surname shall be placed a square in which the voter may indicate his choice by the mark "X", and one such mark opposite a group of presidential electors shall be counted as a vote for each elector in such group.

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EX2-0010



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MAR 7 1979

Minutes of Meeting

COMMITTEE ON JUDICIARY

March 5, 1979

The regular meeting of the House of Representatives Committee on Judiciary of the First Regular Session of the Thirty-fourth Legislature was held in Hearing Room 3 of the House Wing at 9:00 a.m., March 5, 1979 with Chairman Peter Kay presiding.

Members Present:

Mr. Bahill	Mr. McConnell	Mr. West
Mr. Corpstein	Mrs. Ollson	Mr. Kenney
Mrs. Carlson	Mrs. Rosenbaum	Mr. Kay
Mr. Dunn	Mr. Skelly	
Mr. Kunasek	Mr. Sossaman	

Members Absent:

Mr. Hamilton  
Mr. Peaches (excused)

Speakers Present:

Representative Jacque Steiner  
John Ahl, Acting Program Administrator, Child Support Enforcement Program,  
Department of Economic Security  
Austin Masterson, Deputy Maricopa County Attorney  
Doug Ehrenkranz, Student Body President, University of Arizona Associated Students  
Representative Pat Wright  
Dr. Robert Huff, Executive Coordinator, Arizona Board of Regents  
Lance Ross, President, Associated Students, Arizona State University  
Joseph McDonald, Arizona Students Association Coordinator, Northern Arizona University  
Kathleen Duffy, Panhellenic President, Greek System of Arizona State University  
Vince Clark, Board Member, Arizona Students Association, Northern Arizona University  
Jeff Patton, Member, Arizona Students Association Board of Directors, University  
of Arizona  
David Tyler, Student, University of Arizona  
Amy McMinin, SPURS President, Arizona State University  
Bruce Robinson, Student, Arizona State University  
Jonathan Marshall, Chairman, Freedom of Information Committee and Publisher,  
Scottsdale Daily Progress  
Loyal Meek, Editor, The Phoenix Gazette  
Philip R. Higdon, Attorney, Arizona Newspapers Association  
Bill Truman, Pinal County Recorder  
Skeet Blakeslee, League of Women Voters  
Lois Figgins, Arizona Federation of Republican Women  
John Kannarr, Arizona Libertarian Party

EX2-0011

Minutes of Meeting  
Committee on Judiciary  
March 5, 1979

H.B. 2028, election law. Mr. Dunn, subcommittee chairman, explained that the proposed amendment (Attachment L) was a result of agreement between both major political parties and the County Recorders Association. He explained that a summary sheet had been given to committee members explaining the extensive amendment which is a reworking of the present election law. He stated that one major change is the time for reorganization of the parties from between the primary and general elections until after the general election, but before April following the election.

Mr. Bill Truman, Pinal County Recorder and representative of the County Recorders Association, answered questions and discussed the amendment.

Mrs. Skeet Blakeslee, League of Women Voters, questioned the need for telephone numbers, date of birth, marital status and father's name on the registration form. She also stated that the 50-day closing of registration before the election is the longest in the nation.

Mrs. Lois Figgins, Arizona Federation of Republican Women, urged support of the bill. She said that there is a real need for retaining the telephone number on registration information.

Mr. John Kannarr, Arizona Libertarian Party, spoke in opposition to the bill and cited Section 16-322 as being discriminatory to the small parties such as the Libertarians.

Mr. Dunn moved, seconded by Mr. Skelly, that H.B. 2028 do pass.

Mr. Dunn moved, seconded by Mr. Skelly, that H.B. 2028 be amended as follows: (Attachment L)

Mr. Bahill moved, seconded by Mrs. Rosenbaum, that the proposed amendments to H.B. 2028 be amended as follows: Page 7, line 43, strike "UNLESS UNLISTED" and insert "OPTIONAL". The motion failed to carry.

Mr. Bahill moved, seconded by Mrs. Rosenbaum, that the proposed amendments to H.B. 2028 be amended as follows: Page 7, line 33, after "MISS" insert "OR RELIGIOUS TITLE". The motion was withdrawn with the permission of the second.

Mr. Bahill moved, seconded by Mr. Dunn, that the proposed amendments to H.B. 2028 be amended as follows: Page 8, line 26, after "REGISTRAR" insert "AND SHALL BE PROOF OF VALID REGISTRATION". Mr. Bahill withdrew his motion with Mr. Dunn's permission.

Mr. Bahill moved, seconded by Mr. Dunn, that the proposed amendments be amended as follows: Page 8, line 26, after "REGISTRAR" insert "AND SHALL BE EVIDENCE OF VALID REGISTRATION". Show of hands vote indicated that the motion carried by a vote of 6 to 1.

Minutes of Meeting  
Committee on Judiciary  
March 5, 1979

Mr. Bahill moved, seconded by Mrs. Rosenbaum, that the proposed amendments to H.B. 2028 be amended as follows: (Attachment M) Mr. Dunn spoke against the amendment, and the motion failed to pass.

Mr. Bahill moved, seconded by Mrs. Rosenbaum, that the proposed amendments to H.B. 2028 be further amended as follows: Page 17, line 41, after "OFFICE" insert "AND DISTRICT OR PRECINCT NUMBER, IF ANY". The motion carried.

Mr. Bahill moved, seconded by Mr. Dunn, that the proposed amendments to H.B. 2028 be further amended as follows: Page 20, line 3, strike "MAILING ADDRESS,".

Mr. Sossaman made a substitute motion, seconded by Mr. McConnell, that the proposed amendments be further amended as follows: Page 20, line 2, after "ADDRESS" strike the comma and insert "OR". Mr. Bahill spoke against the amendment. No vote was taken.

Mr. Kay then asked Mr. Bahill if he had further amendments to propose. Mr. Bahill replied that he had several, and Mr. Kay announced that due to lack of time, H.B. 2028 would be considered at a later Judiciary Committee meeting.

H.B. 2202, collection of child support by department of economic security. Representative Jacque Steiner, sponsor, answered questions.

Mr. Bahill moved, seconded by Mr. Dunn, that H.B. 2202 do pass.

*(Motion carried)*  
Mr. Dunn moved, seconded by Mr. West, that the meeting adjourn. The motion carried.

The meeting adjourned at 2:00 p.m.

(Copies of attachments are on file in the offices of the Chief Clerk and the Committee Secretary.)

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MAR 13 1979

Minutes of Special Meeting

COMMITTEE ON JUDICIARY

March 9, 1979

The special meeting of the House of Representatives Committee on Judiciary of the First Regular Session of the Thirty-fourth Legislature was held in Hearing Room 3 of the House Wing at 11:50 a.m., March 9, 1979 with Chairman Peter Kay presiding.

Members Present:

Mr. Bahill	Mr. Kunasek	Mr. Sossaman
Mr. Corpstein	Mr. McConnell	Mr. West
Mrs. Carlson	Mrs. Ollson	Mr. Kenney
Mr. Dunn	Mrs. Rosenbaum	Mr. Kay
Mr. Hamilton	Mr. Skelly	

Members Absent:

Mr. Peaches (excused)

Speakers Present:

David J. Nicol, Director of Elections, Maricopa County  
Representative Bill Lewis  
Thomas D. Barnes, Chief of Law Enforcement, Arizona Game and Fish Department  
Jon Kyl, Attorney representing Salt River Project  
Representative Bart Baker  
D. Jay Ryan, President, Arizona State Board of Accountancy  
Representative Cal Holman  
Representative Steve Vukceovich  
Ed Lockwood, Mesa, representing himself  
Allen R. Heinze, Executive Director, Arizona Prosecuting Attorneys Council  
Warren Smoot, Bureau Chief, Maricopa County Attorney's Office  
Judith O'Neill, Deputy Maricopa County Attorney  
Zada Edgar-Soto, Deputy Pima County Attorney  
(See Guest List attached)

H.B. 2028, election law. As testimony on this bill was heard at the previous meeting, Mr. Dunn moved, seconded by Mr. Sossaman, that H.B. 2028 do pass.

Mr. Dunn moved, seconded by Mrs. Carlson, that H.B. 2028 be amended as follows: (111-page Strike-everything Amendment, Attachment L, Minutes of March 5, 1979)

Mr. Dunn moved, seconded by Mrs. Carlson, that the proposed amendments to H.B. 2028 be amended as follows: (Attachment A). The motion carried.

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows: Page 7, line 43, strike "UNLESS UNLISTED" and insert "OPTIONAL TO THE REGISTRANT". Division showed the motion failed to carry by a vote of 3 to 7.

EX2-0014

Minutes of Special Meeting  
Committee on Judiciary  
March 9, 1979

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows: Page 20, line 2, after "RESIDENCE" insert "OR MAILING" and line 3, strike "MAILING ADDRESS".

Mr. Dunn objected to the amendment, saying that there would be no way to check if a person lived within a district by the mailing address alone.

Vote was taken on Mr. Bahill proposed amendments to the amendment, and the motion carried.

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows: Page 17, between lines 17 and 18, insert:  
"ARTICLE 4. ELECTIONS; CONFORMITY 16-225. Other elections  
NOTWITHSTANDING ANY PROVISION OF LAW TO THE CONTRARY, THE GOVERNING BODY OF ANY CITY OR TOWN, SPECIAL DISTRICT OR OTHER POLITICAL SUBDIVISION ESTABLISHED UNDER THE LAWS OF THIS STATE SHALL HOLD ALL ELECTIONS EXCEPT PRIMARY ELECTIONS ONLY ON THE FIRST TUESDAY AFTER THE FIRST MONDAY IN FEBRUARY, MAY, AUGUST OR NOVEMBER."

The motion failed to carry.

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows: Page 27, between lines 40 and 41, insert:  
"16-413. Board of supervisors; duty  
NOTWITHSTANDING ANY PROVISION OF LAW TO THE CONTRARY, THE BOARD OF SUPERVISORS OR THE RESPONSIBLE COUNTY ELECTION OFFICER SHALL SUPERVISE AND CONDUCT ANY ELECTION HELD BY ANY SPECIAL DISTRICT OR POLITICAL SUBDIVISION, EXCEPT CITIES AND TOWNS, WITHIN THE COUNTY ESTABLISHED UNDER THE LAWS OF THIS STATE. THE COSTS OF SUCH SUPERVISION SHALL BE PAID BY THE POLITICAL SUBDIVISION AUTHORIZING THE ELECTION."

Division showed the motion failed to carry by a vote of 3 to 8.

Mr. Bahill moved, seconded by Mrs. Ollson, that the proposed amendments to H.B. 2028 be further amended as follows: Page 20, strike lines 9 and 10. The motion failed to carry.

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows: Page 101, line 9, strike "ONE HUNDRED FIFTY" and insert "FIVE HUNDRED".

Mr. Sossaman made a substitute motion, seconded by Mr. West, that the proposed amendments to H.B. 2028 be further amended as follows: Page 101, line 9, strike "ONE HUNDRED FIFTY" and insert "THREE HUNDRED". Several members spoke in opposition to the amendment, and the motion failed to carry by a vote of 5 to 5.

Mr. Bahill's motion to further amend the proposed amendments was voted on, and the motion failed to carry.

Minutes of Special Meeting  
Committee on Judiciary  
March 9, 1979

Mr. Bahill moved, seconded by Mr. Hamilton, that the proposed amendments to H.B. 2028 be further amended as follows:

Page 36, line 40, after the period insert "IN ANY SUCH ELECTION EACH CANDIDATE, IN ADDITION TO HAVING HIS NAME ROTATED AMONG ALL POSSIBLE POSITIONS, SHALL BE EXPOSED IN EACH BALLOT POSITION TO A SUBSTANTIALLY EQUAL NUMBER OF REGISTERED VOTERS."

Page 37, line 10, after the period insert "IN ANY SUCH ELECTION EACH CANDIDATE, IN ADDITION TO HAVING HIS NAME ROTATED AMONG ALL POSSIBLE POSITIONS, SHALL BE EXPOSED IN EACH BALLOT POSITION TO A SUBSTANTIALLY EQUAL NUMBER OF REGISTERED VOTERS."

Page 41, line 24, strike "AS MAY BE PRACTICABLE" and after the period insert "IN ANY SUCH ELECTION EACH CANDIDATE, IN ADDITION TO HAVING HIS NAME ROTATED AMONG ALL POSSIBLE POSITIONS, SHALL BE EXPOSED IN EACH BALLOT POSITION TO A SUBSTANTIALLY EQUAL NUMBER OF REGISTERED VOTERS."

Mr. David J. Nicol, Director of Elections, Maricopa County, explained that he did not support this amendment because the Elections Department now has no choice in the rotation of names. If the law is changed so they have a choice, there is the possibility of manipulation.

Vote was taken on Mr. Bahill's proposed amendments to the amendment and the motion failed to carry by a vote of 4 to 7.

Mr. Dunn moved, seconded by Mrs. Carlson, that the proposed amendments to H.B. 2028 as amended be adopted. The motion carried.

Mr. Dunn moved, seconded by Mrs. Carlson, that H.B. 2028 do pass as amended. The motion carried by a vote of 9 to 3, 1 voting Present, 2 absent. (Roll Call Vote Attachment B)

H.B. 2071, game and fish; violations; classifications. Representative Bill Lewis, sponsor, explained the provisions of the bill.

Mr. Thomas D. Barnes, Chief of Law Enforcement, Arizona Game and Fish Department, read from A.R.S. 17-101 in reply to Mr. Corpstein's question on the definition of "taking wildlife."

Mr. Kenney moved, seconded by Mr. Kay, that H.B. 2071 do pass.

Mr. Sossaman moved that H.B. 2071 be amended as follows: Page 1, lines 15 and 16, strike "WHILE TAKING WILDLIFE without" and insert "EXCEPT BY" and line 16, after "resident" insert "OR IN A RECOGNIZED SHOOTING AREA". The motion failed for lack of a second.

Mr. Kenney's motion that H.B. 2071 do pass was voted on. The motion carried by a vote of 9 to 0, 6 absent. (Roll Call Vote Attachment C)

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House Bills 2066, 2166, 2333, 2150, 2040, 2457, 2414 and 2114 were placed under third reading of bills.

THIRD READING OF BILLS

The following bills were read on third reading by number and title and passed on roll call:

HOUSE BILL 2028: An Act relating to elections and electors; prescribing a new elections code; making conforming changes; repealing title 16, Arizona Revised Statutes, except chapter 11; amending the Arizona Revised Statutes, by adding a new title 16; transferring title 16, chapter 11, Arizona Revised Statutes, for placement in the new title 16, Arizona Revised Statutes, as chapter 8; transferring title 16, chapter 11, article 1, Arizona Revised Statutes, for placement in the new title 16, chapter 8, Arizona Revised Statutes, as article 1 and renumbering sections 16-1401 as 16-1101, 16-1402 as 16-1102 and 16-1403 as 16-1103; amending sections 1-305, 9-822, 9-823, 9-1001, 15-471, 15-472.01, 15-473.01, 15-478, 19-101, 19-112, 19-205, 19-212, 22-426, 36-305, 41-1205, 41-1348, 45-1519.01 and 45-1649, Arizona Revised Statutes, and providing for conditional enactment.

AYES 28: Alston, Camping, Gabaldon, Getzwiller, A. Gutierrez (Dist. 23), J. Gutierrez (Dist. 11), Hardt, Hill, Hubbard, Kimball, Kolbe, Lindeman, Mack, Mawhinney, McMullin, Osborn, Pena, Pritzlaff, Rottas, Runyan, Sawyer, Stump, Swink, Taylor, Tenney, Turley, Usdane, President Corbet.

NOES 2: Farr, Gonzales.

House Bill 2028 was signed in open session and returned to the House.

HOUSE BILL 2455: An Act relating to prisons and prisoners; providing that certain appropriations shall be used for the construction of new prison facilities at the present site of Florence.

AYES 20: Camping, Getzwiller, A. Gutierrez (Dist. 23), Hardt, Hill, Hubbard, Kimball, Lindeman, Mawhinney, McMullin, Pritzlaff, Rottas, Runyan, Sawyer, Stump, Swink, Taylor, Tenney, Turley, Usdane.

NOES 10: Alston, Farr, Gabaldon, Gonzales, J. Gutierrez (Dist. 11), Kolbe, Mack, Osborn, Pena, President Corbet.

House Bill 2455 was signed in open session WITH THE EMERGENCY and returned to the House.

FINAL READING OF BILLS

The following bills were read on final reading by number and title and passed on roll call:

HOUSE BILL 2053: An Act relating to education; providing for prepayment of magazine subscriptions by school districts, and amending section 15-1202, Arizona Revised Statutes.

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NOES 7: Alston, Farr, Gabaldon, Kimball, Mack, Mawhinney,  
President Corbet.

NOT VOTING 4: J. Gutierrez (Dist. 11), Hardt, Pena, Pritzlaff.

Senate Bill 1043 was signed in open session and transmitted to the  
Governor.

SENATE BILL 1218, An Act relating to cities and towns; providing for  
disposition of certain unclaimed property to nonprofit charitable  
organizations, and amending section 9-402, Arizona Revised Statutes.

AYES 25: Alston, Camping, Farr, Gabaldon, Getzwiller,  
Gonzales, A. Gutierrez (Dist. 23), J. Gutierrez (Dist. 11), Hill,  
Hubbard, Kimball, Kolbe, Lindeman, McMullin, Osborn, Rottas,  
Runyan, Sawyer, Stump, Swink, Taylor, Tenney, Turley, Usdane,  
President Corbet.

NOES 2: Mack, Mawhinney.

NOT VOTING 3: Hardt, Pena, Pritzlaff.

Senate Bill 1218 was signed in open session and transmitted to the  
Governor.

RECESS

At 7:28 a.m. the Senate stood at recess to the sound of the gavel.

The President called the Senate to order at 7:34 a.m.

MESSAGES FROM THE HOUSE

Messages from Chief Clerk Leona Young on April 20, advised the  
following:

The House concurred in Senate amendments and passed on final reading  
House Bill 2028, election law (40-11-9); House Bill 2093, solar design  
standards for state buildings (51-0-9); House Bill 2115, Arizona grain  
research and promotion council (43-9-8); House Bill 2244, commercial  
bribery; classification (34-17-9); House Bill 2375, statute corrections  
(50-2-8); House Bill 2400, employment security appeal tribunals;  
composition; review (39-14-7); House Bill 2362, reimbursement to  
nonprofit organizations for payments as a result of administrative errors  
(40-4-16) and House Bill 2414, department of law; funds; disposition of  
fines (46-0-14).

The House passed on final reading as per the Free conference committee  
reports, Senate Bill 1171, retirement communities; county zoning; deed  
restrictions (34-17-9) and Senate Bill 1328, state land; use pursuant to  
terms of lease (50-0-10). The bills were transmitted to the Governor.



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23-722, 23-724, 23-732, 23-733, 23-773 and 41-1993, Arizona Revised Statutes.

On roll call HOUSE BILL 2400 passed the House by the following vote:

AYES: Baker, Barr, Carlson, Cooper, Corpstein, Courtright, Denny, Dunn, P. (18), English, Everall, Hartdegen, Hays, Holman, Hull, Hungerford, Jeffers, Jones, Jordan, Kay, Kenney, Kret, Lane, Lewis, McCarthy, McConnell, McElhaney, Morales, Ollson, Ratliff, Rockwell, Skelly, Soelter, Sossaman, Steiner, Todd, Vukceovich, West, Wright, Speaker Kelley--39.

NAYS: Abril, Bahill, Cajero, Dunn, C. (13), Goudinoff, Hamilton, Hanley, Hawke, Jennings, Kromko, McCune, Thompson, Wettaw, Wilcox--14.

NOT VOTING: Goodwin, Guerrero, Harelson, Kunasek, Pacheco, Peaches, Rosenbaum--7.

House Bill 2400 was signed in open session by Speaker Kelley.

HOUSE BILL 2028, passed amended by the Senate.

Motion by Mr. Kay, seconded by Mr. Barr, that the House concur in the Senate amendments to House Bill 2028. Carried.

FINAL PASSAGE

The following bill, as amended by the Senate, was read the final time by number and title:

HOUSE BILL 2028, An Act relating to elections and electors; prescribing a new elections code; making conforming changes; repealing title 16, Arizona Revised Statutes, except chapter 11; amending the Arizona Revised Statutes, by adding a new title 16; transferring title 16, chapter 11, Arizona Revised Statutes, for placement in the new title 16, Arizona Revised Statutes, as chapter 8; transferring title 16, chapter 11, article 1, Arizona Revised Statutes, for placement in the new title 16, chapter 8, Arizona Revised Statutes, as article 1 and renumbering sections 16-1401 as 16-1101, 16-1402 as 16-1102 and 16-1403 as 16-1103; amending sections 1-305, 9-822, 9-823, 9-1001, 15-471, 15-472.01, 15-473.01, 15-478, 19-101, 19-112, 19-205, 19-212, 22-426, 36-305, 41-1205, 41-1348, 45-1519.01 and 45-1649, Arizona Revised Statutes, and providing for conditional enactment.

On roll call HOUSE BILL 2028 passed the House by the following vote:

AYES: Baker, Barr, Carlson, Cooper, Corpstein, Courtright, Denny, Dunn, P. (18), English, Everall, Hartdegen, Hawke, Hays, Holman, Hull, Hungerford, Jeffers, Jones, Jordan, Kay, Kenney, Kret, Lane, Lewis, McCarthy, McConnell, McElhaney, Morales, Ollson, Ratliff, Rockwell, Skelly, Soelter, Sossaman, Steiner, Todd, West, Wettaw, Wright, Speaker Kelley--40.

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NAYS: Abril, Cajero, Dunn, C. (13), Goudinoff, Hamilton, Hanley, Jennings, Kromko, McCune, Thompson, Wilcox--11.

NOT VOTING: Bahill, Goodwin, Guerrero, Harelson, Kunasek, Pacheco, Peaches, Rosenbaum, Vukceвич--9.

House Bill 2028 was signed in open session by Speaker Kelley.

Motion by Mr. Barr, seconded by Mr. Sossaman, that the House stand at recess, subject to the call of the gavel. Carried at 5:40 A.M.

At 6:49 A.M., Speaker Kelley called the House to order.

Without objection, the House referred to the Order of Business:

BILLS AND OTHER BUSINESS FROM THE SENATE

Messages from the Secretary of the Senate, Marcy Byrd, were read:

HOUSE BILL 2039, passed on Final Passage, 29 ayes, 1 nay.

HOUSE BILL 2048, passed on Final Passage, 25 ayes, 5 nays.

HOUSE BILL 2088, passed on Final Passage, 16 ayes, 14 nays.

HOUSE BILL 2259, passed on Final Passage, 17 ayes, 13 nays.

HOUSE BILL 2357, passed on Final Passage, 29 ayes, 1 nay.

HOUSE BILL 2362, passed amended, 27 ayes, 3 nays.

SENATE BILL 1255, concurred in House amendments and passed on Final Passage, 23 ayes, 7 nays.

HOUSE BILL 2303, failed to pass on Final Passage, 13 ayes, 17 nays.

UNFINISHED BUSINESS

The following action was taken on business held in abeyance:

HOUSE BILL 2362, passed amended by the Senate.

Motion by Mr. Wettaw, seconded by Mr. Skelly, that the House concur in the Senate amendments to House Bill 2362. Carried.

FINAL PASSAGE

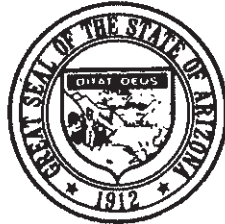
The following bill, as amended by the Senate, was read the final time by number and title:

HOUSE BILL 2362, An Act relating to labor; prescribing a definition and its application; providing that special administration fund may be used to reimburse employers which make payments in lieu of contributions as a

# SESSION LAWS

## STATE OF ARIZONA

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Thirty-Sixth Legislature  
FIRST REGULAR SESSION

Convened—January 10, 1983  
Sine Die—April 27, 1983

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36th LEGISLATURE

infliction of serious physical injury upon another if committed while the person is on probation;— FOR A CONVICTION OF A FELONY OFFENSE, OR parole, work furlough or any other release FROM CONFINEMENT FOR CONVICTION OF A FELONY OFFENSE shall be sentenced to life imprisonment and is not eligible for suspension or commutation of sentence, probation, pardon, parole, work furlough or release from confinement on any other basis except as specifically authorized by section 31-233, subsection A or B until the person has served not less than twenty-five years. A sentence imposed pursuant to this subsection shall be consecutive to any other sentence from which the convicted person had been temporarily released.

B. Notwithstanding any provision of law to the contrary, a person convicted of any felony offense not included in subsection A of this section if committed while the person is on probation;— FOR A CONVICTION OF A FELONY OFFENSE, OR parole, work furlough or any other release FROM CONFINEMENT FOR CONVICTION OF A FELONY OFFENSE shall be sentenced to a term of not less than the presumptive sentence authorized for the offense, and the person is not eligible for suspension or commutation of sentence, probation, pardon, parole, work furlough or release from confinement on any other basis except as specifically authorized by section 31-233, subsection A or B until the sentence imposed by the court has been served. A sentence imposed pursuant to this subsection shall be consecutive to any other sentence from which the convicted person had been temporarily released.

Approved by the Governor, April 1, 1988.

Filed in the Office of the Secretary of State, April 1, 1988.

ELECTION BALLOTS—FORM; CONTENTS

CHAPTER 33

HOUSE BILL 2068

AN ACT

RELATING TO ELECTIONS AND ELECTORS; PRESCRIBING FORM AND CONTENT OF ELECTION BALLOT, AND AMENDING SECTION 16-502, ARIZONA REVISED STATUTES.

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 16-502, Arizona Revised Statutes, is amended to read:

16-502. Form and contents of ballot

A. Ballots shall be printed with black ink on white paper of sufficient thickness to prevent the printing thereon from being discernible from the back, and the same type shall be used for the names of all candidates. The ballots shall be headed "official ballot" in heavyfaced plain letters, not smaller than long primer nor larger than great primer, with a heavy rule above and below the heading. Immediately below shall be placed the words "election, (date of election)", and alongside these words shall be placed the name of the county and the name or number of the precinct in which the election is held. No other matter shall be placed or printed at the head of any ballot, except above the heading there shall be a stub which shall contain the words "stub no.

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register no. \_\_\_\_\_, to be torn off by inspector." The stub shall be separated from the ballot by a perforated line, so that it may be easily detached from the ballot. The official ballots shall be bound together in blocks of not less than twenty-five nor more than one hundred.

~~B. Immediately below the ballot heading shall be placed the following:~~

~~"Section one~~

~~Nonpartisan ballot~~

~~1. Put an 'x' opposite the name of the candidate for each nonpartisan office for which you wish to vote.~~

~~2. If you wish to vote for a person whose name is not printed on the ballot, write such name in the blank space opposite the office for which he is a candidate and put an 'x' in the square opposite the name so written.~~

~~3. Put an 'x' in the square preceded by the word 'yes' (or for) for each proposition or question you wish to be adopted. Put an 'x' in the square preceded by the word 'no' (or against) for each proposition or question you wish not to be adopted."~~

~~G. Immediately below the instructions for voting in section one shall be placed the names of the candidates for justice of the supreme court, judges of the court of appeals, judges of the superior courts, school district officials and other nonpartisan officials in a column or in columns without partisan or designation except the title of office.~~

~~D. All proposed constitutional amendments and other propositions or questions to be submitted to the voters shall be printed immediately below the names of candidates for nonpartisan positions in such order as the secretary of state, or if a city or town election, the city or town clerk, designates, and each amendment, proposition or question shall be followed by the words "yes" and "no" or "for \_\_\_\_\_" and "against \_\_\_\_\_" as the nature of the amendment, proposition or question requires, and at the right of and opposite each of such words shall be placed a square of the size of those placed opposite the names of the candidates, in which the voter may indicate his vote for or against such amendment, proposition or question by the mark "x".~~

~~E. B. Immediately below section one of the ballot HEADING shall be placed the following:~~

~~"Section two ONE~~

~~Partisan ballot~~

~~1. Put an 'x' in the square after the name of each candidate for each partisan office for whom you wish to vote.~~

~~2. If you wish to vote for a person whose name is not printed on the ballot, write such name in the blank space opposite the office for which he is a candidate and put an 'x' in the square opposite the name so written."~~

~~F. C. Immediately below the instructions for voting in section two ONE there shall be placed, in columns, the names of the candidates of the several political parties. At the top of each column shall be printed, in boldfaced BOLD-FACED letters, the name of the political party. Below the columns and running across the ballot there shall be a heavy line, and below the line shall be printed in each column the names of the candidates of each of the political parties for the several offices. At the left of the several columns shall be printed the heading "name of office to be voted for", and below and in regular order the names of the offices to be filled. At the head of each column shall be printed in the following order the names of candidates for:~~

- ~~1. Presidential electors.~~
- ~~2. United States senator.~~
- ~~3. Representatives in Congress.~~
- ~~4. The several state offices.~~
- ~~5. The several county and precinct offices.~~

deletions by strikeouts

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~~G~~ D. The names of candidates for the offices of state senator and state representative along with the district number shall be placed among the candidates for state offices and immediately below the candidates for the office of governor. The number of the supervisorial district of which a candidate is a nominee shall be printed in brackets immediately to the right of the name of each candidate for supervisor.

~~H~~ E. The lists of the candidates of the several parties shall be arranged with the names of the parties in descending order according to the votes cast for governor for that county in the most recent general election for the office of governor, commencing with the left-hand column. In the case of political parties which did not have candidates on the ballot in the last general election, such parties shall be listed in alphabetical order to the right of the parties which did have candidates on the ballot in the last general election. The names of all candidates nominated under the provisions of section 16-341 shall be placed in a single column at the right of the party columns and shall bear the heading in ~~bold-face~~ BOLD-FACE type: "Other candidates", and immediately under such heading the words: "Vote separately for each office." Immediately above the name of each candidate, in parenthesis, shall be printed the designation prescribed in the candidate's certificate of nomination.

~~I~~ F. Immediately below the designation of the office to be voted for shall appear the words: "Vote for not more than \_\_\_\_\_" (insert the number to be elected).

~~J~~ G. In each column at the right of the name of each candidate and on the same line there shall be an eighteen point square. Below the name of the last named candidate for each office there shall be as many blank lines as there are offices of the same title to be filled, with a square after each line. Upon the blank line the voter may write the name of any person for whom he desires to vote whose name is not printed, and in the square opposite the name so written he shall designate his choice by the mark "x" as in the case of printed names.

~~K~~ H. When there are two or more candidates of the same political party for the same office, or more than one candidate for a judicial office, the names of all such candidates shall be so alternated on the ballots used in each election district that the name of each candidate shall appear substantially an equal number of times in each possible location.

I. IMMEDIATELY BELOW SECTION ONE OF THE BALLOT SHALL BE PLACED THE FOLLOWING:

"SECTION TWO  
NONPARTISAN BALLOT

1. PUT AN 'X' OPPOSITE THE NAME OF THE CANDIDATE FOR EACH NONPARTISAN OFFICE FOR WHICH YOU WISH TO VOTE.

2. IF YOU WISH TO VOTE FOR A PERSON WHOSE NAME IS NOT PRINTED ON THE BALLOT, WRITE SUCH NAME IN THE BLANK SPACE OPPOSITE THE OFFICE FOR WHICH HE IS A CANDIDATE AND PUT AN 'X' IN THE SQUARE OPPOSITE THE NAME SO WRITTEN.

3. PUT AN 'X' IN THE SQUARE PRECEDED BY THE WORD 'YES' (OR FOR) FOR EACH PROPOSITION OR QUESTION YOU WISH TO BE ADOPTED. PUT AN 'X' IN THE SQUARE PRECEDED BY THE WORD 'NO' (OR AGAINST) FOR EACH PROPOSITION OR QUESTION YOU WISH NOT TO BE ADOPTED."

J. IMMEDIATELY BELOW THE INSTRUCTIONS FOR VOTING IN SECTION TWO SHALL BE PLACED THE NAMES OF THE CANDIDATES FOR JUSTICE OF THE SUPREME COURT, JUDGES OF THE COURT OF APPEALS, JUDGES OF THE SUPERIOR COURTS, SCHOOL DISTRICT OFFICIALS AND OTHER NONPARTISAN OFFICIALS IN A COLUMN OR IN COLUMNS WITHOUT PARTISAN OR OTHER DESIGNATION EXCEPT THE TITLE OF OFFICE.

K. ALL PROPOSED CONSTITUTIONAL AMENDMENTS AND OTHER PROPOSITIONS OR QUESTIONS TO BE SUBMITTED TO THE VOTERS SHALL BE PRINTED IMMEDIATELY BELOW THE NAMES OF CANDIDATES FOR NONPARTISAN POSITIONS IN SUCH ORDER AS THE SECRETARY OF STATE, OR IF A CITY OR TOWN ELECTION, THE CITY OR TOWN CLERK, DESIGNATES. EXCEPT AS PROVIDED BY SECTION 19-125, EACH PROPOSITION OR

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QUESTION SHALL BE FOLLOWED BY THE WORDS "YES" AND "NO" OR "FOR" AND "AGAINST" AS THE NATURE OF THE PROPOSITION OR QUESTION REQUIRES, AND AT THE RIGHT OF AND OPPOSITE EACH OF SUCH WORDS SHALL BE PLACED A SQUARE OF THE SIZE OF THOSE PLACED OPPOSITE THE NAMES OF THE CANDIDATES, IN WHICH THE VOTER MAY INDICATE HIS VOTE FOR OR AGAINST SUCH PROPOSITION OR QUESTION BY THE MARK "X".

Approved by the Governor, April 1, 1983.

Filed in the Office of the Secretary of State, April 1, 1983.

TAXATION—APPRAISAL DATE OF CENTRALLY ASSESSED PROPERTY

CHAPTER 34

HOUSE BILL 2073

AN ACT

RELATING TO TAXATION; PRESCRIBING THE APPRAISAL DATE OF CENTRALLY ASSESSED PROPERTY, AND AMENDING SECTIONS 42-124, 42-124.01, 42-124.03, 42-704, 42-745, 42-762 AND 42-793, ARIZONA REVISED STATUTES.

Be it enacted by the Legislature of the State of Arizona:

Section 1. Section 42-124, Arizona Revised Statutes, is amended to read:

42-124. Determination of valuation of producing and closed mines, mills and smelters and producing oil, gas and geothermal resource interests; changing valuation

A. On or before the first Monday in June the department shall find the full cash value of all patented and unpatented producing mines, the personal property used thereon, the improvements thereto and the mills and smelters operated in conjunction therewith within the state and on or before the third Monday of June transmit to the several boards of supervisors the valuation thereof.

B. On or before the first Monday in June the department shall determine the valuation of all patented and unpatented mines which were producing mines on the first Monday in January of any of the three preceding tax years but which are no longer producing mines. The department shall value such non-producing mines for a period of three tax years subsequent to the tax year in which production terminated.

C. The department shall determine the valuation of all producing oil, gas and geothermal resource interests within the state in the manner provided in sections 42-227.01 through 42-227.04 and on or before the third Monday of June the department shall furnish to the board of supervisors of the county in which oil or gas has been produced the valuation of the oil, gas or geothermal resource interests of each producer for each of his properties in the county as of January 1 of the year.

D. After the determination of the valuation of any producing oil, gas or geothermal resource interest and before certification of the valuation to the county the department may on the application of the producer, or on its own motion, change the valuation to properly reflect the gross yield therefrom.

Conference Engrossed

State of Arizona  
Senate  
Forty-fourth Legislature  
Second Regular Session  
2000

CHAPTER 249

## SENATE BILL 1372

AN ACT

AMENDING SECTIONS 1-261 AND 9-201, ARIZONA REVISED STATUTES; AMENDING TITLE 9, CHAPTER 2, ARTICLE 3, ARIZONA REVISED STATUTES, BY ADDING SECTION 9-232.04; AMENDING SECTIONS 9-273, 9-472, 9-473, 9-823, 16-135, 16-137, 16-165, 16-166, 16-168, 16-202, 16-204, 16-311, 16-312, 16-314, 16-322, 16-341, 16-411, 16-445, 16-461, 16-462, 16-466, 16-502, 16-508, 16-509, 16-514, 16-547 AND 16-548, ARIZONA REVISED STATUTES; PROVIDING FOR A DELAYED REPEAL OF SECTION 16-613, ARIZONA REVISED STATUTES; AMENDING SECTIONS 16-1018, 19-125 AND 19-209, ARIZONA REVISED STATUTES; RELATING TO ELECTION PROCEDURES.

(TEXT OF BILL BEGINS ON NEXT PAGE)



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1 following column or page, and insofar as may be practicable, the same number  
2 of names shall be printed on each column or page.

3 D. In primary and nonpartisan elections the names of candidates for  
4 each office shall appear on the ballot or ballot labels so that each  
5 candidate occupies each position on the ballot or ballot labels substantially  
6 the same number of times insofar as may be practicable. If there are fewer  
7 or the same number of candidates seeking office than the number to be  
8 elected, rotation of names shall not be required and the names shall be  
9 placed in alphabetical order.

10 E. In primary elections for a judicial office if there are two or more  
11 candidates of the same political party their names shall be alternated on the  
12 ballots so that the name of each candidate shall appear substantially an  
13 equal number of times in each possible location on the ballot.

14 F. Two sample ballots, which shall be facsimile copies of the official  
15 ballot or ballot labels, shall be provided for each polling place and shall  
16 be posted on election day as provided for paper ballots. Sample ballots may  
17 be printed on a single page or on a number of pages stapled together.

18 Sec. 25. Section 16-502, Arizona Revised Statutes, is amended  
19 effective from and after August 31, 2000, to read:

20 16-502. Form and contents of ballot

21 A. Ballots shall be printed with black ink on white paper of  
22 sufficient thickness to prevent the printing thereon from being discernible  
23 from the back, and the same type shall be used for the names of all  
24 candidates. The ballots shall be headed "official ballot" in bold-faced  
25 plain letters, with a heavy rule above and below the heading. Immediately  
26 below shall be placed the words "TYPE OF election, (date of election)", ~~and~~  
27 ~~alongside these words shall be placed~~ the name of the county and STATE IN  
28 WHICH THE ELECTION IS HELD. The name or number of the precinct in which the  
29 election is held SHALL BE PLACED ON THE BALLOT IN A UNIFORM LOCATION FOR ALL  
30 BALLOTS. No other matter shall be placed or printed at the head of any  
31 ballot, except above the heading there shall MAY be a stub which shall  
32 contain THAT CONTAINS the words "stub no. \_\_\_\_\_, register no. \_\_\_\_\_, to be  
33 torn off by inspector." The stub shall be separated from the ballot by a  
34 perforated line, so that it may be easily detached from the ballot.  
35 INSTRUCTIONS TO THE VOTER ON MARKING THE BALLOT MAY BE PRINTED BELOW THE  
36 HEADING. The official ballots shall be bound together in blocks of not less  
37 than five nor more than one hundred.

38 B. Immediately below the ballot heading shall be placed the following:

39 "Section One

40 Partisan Ballot

41 1. Put a mark ~~in the square after~~ ACCORDING TO THE  
42 INSTRUCTIONS NEXT TO the name of each candidate for each  
43 partisan office for whom you wish to vote.

44 2. If you wish to vote for a person whose name is not  
45 printed on the ballot, write such name in the blank space  
46 ~~opposite the office for which he is a candidate~~ PROVIDED ON THE

S.B. 1372

1           BALLOT OR WRITE-IN ENVELOPE and put a mark ~~in the square~~  
2           ~~opposite~~ ACCORDING TO THE INSTRUCTIONS NEXT TO the name so  
3           written."

4           C. Immediately below the instructions for voting in section one there  
5 shall be placed, ~~in columns,~~ the names of the candidates of the several  
6 political parties. ~~At the top of each column~~ NEXT TO EACH CANDIDATE'S NAME  
7 THERE shall be printed, ~~in bold-faced letters,~~ the name of the political  
8 party. ~~Below the columns and running across the ballot there shall be a~~  
9 ~~heavy line, and below the line shall be printed in each column the names of~~  
10 ~~the candidates of each of the political parties for the several offices. At~~  
11 ~~the left of the several columns shall be printed the heading "name of office~~  
12 ~~to be voted for", and below and in regular order~~ AT THE HEAD OF EACH COLUMN  
13 SHALL BE PRINTED the names of the offices to be filled with the name of each  
14 office being of uniform type size. At the head of each column shall be  
15 printed in the following order the names of candidates for:

- 16           1. Presidential electors.
- 17           2. United States senator.
- 18           3. Representatives in congress.
- 19           4. The several state offices.
- 20           5. The several county and precinct offices.

21           D. The names of candidates for the offices of state senator and state  
22 representative along with the district number shall be placed ~~among the~~  
23 ~~candidates~~ WITHIN THE HEADING OF EACH COLUMN TO THE RIGHT OF THE OFFICE NAME  
24 for state offices and immediately below the candidates for the office of  
25 governor. The number of the supervisorial district of which a candidate is a  
26 nominee shall be printed ~~in brackets immediately~~ WITHIN THE HEADING OF EACH  
27 COLUMN to the right of the name of ~~each candidate for supervisor~~ THE OFFICE.

28           E. The lists of the candidates of the several parties shall be  
29 arranged with the names of the parties in descending order according to the  
30 votes cast for governor for that county in the most recent general election  
31 for the office of governor, commencing with the left-hand column. In the  
32 case of political parties which did not have candidates on the ballot in the  
33 last general election, such parties shall be listed in alphabetical order ~~to~~  
34 ~~the right of~~ BELOW the parties which did have candidates on the ballot in the  
35 last general election. The names of all candidates nominated under the  
36 provisions of section 16-341 shall be placed in a single column ~~at the right~~  
37 ~~of the party columns and shall bear the heading in bold faced type: "Other~~  
38 ~~candidates", and immediately under such heading the words: "Vote separately~~  
39 ~~for each office."~~ BELOW THAT OF THE RECOGNIZED PARTIES. ~~Immediately above~~  
40 NEXT TO the name of each candidate, in parenthesis, shall be printed the  
41 designation NOT TO EXCEED THREE WORDS IN LENGTH AS prescribed in the  
42 candidate's certificate of nomination.

43           F. Immediately below the designation of the office to be voted for  
44 shall appear the words: "Vote for not more than \_\_\_\_\_" (insert the number  
45 to be elected).

S.B. 1372

1 G. In each column at the right of the name of each candidate and on  
2 the same line there shall be ~~an eighteen point square~~ A PLACE FOR THE VOTER  
3 TO PUT A MARK. Below the name of the last named candidate for each office  
4 there shall be as many blank lines as there are offices of the same title to  
5 be filled, ~~with a square after each line~~ WITH A PLACE FOR THE VOTER TO PUT A  
6 MARK UNLESS WRITE-IN ENVELOPES ARE PROVIDED FOR THAT PURPOSE. Upon the blank  
7 line the voter may write the name of any person for whom he desires to vote  
8 whose name is not printed, and ~~in the square opposite~~ NEXT TO the name so  
9 written he shall designate his choice by a mark as in the case of printed  
10 names.

11 H. When there are two or more candidates of the same political party  
12 for the same office, or more than one candidate for a judicial office, the  
13 names of all such candidates shall be so alternated on the ballots used in  
14 each election district that the name of each candidate shall appear  
15 substantially an equal number of times in each possible location. If there  
16 are fewer or the same number of candidates seeking office than the number to  
17 be elected, the rotation of names is not required and the names shall be  
18 placed in alphabetical order.

19 I. Immediately below section one of the ballot shall be placed the  
20 following:

21 "Section Two

22 Nonpartisan Ballot

23 1. Put a mark ~~opposite~~ ACCORDING TO THE INSTRUCTIONS NEXT  
24 TO the name of ~~the~~ EACH candidate for each nonpartisan office  
25 for ~~which~~ WHOM you wish to vote.

26 2. If you wish to vote for a person whose name is not  
27 printed on the ballot, write such name in the blank space  
28 ~~opposite the office for which he is a candidate~~ PROVIDED ON THE  
29 BALLOT OR WRITE-IN ENVELOPE and put a mark ~~in the square~~  
30 ~~opposite~~ ACCORDING TO THE INSTRUCTIONS NEXT TO the name so  
31 written.

32 3. Put a mark ~~in the square preceded by~~ ACCORDING TO THE  
33 INSTRUCTIONS NEXT TO the word 'yes' (or for) for each  
34 proposition or question you wish to be adopted. Put a mark ~~in~~  
35 ~~the square preceded by~~ ACCORDING TO THE INSTRUCTIONS NEXT TO the  
36 word 'no' (or against) for each proposition or question you wish  
37 not to be adopted."

38 J. Immediately below the instructions for voting in section two shall  
39 be placed the names of the candidates for justice of the supreme court,  
40 judges of the court of appeals, judges of the superior court, school district  
41 officials and other nonpartisan officials in a column or in columns without  
42 partisan or other designation except the title of office in an order  
43 determined by the officer in charge of the election.

44 K. Immediately below the offices listed in subsection J of this  
45 section, the ballot shall contain a separate heading of any nonpartisan

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1 office for a vacant unexpired term and shall include the expiration date of  
2 the term of the vacated office.

3 L. All proposed constitutional amendments and other propositions or  
4 questions to be submitted to the voters shall be printed immediately below  
5 the names of candidates for nonpartisan positions in such order as the  
6 secretary of state, or if a city or town election, the city or town clerk,  
7 designates. **PLACEMENT OF COUNTY AND LOCAL CHARTER AMENDMENTS, PROPOSITIONS**  
8 **OR QUESTIONS SHALL BE DETERMINED BY THE OFFICER IN CHARGE OF THE ELECTION.**  
9 Except as provided by section 19-125, each proposition or question shall be  
10 followed by the words "yes" and "no" or "for \_\_\_\_\_" and "against \_\_\_\_\_" as  
11 the nature of the proposition or question requires, and at the right of and  
12 ~~opposite~~ NEXT TO each of such words shall be ~~placed a square of the size of~~  
13 ~~those placed~~ A PLACE FOR THE VOTER TO PUT A MARK ACCORDING TO THE  
14 INSTRUCTIONS THAT IS SIMILAR IN SIZE TO THOSE PLACES APPEARING opposite the  
15 names of the candidates, in which the voter may indicate his vote for or  
16 against such proposition or question by a mark as defined in section 16-400.

17 M. **INSTEAD OF PRINTING THE OFFICIAL AND DESCRIPTIVE TITLES OR THE FULL**  
18 **TEXT OF EACH MEASURE OR QUESTION ON THE OFFICIAL BALLOT, THE OFFICER IN**  
19 **CHARGE OF ELECTIONS MAY PRINT PHRASES ON THE OFFICIAL BALLOT THAT CONTAIN ALL**  
20 **OF THE FOLLOWING:**

21 1. THE NUMBER OF THE MEASURE IN REVERSE TYPE AND AT LEAST TWELVE POINT  
22 TYPE.

23 2. THE DESIGNATION OF THE MEASURE AS PRESCRIBED BY SECTION 19-125,  
24 SUBSECTION C OR AS A QUESTION, PROPOSITION OR CHARTER AMENDMENT, FOLLOWED BY  
25 THE WORDS "RELATING TO..." AND INSERTING THE SUBJECT.

26 3. EITHER THE STATEMENT PRESCRIBED BY SECTION 19-125, SUBSECTION D  
27 THAT DESCRIBES THE EFFECTS OF A "YES" VOTE AND A "NO" VOTE OR, FOR OTHER  
28 MEASURES, THE TEXT OF THE QUESTION OR PROPOSITION.

29 4. THE WORDS "YES" AND "NO" OR "FOR" AND "AGAINST", AS MAY BE  
30 APPROPRIATE AND A PLACE FOR THE VOTER TO PUT A MARK.

31 N. FOR ANY BALLOT PRINTED PURSUANT TO SUBSECTION M OF THIS SECTION,  
32 THE INSTRUCTIONS ON THE OFFICIAL BALLOT SHALL DIRECT THE VOTER TO THE FULL  
33 TEXT OF THE OFFICIAL AND DESCRIPTIVE TITLES AND THE QUESTIONS AND  
34 PROPOSITIONS AS PRINTED ON THE SAMPLE BALLOT AND POSTED IN THE POLLING PLACE.

35 Sec. 26. Section 16-508, Arizona Revised Statutes, is amended  
36 effective from and after August 31, 2000, to read:

37 16-508. Number of ballots furnished each polling place  
38 There shall be furnished ~~to each polling place at~~ FOR EACH PRECINCT IN  
39 which an election is to be held, a number of EARLY BALLOTS AND printed  
40 ballots exceeding by at least ~~two~~ ONE per cent the number of registered  
41 voters whose names appear on the precinct register of the precinct, city,  
42 town or district for which the ballots are printed.

43 Sec. 27. Section 16-509, Arizona Revised Statutes, is amended  
44 effective from and after August 31, 2000, to read:

45 16-509. Delivery of ballots to election officers

AZ H.R. Comm. Min., 3/1/2000

Arizona Committee Minutes, March 1, 2000

March 1, 2000

Arizona House of Representatives Committee on Judiciary  
Forty-fourth Legislature, Second Regular Session, 2000

Minutes of Meeting

Wednesday, March 1, 2000

House Hearing Room 3 - 1:30 p.m.

(Tape 1, Side A)

Chairman Jarrett called the meeting to order at 1:40 p.m. and attendance was noted by the secretary.

**Members Present**

Mr. Brotherton	Miss Voss	Mrs. Binder, Vice Chairman
Mr. Hart	Ms. Weason	Mrs. Jarrett, Chairman
Mr. Loredó	Mr. Wong	

**Members Absent**

Mrs. Gerard (excused)

**Committee Action**

S.B. 1372 - DP (8-0-0-1)

S.B. 1353 - DPA (7-0-1-1)

S.B. 1249 - DP (6-1-0-2)

**Speakers Present**

Elizabeth Hatch, Majority Research Analyst

Karen Osborne, Director of Elections, Maricopa County

Senator Marc Spitzer, sponsor

Names of people recognized by Chairman Jarrett who appeared in support of S.B. 1372 but did not speak (page 3)

Jodi Jerich, Majority Research Analyst

Jerry Landau, Special Assistant, Maricopa County Attorney's Office

Names of people recognized by Chairman Jarrett who appeared in support of S.B. 1353 but did not speak (page 4)

Emily Schubert, Majority Intern

Guest List (Attachment 1)

CONSIDERATION OF BILLS:

S.B. 1372, election laws; procedures; DO PASS

Elizabeth Hatch, Majority Research Analyst, advised that S.B. 1372 makes numerous changes to the statutes regarding elections (Attachment 2). She reviewed the major provisions of the bill:

- Allows a person to withdraw their signature from an initiative or referendum petition by drawing a line through their signature.
- Allows the county recorder to cancel the registration of a person convicted of a felony.
- Allows individuals who are not members of State recognized parties to sign partisan nominating petitions.
- Allows color striping of ballots and other changes to accommodate optical scanning equipment.
- Allows tag lines on ballots that indicate the effect of a yes or no vote.
- Reduces the number of ballots to be printed from 102 percent of the voter registration plus early voting to 101 percent of registered voters.
- Eliminates the requirement that the Secretary of State transmit to the Board of Supervisors notice of the local officers being elected at the primary election.
- Requires candidates to file simultaneously with the relevant elections officer their nominating petition, their statement of organization and their financial disclosure statement.

Ms. Weason asked whether the bill allows individuals who are not of the two major parties to sign partisan petitions. She wondered if this will allow Independents to sign. Ms. Hatch replied in the affirmative.

Ms. Weason queried whether Libertarians are able to sign a Democratic petition. Ms. Hatch replied in the negative.

Chairman Jarrett asked whether the Reform Party is qualified for the ballot this year. Ms. Hatch answered that they are not qualified yet.

In response to Vice Chair Binder, Ms. Hatch said she believes these changes come from the County Recorders Office.

Karen Osborne, Director of Elections, Maricopa County, testified that S.B. 1372 comes from all 15 County Recorders and all 15 Election Directors. The changes help the County Recorders and Election Directors do a better job and save public money.

Senator Marc Spitzer, sponsor, advised he has worked on election matters over the past few years. He said he looks to the County Recorders to provide feedback on areas that could be improved. One example is that there has been some concern about moving the filing from the end of June to June 15. The reason for this change is that challenges to petitions were not being handled in time for review by the courts for the September ballot.

Vice Chair Binder questioned how this will affect some of the rural areas who are not doing electronic elections. Ms. Osborne explained that areas on punch cards will continue to function with punch card rules, while allowing for electronic scanning.

Chairman Jarrett announced that she had Request to Speak forms from the following people who are in favor of Senate Bill 1372:

Helen Purcell, Maricopa County Recorder

Jessica Funkhouser, State Election Director, Secretary of State

Tonia Garrett, Government Affairs Manager, Arizona Association of Counties

**Vice Chair Binder moved that S.B. 1372 do pass. The motion carried by a roll call vote of 8-0-0-1 (Attachment 3).**

S.B. 1353, DNA testing; felony offenders - DO PASS AMENDED

Jodi Jerich, Majority Research Analyst, explained that S.B. 1353 expands the lists of crimes for which a convicted defendant shall submit a deoxyribonucleic acid (DNA) sample to include all homicide crimes, burglary in the first and second degree, and crimes involving the discharge, use or threatening exhibition of a deadly weapon or the intentional or the knowing infliction of serious physical injury (Attachment 4). She said there is a two-year phase-in for this testing. Currently, Arizona requires DNA testing for all convicted sex offenders.

Ms. Jerich advised that the Jarrett six-line amendment dated 2/29/00 is merely technical.

Senator Marc Spitzer, sponsor, stated that he feels this is one of the most important bills to be considered this year. He said technology innovations have greatly promoted the administration of justice. DNA testing can be used to convict the guilty and exculpate the innocent. He opined that DNA will revolutionize crime solving.

Miss Voss advised that she is uncomfortable with the bill. She said she does not understand why the same thing is imposed for murder as for property crime. Senator Spitzer declared that the courts have upheld DNA testing. The law enforcement community believes it will solve crimes by establishing a DNA database. It will help to solve unsolved crimes.

Miss Voss said she is curious to know what kind of technology allows DNA to show that a gun trigger was not pulled. Senator Spitzer said that in most trials, there is some other physical evidence to take DNA from. He maintained that DNA testing is a huge step forward in terms of restoration of justice. He urged Members to move this bill forward.

Mr. Brotherton pointed out that this bill covers some misdemeanor offenses. Senator Spitzer clarified that it is only within the sex offender classification. He declared that expanding DNA testing makes sense.

Mr. Hart said he can see how DNA testing can prove a person was at the scene of a crime, but he does not understand how it can prove that a person was at the scene of a crime at the time the crime was committed. Senator Spitzer reiterated that additional evidence is needed.

In reply to Miss Voss, Senator Spitzer related that the bill requires that a person be convicted.

Jerry Landau, Special Assistant, Maricopa County Attorney's Office, expressed support of S.B. 1353. He declared that there is a trend around the country to take DNA samples from persons convicted of serious crimes. He urged support of this legislation.

Mr. Brotherton asked whether there is any judicial discretion for a misdemeanor. Mr. Landau said he does not believe so, but he would have to look at the code. He said he will get that information.

Mr. Brotherton queried what is done with the data and who has access to the information. He asked whether DNA information can be used for other purposes. Mr. Landau divulged that the information is kept in the crime lab. The prosecutor and defense attorneys can access it but it is not available to others who request it.

Miss Voss asked whether DNA testing is used for any other purpose. Mr. Landau replied in the negative. He said it is used for the inclusion or exclusion of criminal activity.

Chairman Jarrett announced that she had Request to Speak forms from the following people who are in favor of Senate Bill 1353:

John Blackburn, Special Assistant, Maricopa County Attorney's Office and Arizona

Sheriffs Association

Rick Knight, Lieutenant, Arizona Department of Public Safety

Todd Griffith, Scientific Analysis Superintendent, Arizona Department of Public Safety

John Blackburn, Jr., Lieutenant, Mesa Police Department

Ed Cook, Executive Director, Arizona Prosecuting Attorneys' Advisory Council (APAAC)

**Vice Chair Binder moved that S.B. 1353 do pass.**

**Vice Chair Binder moved that the Jarrett six-line amendment dated 2/29/00 be adopted (Attachment 5).**

Mr. Brotherton asked how the amendment changes things. Ms. Jerich related that the amendment is purely technical. She said the Joint Legislative Budget Committee (JLBC) advised that without the amendment there would be a blending problem.

**Question was called for on the Binder motion that the Jarrett six-line amendment dated 2/29/00 be adopted (Attachment 5). The motion carried.**

**Vice Chair Binder moved that S.B. 1353 as amended do pass. The motion carried by a roll call vote of 7-0-1-1 (Attachment 6).**

S.B. 1249, certified court reporters board - DO PASS

Emily Schubert, Majority Intern, explained that S.B. 1249 makes several changes and adds clarifying language to Title 32, Chapter 40 establishing the Board of Certified Court Reporters in order to better delineate the duties of the Board and the Supreme Court (Attachment 7).

**Vice Chair Binder moved that S.B. 1249 do pass. The motion carried by a roll call vote of 6-1-0-2 (Attachment 8).**

Without objection, the meeting adjourned at 2:30 p.m.

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Joanne Bell, Committee Secretary

(Original minutes, attachments and tape on file in the Chief Clerk's Office)

AZ H.R. Comm. Min., 3/1/2000

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End of Document

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Assigned to JUD  
SENATE

AS PASSED BY THE

***ARIZONA STATE SENATE***  
***Phoenix, Arizona***

**FINAL REVISED**  
**FACT SHEET FOR S.B. 1372**

election laws; procedures

Purpose

An emergency measure that makes numerous changes to election laws.

Background

State and county election officials regularly identify areas of election law to be modified to promote efficiency and to avoid duplication of duties. Officials throughout the state desire a variety of statutory election procedures be altered.

Currently, the Secretary of State is required to transmit to the board of supervisors a notice designating all of the offices that are to be elected at the primary election, although only state and federal candidates file paperwork with the Secretary of State -- not local candidates.

If individuals wish to remove their names from an initiative petition, they often will put a line through their names on the petition. However, because of a lack of statutory authority to reject signatures that have been lined through, superior court cases have forced them to be counted. State law currently requires that an individual sign a statement of intent at the office of the receiving officer, or mail a signed, notarized statement to remove the individual's name from a petition.

New open primary law allows voters who are not registered in a recognized party to vote in primary elections but does not currently allow them to sign petitions for partisan candidates. Additionally, the federal district court in Tucson has determined that any voter who resides in the district that a candidate seeks to represent, regardless of the voter's party affiliation, can sign a petition for a candidate that is not affiliated with a party recognized by the state.

Early voting requests include an opportunity for voters to provide change of address information. Currently, permission through an additional registration form is required in law for the recorder to change the voter file to reflect the address change based on the early voting request. Likewise, forms verifying ballots because of a voter's change of name contain related voter information.

It is currently required that a list of polling places be made available to the public at least 80 days before an election. However, county recorders say it is not always possible to determine all polling places by the 80-day deadline.

Current law requires that a number of ballots equal to 102 percent of voter registration plus the ballots necessary for early voting be printed. In some cases, this results in a printing of 145 percent of the number of

EX2-0035

registered voters. On the other hand, election turn-out is as low as 3 percent but rarely exceeds 60 percent, leaving a great number of excess ballots.

The Supreme Court decision of *County of Cochise v. Pacuilla* states that the voter only need be registered in the county and that a street address is not required in the affidavit that is signed by an early voter.

There is no fiscal impact to the state general fund.

### Provisions

1. Allows individuals to remove their names from petitions by lining through them.
2. Allows towns to elect to be governed by a district system without having to become a city first.
3. Specifies procedures for updating voter registration address and name information.
4. Requires county recorders to remove from the voter registration rolls those who indicate on jury questionnaires that they are convicted felons who have not had their civil rights restored.
5. Alters, from four years to two federal elections, the period of time that must elapse before a county recorder can purge a voter from the inactive file.
6. Prohibits posting of precinct register information on the Internet without prior voter approval.
7. Increases the criminal classification for improper use of a precinct register from a class 2 misdemeanor to a class 6 felony.
8. Eliminates the requirement that the Secretary of State transmit to the board of supervisors notice of local offices being elected at the primary election.
9. Defers to federal election regulations as applicable to candidates in Arizona running for federal office.
10. Requires candidates to file simultaneously, with the relevant election officer, their nomination petition, statement of organization (or the \$500 threshold exception statement) and financial disclosure statement.
11. Allows individuals who are not members of state-recognized parties to sign partisan nominating petitions.
12. Requires presidential candidates in the general election to list their running mate and electors for inclusion on the ballot.
13. Establishes a requirement of ten nomination petition signatures for precinct committeemen nominees or the current two percent of the party voter registration in that precinct, whichever is less.
14. Allows county recorders to use information provided on early voting requests and other election materials to update voter files.
15. Eliminates the requirement that county recorders make available to the public, at least 80 days prior to an election, the location of polling places. The federal deadline serves as the default deadline.
16. Extends from one week before an election to two weeks before an election the deadline for counties to file with the Secretary of State computer election tabulation programs.
17. Requires county party chairmen to provide changes to the sample ballot within five days of receiving the draft copy.

EX2-0036

18. Allows color striping of ballots to identify political parties and other alterations to accommodate optical scanning technology.
19. Allows tag lines on ballots that indicate the effect of yes or no votes, while still requiring more in depth analysis to be available at the polling place.
20. Reduces the required number of ballots to be printed from 102 percent of precinct voter registration for each polling place to 101 percent of registered voters for each precinct inclusive of early ballots already printed.
21. Allows delivery of ballots directly to the precinct rather than to the election inspector.
22. Eliminates the requirement that a precinct designation be included in an early voter affidavit.
23. Requires voters to put a mark next to write-in candidates to vote for them.
24. Repeals the law that prohibits tabulation of ballots that can be identified as coming from a particular voter.
25. Creates a committee comprised of legislators and members of the public to study issues relating to availability of voter registration information, including making such information available on the Internet.
26. Eliminates obsolete language.
27. Makes technical and conforming changes.
28. Contains an emergency clause but delays the effective date until September 1, 2000 for all provisions except the study committee and the prohibition against posting precinct register information on the Internet without voter approval.

#### Amendments Adopted by Committee

1. Makes changes related to candidates for federal office.

#### Amendments Adopted by Committee of the Whole

1. Replaces the term "ward" with the term "district" throughout the cities' and towns' title of the code.
2. Allows towns to elect to be governed by a district system without having to become a city first.
3. Eliminates the requirement that write-in candidates submit a nomination petition.
4. Eliminates the ability of people from recognized parties to sign partisan nomination petitions for candidates of a different recognized party.

#### Amendments Adopted by the House of Representatives

1. Establishes a requirement of ten nomination petition signatures for precinct committeemen nominees or the current two percent of the party voter registration in that precinct, whichever is less.
2. Allows political committees to request precinct registers.
3. Changes the cost of an electronic version of the precinct register from ten cents a name to \$50 plus 50 cents for each 1000 names for counties with populations of less than 400,000 persons; and the greater of \$100 or

50 cents for each 1000 names for counties with populations of more than 400,000 persons. This generally decreases the cost of obtaining a precinct register.

- 4. Increases the criminal classification for improper use of a precinct register from a class 2 misdemeanor to a class 6 felony.
- 5. Makes technical changes.

Amendments Adopted by Conference Committee

- 1. Eliminates the House changes regarding precinct registers in favor of a study committee.
- 2. Prohibits posting of voter information on the Internet without prior voter approval.
- 3. Adds an emergency clause to the bill, but delays implementation of most provisions until September 1, 2000.

Senate Action

House Action

JUD	2/1/00	DPA	8-0-1	JUD	2/28/00	DP	8-0-0-1-0
3 <sup>rd</sup> Read	2/23/00		30-0-0	3 <sup>rd</sup> Read	3/20/00		57-2-1-0
Final Read	4/10/00		27-2-1-0	Final Read	4/10/00		43-15-2-0

Signed by Governor 4/13/00  
Chapter 249 E

Prepared by Senate Staff  
May 12, 2000

Senate Final Reading - SB1372

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Action Date		Action		Vote		Emergency	
04/10/2000		Passed		27-2-1-0-0		Emergency	
AGUIRRE	Y	CUMMISKEY	Y	HARTLEY	N	RIOS P	Y
ARZBERGER	Y	CUNNINGHAM	Y	HUPPENTHAL	Y	SMITH	Y
BEE	NV	DAY	Y	JACKSON	Y	SOLOMON	Y
BENNETT	Y	FREESTONE	Y	LOPEZ	N	SOLTERO	Y
BOWERS	Y	GNANT	Y	MITCHELL	Y	SPITZER	Y
BROWN	Y	GRACE	Y	PETERSEN	Y	WETTAW	Y
BUNDGAARD	Y	GUENTHER	Y	RICHARDSON	Y	BURNS B	Y
CIRILLO	Y	HAMILTON	Y				

House Final Reading - SB1372

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Action Date		Action		Vote			
04/10/2000		Passed		43-15-2-0-0		Emergency	
ALLEN	NV	DUNBAR	Y	HUFFMAN	Y	MIRANDA	Y
ANDERSON	N	FLAKE	Y	JARRETT	Y	NICHOLS	Y
AVELAR	Y	FOSTER	Y	JOHNSON	N	NORRIS	Y
BINDER	Y	GARDNER M	N	KNAPEREK	N	OVERTON	Y
BLEWSTER	Y	GARDNER W	N	KYLE	Y	PICKENS	Y
BRIMHALL	Y	GERARD	Y	LANDRUM	Y	PREBLE	Y
BROTHERTON	Y	GLEASON	Y	LAUGHTER	N	RIOS	Y
BURNS R	N	GONZALES	Y	LEFF	Y	SCHOTTEL	Y
CARDAMONE	Y	GORDON	NV	LOREDO	Y	VALADEZ	Y
CARPENTER	N	GRAY	Y	MAIORANA	N	VERKAMP	Y
CARRUTHERS	Y	GRIFFIN	Y	MARSH	N	VOSS	Y
CHEUVRONT	Y	HART	N	MAY	N	WEASON	Y
CLARK	Y	HATCH-MILLER	N	MCGIBBON	Y	WEIERS	N
COOLEY	Y	HORNE	Y	MCGRATH	Y	WONG	Y
DANIELS	Y	HORTON	Y	MCLENDON	Y	GROSCOST	N

# **EXHIBIT 3**

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA

BRIAN MECINAS, *et al.*

*Plaintiffs,*

v.

KATIE HOBBS, in her official  
capacity as Arizona Secretary  
of State,

*Defendant.*

Case No. CV-19-05547-PHX-  
DJH

**Expert Report of Sean P. Trende**

I, Sean P. Trende, do hereby declare the following:

1. I am over 18 years of age and am competent to testify regarding the matters discussed in this report.
2. My areas of expertise include political history, voting laws and procedures in the United States, redistricting, and the study of campaigns and elections.
3. I have been retained in this matter to provide an expert opinion responding to the reports of Dr. Jonathan Rodden and Dr. Jon Krosnick. All opinions contained in this report are offered to a reasonable degree of professional certainty. I am being compensated \$300 per hour for my work in this case.
4. My *curriculum vitae* is attached to this report as **Exhibit 1**.



### EXPERT CREDENTIALS

5. I have studied and followed United States elections on both a part-time and full-time basis for almost two decades.

6. I received a B.A. from Yale University in 1995, with a double major in history and political science.

7. I received a J.D. from Duke University in 2001.

8. I also received an M.A. from Duke University in 2001, in political science.

9. I received a Master's in Applied Statistics from The Ohio State University in 2019.

10. I am currently enrolled as a doctoral candidate in political science at The Ohio State University. I have completed all of my coursework and have passed comprehensive examinations in both methods and American Politics.

11. I joined RealClearPolitics in January of 2009. I assumed a fulltime position with RealClearPolitics in March of 2010. My title is Senior Elections Analyst. RealClearPolitics is a company of around 40 employees, with offices in Washington D.C. It produces one of the most heavily trafficked political websites in the world, which serves as a one-stop shop for political analysis from all sides of the political spectrum and is recognized as a pioneer in the field of poll aggregation. It produces original content, including both data analysis and traditional reporting. It is routinely cited by the most influential voices in politics, including David Brooks of *The New York Times*, Brit Hume of *Fox News*, Michael Barone of *The Almanac of American Politics*, Paul Gigot of *The Wall Street Journal*, and Peter Beinart of *The Atlantic*.

12. My main responsibilities with RealClearPolitics consist of tracking, analyzing, and writing about elections. I collaborate in rating the competitiveness of Presidential, Senate, House, and gubernatorial races. As a part of carrying out these responsibilities, I have studied and written extensively about demographic trends in the country, exit poll data at the state and federal level, public opinion polling, and voter turnout and voting behavior.

13. I am currently the Gerald R. Ford Visiting Scholar at the American Enterprise Institute, where my publications will focus on demographic changes and American elections.

14. I served as a Senior Columnist for Dr. Larry Sabato's "Crystal Ball" from January 2014 through the end of 2016. I had to stop writing for the Crystal Ball because coursework for my Ph.D. and Master's of Applied Statistics was taking up too much of my time.

15. I am the author of *The Lost Majority: Why the Future of Government is up For Grabs and Who Will Take It*. In this book, I explore realignment theory. It argues that realignments are a poor concept that should be abandoned. As part of this analysis, I conducted a thorough analysis of demographic and political trends beginning in the 1920s and continuing through the modern times, noting the fluidity and fragility of the coalitions built by the major political parties and their candidates .

16. I also authored a chapter in Dr. Larry Sabato's *Barack Obama and the New America: The 2012 Election and the Changing Face of Politics*, which discussed the demographic shifts accompanying the 2012 elections. I further authored a chapter in Dr. Sabato's *The Surge: 2014's Big GOP Win and What It Means for the Next Presidential Election*, which discusses demographics and Electoral College shifts. I authored a chapter in Dr. Sabato's *Trumped: The 2016 Election That Broke All The Rules*. I authored a chapter in David Schultz and Rafael Jacob's

*Presidential Swing States*, covering Ohio politics and its political subdivisions. Finally, I have been asked to author a chapter for Dr. Sabato's forthcoming book on the 2018 elections.

17. I co-authored the 2014 *Almanac of American Politics*. The Almanac is considered the foundational text for understanding congressional districts and the representatives of those districts, as well as the dynamics in play behind the elections. PBS's Judy Woodruff described the book as "the oxygen of the political world," while NBC's Chuck Todd noted that "[r]eal political junkies get two *Almanacs*: one for the home and one for the office." My focus was researching the history of and writing descriptions for many of the newly-drawn districts.

18. I have spoken on these subjects before audiences from across the political spectrum, including at the Heritage Foundation, the American Enterprise Institute, the CATO Institute, the Bipartisan Policy Center, and the Brookings Institution. In 2012, I was invited to Brussels to speak about American elections to the European External Action Service, which is the European Union's diplomatic corps. I was selected by the United States Embassy in Sweden to discuss the 2016 elections to a series of audiences there, and was selected by the United States Embassy in Spain to fulfil a similar mission in 2018. I was invited to present by the United States Embassy in Italy, but was unable to do so because of my teaching schedule.

19. In the winter of 2018, I taught American Politics and the Mass Media at Ohio Wesleyan University. I taught Introduction to American Politics at The Ohio State University for three semesters from Fall of 2018 to Fall of 2019. This semester I am teaching Political Participation and Voting Behavior at The Ohio State University.

20. It is my policy to appear on any major news outlet that invites me, barring scheduling conflicts. I have appeared on both Fox News and MSNBC to discuss electoral and

demographic trends. I have been cited in major news publications, including *The New York Times*, *The Washington Post*, *The Los Angeles Times*, *The Wall Street Journal*, and *USA Today*.

21. I sit on the advisory panel for the “States of Change: Demographics and Democracy” project. This project is sponsored by the Hewlett Foundation and involves three premier think tanks: The Brookings Institution, the Bipartisan Policy Center, and the Center for American Progress. The group takes a detailed look at trends among eligible voters and the overall population, both nationally and in key states, to explain the impact of these changes on American politics, and to create population projections, which the Census Bureau abandoned in 1995. In 2018, I authored one of the lead papers for the project: “In the Long Run, We’re All Wrong,” available at <https://bipartisanpolicy.org/wp-content/uploads/2018/04/BPC-Democracy-States-of-Change-Demographics-April-2018.pdf>.

22. I previously authored an expert report in *Dickson v. Rucho*, No. 11-CVS-16896 (N.C. Super Ct., Wake County), which involved North Carolina’s 2012 General Assembly and Senate maps. Although I was not called to testify, it is my understanding that my expert report was accepted without objection. I also authored an expert report in *Covington v. North Carolina*, Case No. 1:15-CV-00399 (M.D.N.C.), which involved almost identical challenges in a different forum. Due to what I understand to be a procedural quirk, where my largely identical report from *Dickson* had been inadvertently accepted by the plaintiffs into the record when they incorporated parts of the *Dickson* record into the case, I was not called to testify.

23. I authored two expert reports in *NAACP v. McCrory*, No. 1:13CV658 (M.D.N.C.), which involved challenges to multiple changes to North Carolina’s voter laws, including the elimination of a law allowing for the counting of ballots cast in the wrong precinct. I was admitted

as an expert witness and testified at trial. My testimony discussed the “effect” prong of the Voting Rights Act claim. I did not examine the issues relating to intent.

24. I authored reports in *NAACP v. Husted*, No. 2:14-cv-404 (S.D. Ohio), and *Ohio Democratic Party v. Husted*, Case 15-cv-01802 (S.D. Ohio), which dealt with challenges to various Ohio voting laws. I was admitted and testified at trial in the latter case (the former case settled). The judge in the latter case ultimately refused to consider one opinion, where I used an internet map-drawing tool to show precinct locations in the state. Though no challenge to the accuracy of the data was raised, the judge believed I should have done more work to check that the data behind the application was accurate.

25. I served as a consulting expert in *Lee v. Virginia Board of Elections*, No. 3:15-cv-357 (E.D. Va. 2016), a voter identification case. Although I would not normally disclose consulting expert work, Perkins Coie represented the plaintiffs in that case as well, and I was asked by defense counsel to sit in the courtroom during the case and review testimony. I would therefore consider my work *de facto* disclosed.

26. I authored two expert reports in *Feldman v. Arizona*, No. CV-16-1065-PHX-DLR (D. Ariz.). Plaintiffs in that case challenged an Arizona law prohibiting the collection of voted ballots by third parties that were not family members or caregivers and the practice of most of the state's counties to require voters to vote in their assigned precinct. My reports and testimony were admitted. Part of my trial testimony was struck in that case for reasons unrelated to the merits of the opinion; counsel for the state elicited it while I was on the witness stand and it was struck after Plaintiffs were not able to provide a rebuttal to the new evidence.

27. I authored expert reports in *A. Philip Randolph Institute v. Smith*, No. 1:18-cv-00357-TSB (S.D. Ohio), *Whitford v. Nichol*, No. 15-cv-421-bbc (W.D. Wisc.), and *Common Cause v. Rucho*, NO. 1:16-CV-1026-WO-JEP (M.D.N.C.), which were efficiency gap-based redistricting cases filed in Ohio, Wisconsin and North Carolina.

**I. Dr. Rodden’s Data Do Not Suggest a Strong Relationship Between Ballot Order and Vote Share**

28. First, I was asked by counsel to investigate and opine upon the opinions expressed in the “Expert Report of Jonathan Rodden, PhD” [hereinafter “Rodden Report”].

29. This section of my report discusses two problems with the Rodden Report. First, the regressions in the Rodden Report include an odd set of covariates, and the findings are sensitive to this selection of covariates. Second, the analysis fails to account for the fact that there are not really 2,129 independent elections. Instead, these elections share dependencies across space and time, and are more appropriately characterized as 15 clusters of data (counties) measured dozens of times.

**A. The Rodden Report’s findings are sensitive to model selection.**

Utilizing different variables

30. The Rodden Report finds an estimated effect of Republicans appearing first on the ballot of .022, suggesting that, after controlling for other variables, a Republican candidate who appeared first on the ballot would be expected to perform 2.2 percentage points better than one who did not. The reported p-value for this test is .003, suggesting that the data we observe would be very unlikely to occur if there were no relationship between ballot order and outcomes.<sup>1</sup>

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<sup>1</sup> P-values are further discussed in Paragraphs 37-40.

31. The Rodden Report controls for the following variables: ballot position, incumbency, the share of registered voters in the county who are Republican, the log population density, the share of the county population that is Native American, the share of the county population that are renters, the office sought and the year in which the election occurs.

32. It is not clear why the Rodden Report includes the control for office, given that there's no intrinsic reason a Republican should do worse in, say, the Mine Inspector race than in the Attorney General race. Yet the regression analysis finds a statistically significant result for Mine Inspector and for President (taking Attorney General as the reference category) so it makes some sense to include the data.<sup>2</sup>

33. More questionable is the Rodden Report's decision to exclude datapoints that most analysts would agree are important to understanding contemporary voting behavior: age and race. The Rodden Report justifies the exclusion of white voters on the grounds that there are multicollinearity issues with the Native American variable, which is clearly true.<sup>3</sup> It is unclear, however, why the Hispanic share of a county's population and the African American share of the

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<sup>2</sup> Regression analyses are often performed with a set of indicator variables – this is, variables assigned a “1” if the group is included in the category and a “0” if it is not. So, for example, this analysis includes a set of indicator variables for office sought. If an observation is taken from a gubernatorial election, it would get a “1” there, and a “0” in all other offices. If an observation is taken from a treasurer election, it gets a “1” there and a “0” for all other offices, and so forth. For mathematical reasons beyond the scope of this report, one category must be left out, such that some of your observations receive only zeroes in the coding. This category is often referred to as the “reference category” or “reference grouping.” All other indicator variables from this group are interpreted with reference to the excluded group. So, if Mine Inspector is the reference category, then a coefficient of, say, .02 for state senate races suggests that Republicans in general run two points better in state senate races than races for Mine Inspector. See Michael H. Kutner et al, *Applied Linear Regression Models*, 314-19 (4th ed. 2004).

<sup>3</sup> Multicollinearity refers to two predictor variables that are strongly related to one another. For example, as the Native American share of a county increases, the non-Hispanic white share of the county decreases. This can affect the standard errors of predictors.

county's population would be excluded since they do not present similar issues, especially since the data were included in Dr. Rodden's underlying dataset. Likewise, given that younger voters are more likely to vote Democratic than older voters, it is unclear why the Rodden Report would not include the data provided for them. In addition, the decision to include the share of the population that are renters is unusual. In my experience, elections analysts find that age, race, ethnicity and whether a person resides in an urban or rural area (expressed here roughly through the population density variable) is relevant to voting behavior. *See, e.g.,* Sidney Verba, Kay Lehman Schlozman, & Henry E. Brady, *Voice & Equality: Civic Voluntarism in American* ch. 8 (1995) (examining participation through the lens of race, ethnicity and gender); *id.* ch. 15 (examining participatory factors through education, gender, race, ethnicity, education, religiosity, and level of employment); M.V. Hood III & Seth C. McKee, "Stranger Danger: Redistricting, Incumbent Recognition and Vote Choice," 91 *Social Science Quarterly* 344 (2010) (controlling for party identification, ideology, religion, prior voting, age, income, education, marital status, and gender); Kathy Cramer, *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker* (2016) (describing growing rural-versus-urban divide). There is not a well-established renter-versus-owner divide. This does not mean that one should not try the variable out, nor does it suggest that no one has ever included this variable in peer-reviewed literature. It would simply be an odd choice to include, especially at the expense of other variables.

34. As a check on these findings, I replicated the Rodden Report's regression analysis. I included all of his suggested variables, then added the relevant three variables to account for ethnicity, race and age: "hispsshare" "blackshare" and "age18\_30\_share."



35. When we include these predictors, the estimated advantage for a Republican candidate appearing first on a general election ballot in Arizona is 1.2 points. The p-value, however, is 0.12. This means that the conclusion is not significant at traditional levels of significance, especially for a design with (theoretically) more than 2,000 observations. *See infra* ¶¶37-¶40 (discussing p-values more thoroughly). This means that, had the Rodden Report included these common variables, it would not have returned a statistically significant result.

36. In addition, when we include the Hispanic, African American and age variables, renter share is no longer significant ( $p = 0.8$ ). Nor is the share of a county's population that is Native American ( $p = 0.35$ ). Following Dr. Rodden's suggestion to remove variables that are not statistically significant because they add noise, *see* Rodden Report at 18, I dropped Dr. Rodden's variables for the share of a county's population that are renters and Native American. The remaining countywide variables are all statistically significant. Ballot order remains not statistically significant ( $p = 0.12$ ); therefore, under standard social science analysis we would not conclude that there is a relationship between ballot order and vote share. [Table 2]<sup>4</sup> In the bigger picture, it does appear that the conclusions here are sensitive to the analyst's choice of covariates.<sup>5</sup>

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<sup>4</sup> Full regression tables are provided at the end of the report. Their numbering therefore reflects their appearance in the report after the two tables included in the body of this report.

<sup>5</sup> Dr. Rodden may suggest in response that the positive coefficients on the racial variables suggest that the estimates are implausible. This would be a mistake. First, none of these county-level coefficients are telling us how individuals are voting; it is how the *counties* are voting. Second, these coefficients only tell us how the counties are voting *after we account for other variables*. Because of this, seemingly counterintuitive outcomes are not uncommon in regression analyses involving multiple variables.

## Interpreting p-values

37. Understanding the conclusions above requires a review of what a p-value is. The p-value tells us how likely is it that we would see the outcome that we observed (or an even more extreme outcome) if there were no relationship between ballot order and vote share, *See* George Casella & Roger L. Berger, *Statistical Inference* 397 (2d ed. 2002). As that probability gets smaller and smaller, we eventually conclude that the outcome is simply too unlikely to continue to believe that there is no relationship. *Id.*

38. Coin flipping offers a useful analogy. We generally believe coins are fair. If you flip a coin and get a head, that is not unusual; you would think nothing of the coin. If you flipped it again and got another head, that is not unusual either (this will occur about 25% of the time with a fair coin). If you flipped it two more times and get two more heads, your eyebrows would raise. That should only happen about 6% of the time. At a certain point, the outcomes become so improbable with a fairly weighted coin that you would no longer believe that the coin is fair (it is

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For example, African-American voters generally have lower turnout rates than non-Hispanic whites. But when demographic controls are put in place, turnout among African-American voters is actually higher than that of non-Hispanic whites. *See* Barry C. Burden, et al., “Election Laws, Mobilization, and Turnout: The Unanticipated Consequences of Election Reform,” 58 *Am. J. Pol. Sci.* 95, 102 (2014) (“[I]t might be surprising that African Americans are more likely to [vote]. This is not unusual, however, as several studies have shown that blacks vote at a higher rate than whites once demographic disparities are taken into account.”). Trevor Hastie, Robert Tibshirani, and Jerome Friedman, discuss a similar example in their machine learning text, *The Elements of Statistical Learning* (2d ed. 2017). After running a regression on predictors of heart disease, they note that blood pressure and obesity do not appear as statistically significant variables, and that the obesity variable has a negative sign. They explain: “[t]his confusion is a result of the correlation between the set of predictors. On their own, both sbp [blood pressure] and obesity are significant, and with a positive sign. However, in the presence of many other correlated variables, they are no longer needed (and can even get a negative sign).”

possible, to toss 100 heads in a row with a fair coin, but it is extremely unlikely; the better explanation is that the coin is weighted).<sup>6</sup>

39. Statisticians typically use the following guidelines regarding interpretation of a p-value:

- $<.01$ : very strong evidence the “null hypothesis”; in this case, that there is *not* a relationship between vote share and ballot order;
- $.01 - .05$ : strong evidence against the null hypothesis;
- $.05 - .1$ : weak evidence against the null hypothesis;
- $> .1$ : little or no evidence against the null hypothesis; in this case, little-to-no evidence that ballot order is associated with vote share.

Wasserman, Larry, *All of Statistics: A Concise Course in Statistical Inference*, 157 (2004).

40. Importantly, the p-value only tells us how probable the data are taking the null hypothesis as true: If the null were true, then we would see this sort of evidence “x” percent of the time. One *cannot*, however flip this around and claim a p-value of .12 suggests “given this data, there is a 12 percent chance the null [no relationship between Republican vote share and ballot order] is true.” One also cannot then go a step further and say that there is an 88 percent chance that the original hypothesis (a relationship exists between ballot order and vote share)

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<sup>6</sup> In reality, we would probably go quite some time before we concluded the coin was unfair. This is because many of us would in reality evaluate the evidence in light of a strongly held prior belief that coins are fairly weighted. This is a Bayesian-style analysis, and is discussed in more detail later in the report. Also, in a true frequentist experiment the number of tosses would be determined ahead of time; this example is solely to illustrate the concept of a p-value.

exists. Wasserman at 157. In statistical terms, the p-value represents an analysis of the data conditioned on the null hypothesis (more technically, a parameter estimate) being true. It is incorrect to reverse the statement, as if a researcher had conditioned on the data, and then draw conclusions about the probability of the null hypothesis being true. To use a more basic illustration, the following statement: “If a person has a pug, then they have a dog,” is true. But it would be a mistake to flip it around and say “If a person has a dog, then they have a pug.”

B. Taking account of the clustering of the data shows results that are not statistically significant.

41. This leads to the second problem with the Rodden Report. One of the fundamental assumptions of regression analysis is that the errors of observations are independent. That is to say, roughly, the portion of an observation’s outcome that can’t be explained by the regression analysis should not be partially predictable from knowing the value of other observations’ outcomes Kutner et al, *supra* n. 1, at 108-110.

42. The observations in this case almost certainly are not independent; election outcomes are often related via when and where they occur. The treatment is not applied to individual elections; rather it is applied to clusters of elections within counties. The Democratic vote share in the level at which the treatment is applied obviously has intra-cluster dependencies. An observation from Apache County provides some information regarding what the Democratic vote share will be in other observations from Apache County. While a party’s vote share in a given county changes over time, even slight correlations between observations within clusters can wreak havoc on the accuracy of values generated by regression analyses, as we will see below. Social scientists increasingly recognize that when a treatment (in this case, ballot order) is applied at a higher level than the individual observations, statistical inference must account for

the level at which the treatment is applied. Robert S. Erikson & Lorraine C. Minnite, “Modeling Problems in the Voter Identification – Voter Turnout Debate,” 8 *Election Law Journal* 85 (2009) [Exhibit 2].

43. The consequences of failing to account for “within-group” similarities can result in inaccurate conclusions. For our purposes, the most important effect is that failure to recognize data clusters artificially decreases the standard errors. See Brent R. Moulton, “Diagnostics for Group Effects in Regression Analysis,” 5 *J. Bus. & Econ. Stats.* 275, 275 (1987) (“Failure to incorporate group effects can have serious consequences including inefficient coefficient estimate and large downward bias in the standard errors, especially when estimation of the coefficients of interest relies on between-group variation.”).

44. Artificially decreasing the standard errors, or a “large downward bias in the standard errors,” *id.*, will in turn tend to overstate the significance of findings. David M. Primo, et. al, “Estimating the Impact of State Policies and Institutions with Mixed-Level Data,” 7 *State Politics & Policy Quarterly* 446, 447 (2007) (“[S]tandard regression techniques applied to mixed-level data often attribute exaggerated levels of statistical significance to coefficient estimates, especially for state-level variables. . . . These observations will often not be independent, thereby violating a standard assumption in regression analysis that the errors are independently and identically distributed (i.i.d.)” [i.i.d. is statistical shorthand for “independent and identically distributed]).

45. To use a more familiar example, suppose policy makers wanted to know the effect of a curriculum change. Ten schools are selected, and a new curriculum is randomly assigned to half of them. The final test scores of 100 students within each school measured to see if students

in the schools teaching the curriculum perform better. Traditional linear regression of the type being used in the Rodden Report will use 1,000 independent observations (100 students in each of the ten schools). This will tend to produce small standard errors (standard errors are somewhat analogous to the “margin of error” this Court may be familiar with in opinion polling), because as the number of observations increases, the error margins decrease.

46. This estimate, however, is an illusion. In fact, you only have ten treatments (or non-treatments) applied, measured multiple times within schools. *See* Primo et. al, at 449 (discussing state-wide laws and observing that “[t]he main problem here is that, in effect, the number of independent observations is not the number of cases, but rather the number of clusters. In the case of state policy studies, this results in 50 independent observations.”). The performance of students in each school would likely be correlated due to other factors, such as socioeconomic status, the quality of teachers in the school, classroom size, previous courses made available to students, prior performance of the students, etc. *See* Brent R. Moulton, “An Illustration of a Pitfall in Estimating the Effects of Aggregate Variables on Micro Units,” 2 *Rev. of Econ. & Stats.* 334, 334 (1990) (“It is reasonable to expect that units sharing an observable characteristic, such as industry or location, also share unobservable characteristics that would lead the regression disturbances to be correlated. . . . [i]f the disturbances are correlated within the groupings that are used to merge aggregate with micro data, however, then even small levels of correlation can cause the standard errors from ordinary least squares (OLS) to be seriously biased downward.”). As noted above, similar patterns likely exist at the county level here, which is the level at which our treatment (ballot order) is being applied.

47. There are a number of ways to account for these similarities. This report addresses a few such techniques. To deal with the large number of regressions described in the Rodden Report, for the sake of brevity the report will first walk through the different techniques using the Rodden Report's lead scenario, which takes all available elections and tests whether Republicans receive an advantage when they are listed first on the ballot – as an example. In every instance, the report utilizes the modified specification of variables described above. It concludes with a table that shows the outcome of applying the various techniques in all of the scenarios the Rodden Report explores.

48. The bottom line is that once you begin to account for within-county correlations, the estimated ballot order effects from the Rodden Report shrink in 80 of 80 analyses. In many cases, they disappear entirely.

#### Technique 1: Clustered Robust Standard Errors

49. One of the most straightforward approaches is to cluster standard errors. Clustered robust standard errors were suggested in 1986, *see* Brent R. Moulton, “Random Group Effects and the Precision of Regression Estimates,” 32 *Jrnl. of Econometrics* 395 (1986), and political scientists increasingly utilize this to account for these issues when studying election regulations that occur at the state level. *See, e.g.*, Barry C. Burden, et. al, “Election Laws, Mobilization, and Turnout: The Unanticipated Consequences of Election Reform,” 58 *Am. Jrnl. Political Sci.* 95, 100 (2014) (utilizing clustered standard errors to examine the impact of early voting laws); Jan Leighley and Jonathan Nagler, *Who Votes Now? Demographics, Issues, Inequality & Turnout in the United States* (2013) (reporting clustered standard errors). It is simple to cluster standard

errors; one need only add two words to the various lines of code that generate the regressions for the Rodden Report.

50. When we cluster our standard errors here, the p-value for ballot order is 0.168. [Table 3]. In other words, the probability of seeing this sort of result if there were no relationship between ballot order and vote share is 0.168. To put this in perspective, the probability of having three kids, and having them all be boys, is lower than this – roughly 0.125– but there is nothing unusual about a family that has three boys and no girls.

51. Plaintiffs’ experts may object that clustering robs the test of power. The power of a test is the ability of the test to detect significant effects; it is the probability of rejecting the null hypothesis when that the null hypothesis is, in fact, false. As the number of observations falls, the power of the test falls (all other things being equal), such that it becomes difficult to detect effects. To use an extreme example, if someone were trying to determine whether a coin was fair by tossing it three times, that person would never be able to conclude that the coin was unfair, because none of the outcomes has a less than 5 percent chance of occurring. In statistical terms, the test lacks sufficient power to ever reject the null hypothesis.

52. Such a complaint misses the mark here. First, all of the regressions below detect significant results for some variables, they just do not tend to detect results for the variable we are interested in here. Moreover, the coin toss example is an experiment; before beginning, the person designing the experiment would ensure that there would be a sufficient number of tosses to have a good chance at detecting a biased coin. Election results, however, are observational data, which is data that is analyzed after-the-fact and not controlled. In the coin-toss example



above it is easy to set the experimental design appropriately beforehand. But it is not possible to increase the number of counties in Arizona from 1980 to 2018.

53. In other words, it is not a question of increasing or decreasing the power of the test. It is a question of *acknowledging* the reality of an experiment that was effectively designed decades ago. See Expert Report of Dr. Jon A. Krosnick [hereinafter “Krosnick Report”] at 7 (“The power of a significance test to detect a real difference between groups of voters who saw different orders depends upon the number of *independent* observations on which the significance test is based.”) (emphasis added). This is not to say that we cannot do things to increase the power of observational designs, but we are still limited by the structure of the data. Regardless, Robert Erikson and Lorraine Minnite encountered similar issues when they examined the voter identification literature and concluded that much of it was badly flawed. Most analyses focused on tens of thousands of voters described in the Current Population Survey, which produced very powerful tests. Robert S. Erikson & Lorraine C. Minnite, “Modeling Problems in the Voter Identification – Voter Turnout Debate,” 8 *Election Law Journal* 85, 88 (2009). Erikson and Minnite note, however, that clustered standard errors were uncommon in political science (unlike in economics) and commented that failure to acknowledge clustering *erroneously* increased the power of the test.

54. As they explained, “the large N of over 64,000 cases (in the 2004 analysis) ***provides the illusion of more statistical power than is present***. Although the individual-level variables provide some controls, with only 50 states plus D.C., the effective N for calculating standard errors from the individual-level data is merely 51.”). *Id.* (emphasis supplied). Ignoring the clusters and pretending there are approximately 2,000 independent observations does not

actually increase the power of the test. It leads to false confidence in the test power, when in reality we are simply decreasing the accuracy of the estimated “margin of error.” *See also* Krosnick Report at 8 (“Thus, statistical tests should treat groups of voters (in the same precinct, assembly district, township, etc.) as the ‘unit of analysis’ unless the non-independence is taken into account in an analysis treating individual voters as the unit of analysis.”); Alberto Abadie et al, “When Should You Adjust Standard Errors for Clustering?” (Oct. 2017), *available at* <https://economics.mit.edu/files/13927>.

#### Techniques 2 and 3: Generalized Estimating Equations

55. Generalized estimating equations (GEEs) are also a newer addition to the statistical toolkit. Various forms of regression analysis were unified by the theory of generalized linear models some 50 years ago. *See* J.A. Nelder and R.W.M Wedderburn, “Generalized Linear Models,” 135 *Jrnl. of the Royal Statistical Soc.*, 370 (1972). These still retained the assumption of basic regression analysis that error terms are independent. Over the course of the next decade, however, GLM’s were extended to situations where the data were correlated. *See* K. Y. Liang and S. L. Zeger, “A Comparison of Two Bias-corrected Covariance Estimators for Generalized Estimating Equations,” 73 *Biometrika*, 13 (1986). With the advent of higher computing power, these techniques – Generalized Estimating Equations – have become common for analyzing longitudinal data such is this – that is, data where we have repeated measurements of observations across time.

56. The idea behind Generalized Estimating Equations is that the researcher should specify a covariance matrix, which is the researcher’s sense of *how* the data are likely

correlated.<sup>7</sup> The GEE solution is then obtained by iterating between re-estimating the covariance matrix and re-estimating the coefficients until a stable outcome has been reached. *See* Garrett M. Fitzmaurice et al, *Applied Longitudinal Analysis* 357 (2d ed. 2011). GEEs, then, differ from clustered standard errors in that the latter approach simply adjusts the standard errors after the regression has been recalculated, while the GEEs adjust both the standard errors *and* the coefficients. GEEs have the additional benefit that they tend not to be sensitive to the initial estimated covariance matrix, as they will tend to reach the same conclusion regardless of the initial “best guess” of the researcher. *Id.*

57. I ran the GEEs with two separate definitions of a “cluster.” The first, and most natural, was a county-level cluster. I utilized an exchangeable covariance structure. However, we might also conceptualize the clusters as county-offices: In other words, we might expect races for state senate districts in Maricopa County to have correlations that are different than the correlations for presidential races.

58. When we apply a GEE to the data utilizing counties as the cluster (I chose an exchangeable correlation structure), the estimated effect of Republicans going first is much smaller than in Dr. Rodden’s estimates; it is less than a point, with a p-value of 0.29 [Table 4]. Using the combined county/race clustering method, the estimated effect is two-tenths of a point using exchangeable correlation, with a p-value of 0.758 [Table 5].

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<sup>7</sup> Potential choices include, but are not limited to, “unstructured,” where every point has its own unique relationship to every other point, autoregressive, where datapoints are thought of as more strongly related to the data points closest to them in the time sequence, exchangeable, where datapoints share a constant relationship. Fitzmaurice et al at 169-175.

#### Technique 4: Bayesian Hierarchical modeling

59. In the beginning, statistical inference was Bayesian. To understand what I mean by “Bayesian” we should return to our discussion of a p-value. As noted, with a p-value, you take the null distribution as true, and inquire as to the probability of seeing the data that we observe. The Bayesian approach reverses this. By incorporating a prior view of what the data look like (it is acceptable to take “I really don’t know” as a position, and there are ways to incorporate this view) and evaluating that view in light of the data presented, Bayesian techniques produce what are called “posterior distributions.” This allows us to calculate “credible intervals” – similar to error margins – and to say directly “there is a 95 percent probability that the effect of ballot order is somewhere between the lower bound and upper bound.”

60. Bayesian analysis of data dates to the late 1700s, and for much of the 1800s statisticians used inferential techniques that were effectively Bayesian, even if they did not use the label. *See* Stephen E. Fienburg, “When Did Bayesian Analysis Become Bayesian,” 1 *Bayesian Analysis* 1 (2006) (providing a history of the development of Bayesian analysis). Toward the end of the 19th Century and in the beginning of the 20th Century, Karl Pearson and Ronald Fisher laid the foundation for what would become frequentism; Jerzy Neyman and Egon Pearson later developed the hypothesis testing framework described in the first section of this report. This approach dominated statistics well into the 20th Century; the term “Bayesian” does not appear to have been coined until the 1950s. Some of this was philosophical, but part of it was practical: Bayesian posteriors are often impossible to calculate, and require complex computer applications to finalize. But the development of fast computers enabled increasingly powerful

methods for analyzing posterior distributions, with Geman and Geman introducing the Gibbs sampler in 1984; this forms the basis of much modern Bayesian analysis. *See* Stuart Geman & Donald Geman, “Stochastic Relaxation, Gibbs Distributions, and the Bayesian Restoration of Images,” 6 *IEEE Transactions on Pattern Analysis and Machine Intelligence* 721 (1984).

61. One of the common uses of Bayesian techniques is for hierarchical modeling, including “survey data gathered over a set of locations (e.g. states, Congressional districts, countries); experimental studies deployed in multiple locations; and perhaps the *locus classicus* of hierarchical modeling in the social sciences, studies of educational outcomes where the subjects are students, who are grouped in classes or schools, which nest in school districts, which in turn nest in states.” Simon Jackman, *Bayesian Analysis for Data Analysis* 301 (2009). When the value of a coefficient depends on location, because data are clustered, Bayesian hierarchical modeling provides insight.

62. Bayesian hierarchical modeling is often implemented via a program called JAGS, but JAGS is often time-consuming to execute and cumbersome to program. As an alternative, researchers have recently developed a program called INLA, which is much more computationally efficient and simpler to implement. *See* Marta Blangiardo & Michaela Cameletti, *Spatial & Spatio-Temporal Modeling with R-INLA* (2015). Due to the large number of regression analyses used in Dr. Rodden’s report, I have used R-INLA here.

63. When we implement a hierarchical model using non-informative priors with county-level effects, the mean outcome is -0.006, suggesting a penalty to appearing first on the ballot of six-tenths of a percent. The 95 percent credible interval is (-0.018, 0.007), which clearly includes both positive and negative values. [Table 6]. One must be careful with Bayesian

inference, since there will *always* be an effect one way or the other (the probability of something being *exactly* zero is, in fact, zero). Think of it this way: Even if we randomly assigned ballot order to *every* ballot, the chances that we would actually find exactly no net advantage to one party or the other are miniscule; this would occur through the vagaries of chance. The fact that we have both positive and negative numbers in the 95 percent credible interval suggests that we can have very little confidence in what sort of effect there is.

#### Technique 5: Spatio-Temporal Modeling

64. When Noel Cressie wrote his seminal text on Spatial Statistics 25 years ago, spatio-temporal modeling – which he called spacetime models – warranted a single entry in his index. *Statistics for Spatial Data* 9 (1993). Advances in computing power, however, have renewed interest in spatio-temporal modeling in the past decade.

65. One of the drawbacks of the previous methods is that they all assume that once you have properly identified clusters and dealt with correlations within the clusters, that the clusters themselves are independent of each other. In other words, they assume that election results in Santa Cruz County have nothing to do with what is happening in Pima County. But this is not likely to be the case; Santa Cruz County and Pima County have voted for the same presidential candidate in every election since 1960, with Pima consistently being the more Republican of the two counties.

66. It is also likely the case that our observations are correlated over time: election results in year 2000 in Pima County give us insight as to how that county is likely to vote in 2004. This does not mean that counties cannot change, it simply means that these changes often

occur slowly, and that observations occurring close in time are probably not entirely independent.

67. To control for spatial and temporal dependencies, I implemented a spatio-temporal model in INLA. For spatial dependencies, I selected a “Begg-York-Mollier model, which will assume that there are correlations with neighboring counties, but also allows for independent moves within counties. For the temporal component, I selected an AR1 method, which will suggest that the vote share in a county in a given election year is a function of the vote share in the previous election year, plus some random noise. When I applied this to Dr. Rodden’s basic model, the average advantage for a Republican appearing first on the ballot was a negative percentage point. The 95 percent credible interval was (-0.023, 0.002), suggesting that we should not conclude that any effect was present. [Table 7]

#### Other models

68. The Rodden Report implements a number of other regression models. By my count, there are sixteen, but there are four “core” models. The first model is the base model, which the Rodden Report emphasizes throughout his report. It examines all races from 1980 to 2018, for all offices except for State House of Representatives. It comes in two variants: Republicans first and Democratic first.

69. The Rodden Report then runs its basic model by dividing elections in terms of incumbency. Thus, instead of examining elections where the Republican is listed first, he examines elections where the Republican is listed first and is an incumbent, versus elections where the Republican is listed first but is running for an open seat. He does the same for Democrats.

70. The Rodden Report next examines statewide elections only – that is, he drops the observations for U.S. House, Arizona House of Representatives, and Arizona Senate. He examines Republicans and Democrats separately here.

71. Finally, the Rodden Report splits the data between down-ballot races and top-of-ballot races, which it examines for both elections where Republicans were listed first and for when Democrats were listed first. These are further broken down into analyses where he includes controls for the office sought, and where he does not include these controls.

72. I have reproduced all of these analyses using all of the techniques described above. The results can be found in greater detail in the accompanying computer code; the variable of interest is summarized in the following table. It first reports the coefficient for a given model and technique, the 95 percent confidence/credible interval, and the p-value where appropriate. Thus, the upper left cell reflects Dr. Rodden's base model, using his parameterization. It has an estimated effect of 0.022, a p-value of 0.002, and a 95 percent confidence interval of (.008, 036).



Model	Rodden	Clustered	GEE (County)	GEE2 (C-Office)	BHM	S-T Model
Base Model (Rs First)	0.022 (.008, .036) (p = 0.002)***	0.012 (-0.006, 0.03) (p = 0.167)	.009 (-0.007, 0.024) (p = 0.29)	0.002 (-0.012, 0.017) (p = 0.758)	0.005 (-0.011, 0.021)	-0.01 (-0.023, 0.002)
Base model (Ds First)	0.45 (0.031, 0.059) (p < 0.001)***	0.4 (0.014, 0.066) (p < 0.001)***	0.004 (-0.013, 0.022) (p = 0.621)	0.015 (0.002, 0.029) (p = 0.027)**	0.004 (-0.012, 0.021)	-0.04 (-0.016, 0.008)
R First (R Inc.)	0.002 (-0.013, 0.017) (p = 0.801)	-0.007 (-0.027, 0.013) (p = 0.477)	-0.1 (-0.028, 0.007) (p = 0.22)	-0.015 (-0.03, -0.001) (p = 0.03)**	-0.014 (-0.031, 0.002)	-0.034 (-0.048, -0.02)***
R First (Open Seat)	0.056 (0.04, 0.072) (p < 0.001)***	0.044 (0.027, 0.063) (p < 0.001)***	0.041 (0.025, 0.057) (p < 0.001)***	0.032 (0.017, 0.047) (p < 0.001)***	0.038 (0.009, 0.056)**	0.012 (-0.002, 0.026)
D First (D Inc.)	0.047 (0.031, 0.061) (p < 0.001)***	0.042 (0.017, 0.068) (p = 0.003)***	0.007 (-0.011, 0.025) (p = 0.47)	0.017 (0.003, 0.31) (p = 0.018)**	0.007 (-0.01, 0.025)	0.0 (-0.013, 0.013)
D First (Open Seat)	0.042 (0.029, 0.059) (p < 0.001)***	0.036 (0.007, 0.065) (0.019)**	0 (-0.012, 0.2) (p = 0.97)	0.012 (-0.003, 0.27) (p = 0.13)	-0.001 (-0.02, 0.018)	-0.01 (-0.024, 0.005)
R First (Statewide)	.026 (0.012, 0.039) (p < 0.001)***	0.016 (-0.012, 0.044) (p = 0.246)	.002 (-0.018, 0.021) (p = 0.829)	0.012 (-0.002, 0.026) (p = 0.096)*	0.001 (-0.012, 0.015)	-0.01 (-0.023, 0.002)
D First (Statewide)	0.025 (0.01, 0.039) (p = 0.001)***	0.016 (-0.012, 0.045) (p = 0.24)	0.002 (-0.018, 0.022) (p = 0.838)	0.014 (-0.002, 0.030) (p = 0.08)*	0.002 (-0.013, 0.016)	-0.009 (-0.021, 0.003)
D First Top Ballot No Fixed	0.03 (0.011, 0.049) (p = 0.002)***	0.026 (-0.016, 0.069) (p = 0.203)	-0.019 (-0.044, 0.005) (p = 0.126)	-0.002 (-0.023, 0.02) (p = 0.89)	-0.016 (-0.034, 0.001)	-0.011 (-0.025, 0.003)
D 1st Downballot No Fixed	0.057 (0.042, 0.073) (p < 0.001)***	0.053 (0.015, 0.092) (p = 0.011)**	.005 (-0.011, 0.02) (p = 0.544)	0.022 (0.006, 0.038) (p = 0.006)***	0.007 (-0.01, 0.023)	0.015 (-0.004, 0.035)
R1st Top Ballot No Fixed	.031 (0.012, 0.049) (p = 0.002)***	0.027 (-0.017, 0.07) (p = 0.207)	-0.018 (-0.04, 0.005) (p = 0.127)	0 (-0.017, 0.018) (p = .951)	-0.016 (-0.032, 0.001)	-0.014 (-0.027, 0)
R 1st Downballot No Fixed	0.057 (0.041, 0.072) (p < 0.001)***	0.052 (0.013, 0.092) (p = 0.013)*	0.004 (-0.012, 0.2) (p = 0.6)	0.017 (0.001, 0.033) (p = 0.036)**	0.005 (-0.011, 0.022)	0.014 (-0.005, 0.033)
D First Top Ballot Fixed Effects	0.03 (0.01, 0.048) (p = 0.002)***	0.026 (-0.016, 0.069) (p = 0.207)	-0.019 (-0.045, 0.006) (p = 0.133)	0 (-0.02, 0.02) (p = 0.986)	-0.015 (-0.033, 0.002)	-0.011 (-0.024, 0.003)
D 1st Downballot Fixed Effects	0.057 (0.041, 0.072) (p < 0.001)***	0.053 (0.014, 0.092) (p = 0.01)**	0.005 (-0.011, 0.2) (p = 0.577)	0.023 (0.007, 0.039) (p = 0.004)***	0.005 (-0.011, 0.022)	0.013 (-0.006, 0.032)
R1st Top Ballot Fixed Effects	0.032 (0.013, 0.05) (p = 0.001)***	0.028 (-0.016, 0.072) (p = 0.19)	-0.017 (-0.04, 0.006) (p = 0.164)	0.002 (-0.016, 0.02) (p = .82)	-0.014 (-0.03, 0.003)	-0.013 (-0.026, 0)
R 1st Downballot Fixed Effects	0.056 (0.04, 0.071) (p < 0.001)***	0.051 (0.012, 0.09) (p = 0.014)**	0.003 (-0.012, 0.019) (p = 0.168)	.018 (0.002, 0.034) (p = 0.024)**	0.004 (-0.012, 0.019)	0.014 (-0.005, 0.032)

73. As you can see, Dr. Rodden found statistically significant primacy effects for every one of his models except for one. But as we increasingly take account of clustering and correlations within the data, the size of these effects diminish, and in many cases disappear. Every test that attempts to account for non-independence of observations reveals an estimated effect that is smaller than that found in the Rodden analysis. Likewise, the p-values are typically larger once the structure of the data is taken into account.

74. Of course, all of the techniques offered above have pros, cons and limitations, and experts may disagree about the appropriate techniques to utilize when examining election data. There is rarely a perfect statistical technique for a given problem. In any event, these techniques call into question the accuracy of the estimates from the Rodden Report, which make *no* attempt to account for any intra-county or temporal correlations, and effectively assume them away. Utilizing techniques designed to account for these dependencies will result in smaller effects and larger p-values.

C. The Rodden Report Fails to Account for the Fact that it is Offering Multiple Simultaneous Inferences.

75. As a final observation, to the extent that the Rodden Report simultaneously claims that the 16 regression results are true, it runs into a problem of multiple comparisons. To see the intuition behind the problem of multiple comparisons, imagine that we estimated 20 regression coefficients, one of which presented as statistically significant with a p-value of 0.05. This means that if the null hypothesis were true, there would only be a 1-in-20 chance of this type of data appearing. We would normally reject the null hypothesis in this circumstance. The problem is that we have estimated 20 regression coefficients, so we would actually *expect* around one

statistically significant result even if there were no relationship between the variables. Rejecting the null hypothesis would be a mistake.

76. There are a variety of statistical techniques to account for these multiple comparisons (or “joint inferences”) but the simplest is the Bonferroni correction. *See* Kutner et al at 228. Using this procedure, the researcher divides the p-value that he is using as a threshold (here, 0.05) by the total number of analyses that are simultaneously held out as true (here, 16). This suggests that the Rodden Report should have employed a p-value threshold of 0.003125 for his cutoff. Utilizing this cutoff, many of the significant effects that the Rodden Report holds out as simultaneously true no longer are.

D. The Rodden Report’s Matching and RDD Analyses are Similarly Flawed.

77. Next, Dr. Rodden conducts a matching analysis. This approach takes variables and generates propensity scores, and attempts to compare outcomes with close propensity scores that both received and did not receive the treatment. By generating numerous such matches, the matching analysis attempts to isolate the effect of the treatment (the effect of ballot placement). This suffers from three flaws.

78. First, the matching analysis above suffers from the same problems as the basic regression analysis. Because his covariates are all measured at the county level, which is also the treatment level, the number of available matches is effectively reduced by the design at the outset. Hence, matching is rarely performed on cross-sectional time series data such as this. *See* Kosuke Imai, In Song Kim, & Erik Wang, “Matching Methods for Causal Inference with Time-Series Cross-Sectional Data, ” working paper (describing peer reviewed literature that struggles with application of matching to cross-sectional data and proposing a solution); Alberto Abadie,

Alexis Diamond, & Jens Hainmueller, “Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California’s Tobacco Control Program,” 105 *Jrnl. of the Am. Statistical Ass’n* 493 (2010) (describing a solution for the circumstance where only one grouping receives the treatment).

79. Second, the design in the Rodden Report is sensitive to covariate choice. For example, when the Rodden Report matches on variables beyond party registration and analyzes his “fuller” set of covariates, the resulting analysis shows only weak evidence of an effect for Republicans ( $p = 0.075$ ). When including the variables described above for ethnicity, race, and age as the basis for the matching analysis, the resulting output value indicates a statistically insignificant outcome ( $p = 0.33$ ). In addition, the coefficient shrinks to around 0.016.

80. Third, peer-reviewed literature has cast doubt on the ability of matching analysis to truly expose a causal mechanism in the context of elections. Jasjeet S. Sekhon, “Opiates for the Matches: Matching Methods for Causal Inference”, 12 *Annual Rev. of Poli. Sci.* 487 (2009). This is especially problematic in the context of an observational study, such as this one. A key assumption is that the treatment condition (whether a party is first or not on the ballot) appears “as if random.” *Id.* But ballot order here is plainly not random. Some clusters never receive the treatment, while others never receive the control. Indeed, whether a cluster receives a treatment is not random at all by definition; it is a function of the election outcome in the preceding election year. *Id.* at 496. In a way, units self-select into the treatment.

81. This is not necessarily a problem if the assumption known as “selection on observables” holds true. That is: The predictors/covariates you are using for matching analysis are the relevant ones that determine whether a treatment is applied or not. If you are “selecting

on unobservables,” that is, if the treatment is related to your outcomes, the matching analysis will be flawed. *Id.* Here, the treatment is clearly selected by unobserved predictors, since it is, in fact, fully determined by the outcome of the previous election, which is the response variable of a *different* observation, rather than a predictor or set of predictors from a given observation. The selection mechanism is categorically excluded from the matching analysis; in other words, there are confounders that the model cannot account for, since they are the data for the county in the preceding election year.

82. For Dr. Rodden to argue that the variables he selects are sufficient, it would have to be the case that vote shares are truly determined by only the year, the office sought, ballot order, registration statistics, and a handful of demographic characteristics – in other words, the variables that we have been including throughout this analysis. If there might be other factors that determine vote share – and there almost certainly are (such as candidate quality, campaign quality, the national political environment) – the analysis here will be biased. Regardless, the burden is on the party offering the matching analysis to justify “selection on observables,” and not the other way around; no such justification is offered in the Rodden Report. *Id.* at 503 (“Selection on observables and other identifying assumptions not guaranteed by the design should be considered incorrect un-less compelling evidence to the contrary is provided.”).

83. Dr. Rodden’s regression discontinuity design offers more of the same. Regression discontinuities operate under the same assumptions as regression analyses, so to the extent that clustering is a problem above, it remains a problem here.

84. The estimates here are again sensitive to a choice of covariates. In Dr. Rodden’s first discontinuity, he finds an estimated advantage of almost seven points for Republicans when

they hold the first position on the ballot, with a p-value of .017. But after adding the county-level covariates described above, that effect becomes negative three points, with a p-value of 0.193.

85. Additionally, political scientists have expressed skepticism that RDDs can be used in an election setting to isolate a causal mechanism. Because parties can concentrate resources to manipulate outcomes in close races, they lose their randomness, which makes the estimates of the RDD unreliable. *See* Devin Caughey & Jasjeet Sekhon “Elections and the Regression Discontinuity Design: Lessons from Close U.S. House Races, 1942–2008.” 19 *Political Analysis* 385 (2011); Justin Grimmer et al, “Are Close Elections Random” (2011) (working paper). To be sure, there is a debate over this argument, but caution should be exercised before drawing conclusions regarding causation here.

86. Finally, the Rodden Report itself concedes that these estimates are less reliable than his other estimates. Rodden Report at 4.

## **II. Response to the Krosnick Report**

87. I have also been asked to respond to the Krosnick Report. It mostly consists of a literature review, none of which includes a previous study of Arizona. There are, however, a few important points that weaken his conclusion about what our expectations in Arizona ought to be.

88. First, by Dr. Krosnick’s own reckoning, the literature prior to 1998 is methodologically flawed and largely irrelevant. In his 1998 paper with Dr. Miller, they note “most of the 24 previous studies of name-order effects did not involve assignment of voters to different name orders at all but rather looked at whether, when combined across a large number of elections, candidates listed in different positions did better or worse on average. . . . But because candidates’ names were most often listed alphabetically, these differences between the

positions might have been due to alphabetic-based name preferences instead of name order.”

Joanne M. Miller & Jon A. Krosnick, “The Impact of Candidate Name Order on Election Outcomes,” 62 *The Public Opinion Quart.* 291, 296 (1998). Of the remaining six studies, four failed to report significance tests or made mistakes while computing them. *Id.* The two studies that did not have design flaws are described as finding that no name-order effects exist. *Id.* See also Jon A. Krosnick, Joanne M. Miller, & Michael P. Tichy, “An Unrecognized Need for Ballot Reform,” in A.N. Crigler & M.R. Just, *Rethinking the Vote: The Politics and Prospects of American Election Reform* 63 (2004) (“Only two studies did not have at least one significant design flaw that precludes making reasonable inferences, and neither found statistically significant name order effects . . .”); R. Michael Alvarez, Betsy Sinclair & Richard L. Hasen, “How Much is Enough? The ‘Ballot Order Effect’ and the Use of Social Science Research in Election Law Disputes,” 5 *Election Law Journal* 40 41 (2006) (describing the Miller and Krosnick as concluding that 18 of the pre-Miller/Krosnick studies had “significant methodological flaws” and that the stronger studies “produced mixed results.”)

89. Second, these studies are concentrated in three states: Ohio, North Dakota and California. This can have an impact on the conclusions drawn. While I know relatively little about North Dakota and California, in Ohio, elections are fundamentally different than the Arizona elections being examined here, and any analysis of Ohio that does not restrict the elections being analyzed will is likely to overstate the importance of ballot order because, for example, Ohio has non-partisan judicial elections in all counties and for all state courts, which provide fewer heuristics for voters to use when attempting to make a decision in the ballot booth. Miller & Krosnick, at 299-303. In addition, Ohio holds partisan elections for just about every

imaginable office, down to the county coroner, so analyses of Ohio involve many more low-profile races than we are examining in the current case. In fact, of the post-1998 U.S. studies that do not solely involve down-ballot races or primaries, *see, e.g.*, David Brockington, “A Low-Information Theory of Ballot Position Effect,” 25 *Political Behavior* 1 (2003), only one – an unpublished manuscript regarding the Vermont House of Representatives – studies a state other than those three.

90. Third, these effects tend to be “concentrated among a subset of election contests.” Krosnick et al, at 69. Miller and Krosnick fail to find statistically significant results for U.S. Representative and state representatives, and report only one significant result for state Senator. The significant results are generally confined to the county level: County Commissioners, prosecuting attorneys, sheriffs, coroners, and the judges. Miller and Krosnick find no ballot order advantage for George H.W. Bush, Bill Clinton, or Ross Perot (they study the 1992 election results) in the three Ohio counties that form the basis for their study. For the U.S. Senate, they identify significant effects only in Franklin County, find insignificant positive effects in Cuyahoga County, and find insignificant negative effects in Hamilton County. They do find strong effects for U.S. Representative in Franklin County, but these were not repeated in Cuyahoga or Hamilton counties. Krosnick, et al’s study of the 2000 elections in California, Ohio and North Dakota found no statistically significant result for the major party candidates in any of the three states, found no statistically significant result for the major party candidates in the uncompetitive California Senate election, and found only an effect in the uncompetitive 2000 Senate race in Ohio.



91. To the extent consensus exists, it seems to be that strong ballot primacy effects exist in down-ballot races, for minor candidates, or for races where partisan cues are unavailable such as primaries or non-partisan elections. But none of those are implicated in the elections studied by the Rodden report. In fact, the large effects that Dr. Rodden describes would appear to be anomalous.

92. If we limit ourselves to studies in the United States of general elections conducted at the state legislative level or higher – the elections at issue in this case – the evidence for ballot order effects is equivocal. If we limit ourselves to peer reviewed literature, excluding internal studies in Vermont or Stanford undergrad theses, there are only a handful of studies that qualify, all of which examine either Ohio, North Dakota, or California. Two fail to find any effect (as discussed in Dr. Krosnick’s report), while one (Ho & Imai 2008) finds an effect only for primaries and minor parties. Two (Miller & Krosnick 1998 and Krosnick, Miller & Tichy 2004) fail to employ any sort of control for covariates and find limited evidence of a statistically significant effect beyond county-level offices.

93. Two recent pieces identified by Dr. Krosnick warrant special attention. The first is the Pasek et al piece from 2014. This piece is noteworthy for its similarities to the design in the Rodden Report: The authors look at repeated measurements in California over an extended period of time and use a technique designed to account for correlated errors. However, they do not appear to take the Rodden Report’s approach of splitting the dataset into Republican and Democrat data with separate covariates for each. More importantly, they find much smaller effects than the Rodden Report: only a half point overall, and only a quarter-point in closely contested races.

94. Second, the Chen et al piece involves a study of North Dakota. *See* Eric Chen et al., “The Impact of Candidate Name Order on Election Outcomes in North Dakota,” 35 *Electoral Studies* 115 (2014). It finds statistically significant results in a handful of races. Most of these races were far down-ballot (the uncompetitive 2000 senate race is an exception) while the largest effect was found in the non-partisan state Supreme Court race. Overall, it finds an average effect of just a point.

95. In the section on Bayesian Hierarchical modeling, this report described a Bayesian approach to data analysis: one takes what one knew or believed previously about the data – called a “prior” – and then re-evaluates that prior in light of the data. Dr. Krosnick’s report is perhaps best understood as suggesting that, when evaluating the evidence in Arizona, one should begin with a strong “prior” that there is likely a ballot order effect present in the state. We can replicate Dr. Krosnick’s presumption with a Bayesian Hierarchical Model with random effects at the county level, and run the model with the outcomes we already have (Arizona election results), to see if Dr. Krosnick’s presumption is justified. Since I am only conducting one regression analysis here, I use the more flexible JAGS tool rather than INLA. The model is slow-mixing, so I use 500,000 adaptation steps, and 1,000,000 burn-in steps. I then save 100,000 steps for analysis.

96. For a starting point, on all variables except ballot order, I use the findings of the first model I explored. Because the model takes several hours to mix in its present form, I do not estimate parameters for the 22 “year” variables. In other words, the hierarchical model reflects the findings of Dr. Rodden’s model, minus the data for share of a county’s residents who are renters or Native Americans and the fixed effects for year, plus the variables for share of a

county's residents who are Hispanic, African American, or young. One of the benefits of Bayesian Hierarchical modeling is that if these priors are unjustified, the model will move toward a belief in a different result in light of the data.

97. The ballot order variable is set up to reflect a fairly strong prior belief that there is a primacy effect for all elections. I have set it initially at five points. The precision of 5000 reflects a strong belief that the effect is, in fact, larger than zero.

98. Even with this strong prior in place, after running the model, the expressed mean ballot advantage is just under a point, and the 95 percent credible interval includes zero. Roughly speaking, this suggests a result that is not significant (-.0008269, .02068). [Table 8]

99. Why might Arizona be different? Dr. Krosnick's work offers a hint. One of his theories for the ballot primacy effect arises from the lack of knowledge among voters about low-profile races, who are forced to utilize heuristics to determine for whom they should vote. In the voting booth, it is effectively impossible to acquire additional information about candidates; voters must make do with what they have. If they do not recognize names, and if they lack partisan information to use as a cue, they may resort to something such as ballot order to inform their vote choice, however poorly.

100. Absentee and early balloting is another matter entirely. Information there is easily obtainable; it is much less costly. A voter might watch the news, ask a friend or family member, or simply access the internet and Google a candidate. Thus, we might expect absentee and early voting to result in less of a primacy effect in low-profile offices, where a voter is unlikely to carry large amounts of information into the voting booth. And this is exactly what Pasek et al found in their study: In California, where 42 percent of ballots were cast absentee in 2006, the

first-position advantage for low-profile offices dropped to 0.38 points. Pasek et al, at 432. In a state such as Arizona where at least 75% of votes are consistently cast as early ballots, we might expect that effect to be even smaller, to the point of being negligible.

101. Second, it may just be that the findings for general elections in America simply aren't enough to generalize well. Chen et al raise this possibility in their 2014 piece:

Examined at a distance, it might seem that the existing literature on name order effects documents a robust finding that is well understood in terms of moderators and the underlying psychological processes. But in fact, this may be too optimistic of a conclusion. Most importantly, the majority of general election data analyzed in recent years comes from a narrow slice of time (the late 1990s) just in California, where only one of various possible methods was used to assign name orders to voters. And the wave of work immediately prior was dominated by analysis of data from Ohio elections, where another method of name order assignment was used. Therefore, in order to have confidence in the generalizability of the name order effect, evidence from other states that employ other name order assignment procedures in general elections would be desirable to add to the literature.

Chen et al., at 116-17.

102. In summary, Dr. Krosnick's literature review is largely accurate, but it lumps diverse studies together, including studies using methods he has previously discounted; studies focusing on down-ballot races; and studies of states with an election framework different from Arizona's. There are a handful of published, peer-reviewed studies that are similar to the evidence offered in Arizona, and most of these suggest a lower primacy effect than the Rodden Report suggests. Even when I incorporate a strong prior belief of a large effect into my analysis of the Arizona data, I conclude that the effect is much smaller than the Rodden Report claims and that we are not justified in claiming that it is greater than zero.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States that the foregoing statements are true and correct.

This the 20th day of January, 2020.



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Sean P. Trende

Table 1: Coefficients and Significance for Various Models and Techniques

Model	Rodden	Clustered	GEE (County)	GEE2 (C-Office)	BHM	S-T Model
Base Model (Rs First)	0.022 (.008, .036) (p = 0.002)***	0.012 (-0.006, 0.03) (p = 0.167)	.009 (-0.007, 0.024) (p = 0.29)	0.002 (-0.012, 0.017) (p = 0.758)	0.005 (-0.011, 0.021)	-0.01 (-0.023, 0.002)
Base model (Ds First)	0.45 (0.031, 0.059) (p < 0.001)***	0.4 (0.014, 0.066) (p < 0.001)***	0.004 (-0.013, 0.022) (p = 0.621)	0.015 (0.002, 0.029) (p = 0.027)**	0.004 (-0.012, 0.021)	-0.04 (-0.016, 0.008)
R First (R Inc.)	0.002 (-0.013, 0.017) (p = 0.801)	-0.007 (-0.027, 0.013) (p = 0.477)	-0.1 (-0.028, 0.007) (p = 0.22)	-0.015 (-0.03, -0.001) (p = 0.03)**	-0.014 (-0.031, 0.002)	-0.034 (-0.048, -0.02)***
R First (Open Seat)	0.056 (0.04, 0.072) (p < 0.001)***	0.044 (0.027, 0.063) (p < 0.001)***	0.041 (0.025, 0.057) (p < 0.001)***	0.032 (0.017, 0.047) (p < 0.001)***	0.038 (0.009, 0.056)**	0.012 (-0.002, 0.026)
D First (D Inc.)	0.047 (0.031, 0.061) (p < 0.001)***	0.042 (0.017, 0.068) (p = 0.003)***	0.007 (-0.011, 0.025) (p = 0.47)	0.017 (0.003, 0.31) (p = 0.018)**	0.007 (-0.01, 0.025)	0.0 (-0.013, 0.013)
D First (Open Seat)	0.042 (0.029, 0.059) (p < 0.001)***	0.036 (0.007, 0.065) (0.019)**	0 (-0.012, 0.2) (p = 0.97)	0.012 (-0.003, 0.27) (p = 0.13)	-0.001 (-0.02, 0.018)	-0.01 (-0.024, 0.005)
R First (Statewide)	.026 (0.012, 0.039) (p < 0.001)***	0.016 (-0.012, 0.044) (p = 0.246)	.002 (-0.018, 0.021) (p = 0.829)	0.012 (-0.002, 0.026) (p = 0.096)*	0.001 (-0.012, 0.015)	-0.01 (-0.023, 0.002)
D First (Statewide)	0.025 (0.01, 0.039) (p = 0.001)***	0.016 (-0.012, 0.045) (p = 0.24)	0.002 (-0.018, 0.022) (p = 0.838)	0.014 (-0.002, 0.030) (p = 0.08)*	0.002 (-0.013, 0.016)	-0.009 (-0.021, 0.003)
D First Top Ballot No Fixed	0.03 (0.011, 0.049) (p = 0.002)***	0.026 (-0.016, 0.069) (p = 0.203)	-0.019 (-0.044, 0.005) (p = 0.126)	-0.002 (-0.023, 0.02) (p = 0.89)	-0.016 (-0.034, 0.001)	-0.011 (-0.025, 0.003)
D 1st Downballot No Fixed	0.057 (0.042, 0.073) (p < 0.001)***	0.053 (0.015, 0.092) (p = 0.011)**	.005 (-0.011, 0.02) (p = 0.544)	0.022 (0.006, 0.038) (p = 0.006)***	0.007 (-0.01, 0.023)	0.015 (-0.004, 0.035)
R1st Top Ballot No Fixed	.031 (0.012, 0.049) (p = 0.002)***	0.027 (-0.017, 0.07) (p = 0.207)	-0.018 (-0.04, 0.005) (p = 0.127)	0 (-0.017, 0.018) (p = .951)	-0.016 (-0.032, 0.001)	-0.014 (-0.027, 0)
R 1st Downballot No Fixed	0.057 (0.041, 0.072) (p < 0.001)***	0.052 (0.013, 0.092) (p = 0.013)*	0.004 (-0.012, 0.2) (p = 0.6)	0.017 (0.001, 0.033) (p = 0.036)**	0.005 (-0.011, 0.022)	0.014 (-0.005, 0.033)
D First Top Ballot Fixed Effects	0.03 (0.01, 0.048) (p = 0.002)***	0.026 (-0.016, 0.069) (p = 0.207)	-0.019 (-0.045, 0.006) (p = 0.133)	0 (-0.02, 0.02) (p = 0.986)	-0.015 (-0.033, 0.002)	-0.011 (-0.024, 0.003)
D 1st Downballot Fixed Effects	0.057 (0.041, 0.072) (p < 0.001)***	0.053 (0.014, 0.092) (p = 0.01)**	0.005 (-0.011, 0.2) (p = 0.577)	0.023 (0.007, 0.039) (p = 0.004)***	0.005 (-0.011, 0.022)	0.013 (-0.006, 0.032)
R1st Top Ballot Fixed Effects	0.032 (0.013, 0.05) (p = 0.001)***	0.028 (-0.016, 0.072) (p = 0.19)	-0.017 (-0.04, 0.006) (p = 0.164)	0.002 (-0.016, 0.02) (p = .82)	-0.014 (-0.03, 0.003)	-0.013 (-0.026, 0)
R 1st Downballot Fixed Effects	0.056 (0.04, 0.071) (p < 0.001)***	0.051 (0.012, 0.09) (p = 0.014)**	0.003 (-0.012, 0.019) (p = 0.168)	.018 (0.002, 0.034) (p = 0.024)**	0.004 (-0.012, 0.019)	0.014 (-0.005, 0.032)

Throughout, \* denotes  $p < 0.1$ , \*\* denotes  $p < 0.05$  and \*\*\* denotes  $p < 0.01$ .

Table 2: Regression with Race, Ethnicity and Age Covariates

Variable	Coef.	SE	t	p-value	95% CI
Primacy	0.012	0.008	1.57	0.117	(-0.003 , 0.027)
Incumbency	0.09	0.004	25.02	p < 0.001***	(0.083 , 0.097)
Registration	0.763	0.057	13.33	p < 0.001***	(0.65 , 0.875)
Log Population Density	-0.023	0.003	-8.48	p < 0.001***	(-0.028 , -0.018)
Am Ind	-0.027	0.029	-0.94	0.348	(-0.084 , 0.03)
Renter	0.012	0.046	0.25	0.8	(-0.078 , 0.101)
African American Share	0.076	0.025	3.08	0.002***	(0.028 , 0.125)
Hispanic Share	1.276	0.231	5.52	p < 0.001***	(0.822 , 1.73)
Age 18-to-30	-0.406	0.09	-4.49	p < 0.001***	(-0.584 , -0.229)
Governor	-0.006	0.008	-0.74	0.458	(-0.02 , 0.009)
Mine Inspector	-0.021	0.009	-2.34	0.02**	(-0.039 , -0.003)
President	0.034	0.012	2.88	0.004***	(0.011 , 0.057)
Secretary of State	0	0.008	0.01	0.992	(-0.015 , 0.015)
State Senate	0.009	0.008	1.1	0.273	(-0.007 , 0.026)
PI Superintendent	0.006	0.007	0.93	0.354	(-0.007 , 0.02)
Treasurer	0	0.009	0.04	0.968	(-0.017 , 0.018)
U.S. House	0.006	0.009	0.67	0.503	(-0.011 , 0.023)
U.S. Senate	0.03	0.009	3.33	0.001***	(0.012 , 0.047)
1980	-0.01	0.016	-0.64	0.521	(-0.041 , 0.021)
1982	-0.071	0.011	-6.63	p < 0.001***	(-0.092 , -0.05)
1984	0.008	0.019	0.43	0.666	(-0.028 , 0.045)
1986	-0.069	0.015	-4.71	p < 0.001***	(-0.097 , -0.04)
1988	-0.047	0.015	-3.17	0.002***	(-0.076 , -0.018)
1990	-0.07	0.012	-5.97	p < 0.001***	(-0.093 , -0.047)
1992	-0.112	0.017	-6.49	p < 0.001***	(-0.146 , -0.078)
1994	-0.05	0.013	-3.72	p < 0.001***	(-0.076 , -0.023)
1996	-0.083	0.018	-4.67	p < 0.001***	(-0.117 , -0.048)
1998	-0.031	0.012	-2.5	0.012**	(-0.055 , -0.007)
2000	-0.05	0.014	-3.47	0.001***	(-0.077 , -0.022)
2002	-0.034	0.01	-3.32	0.001***	(-0.055 , -0.014)
2004	0.003	0.015	0.17	0.864	(-0.027 , 0.032)
2006	-0.046	0.01	-4.51	p < 0.001***	(-0.065 , -0.026)
2008	-0.017	0.016	-1.05	0.293	(-0.048 , 0.015)
2010	0.044	0.012	3.8	p < 0.001***	(0.021 , 0.067)
2012	-0.016	0.019	-0.81	0.419	(-0.054 , 0.022)
2014	0.038	0.011	3.34	0.001***	(0.016 , 0.06)
2016	0.016	0.014	1.19	0.235	(-0.011 , 0.044)
Constant	0.317	0.033	9.62	p < 0.001***	(0.252 , 0.382)

Table 3: Regression with Clustering

Variable	Coef.	SE	t	p-value	95% CI
Primacy	0.012	0.008	1.46	0.167	(-0.006 , 0.03)
Incumbency	0.090	0.007	13.22	p <0.001***	(0.076 , 0.105)
Registration	0.798	0.042	18.82	p <0.001***	(0.707 , 0.888)
Log Population Density	-0.023	0.004	-5.78	p <0.001***	(-0.032 , -0.015)
African American Share	1.376	0.351	3.92	0.002***	(0.624 , 2.128)
Hispanic Share	0.099	0.027	3.73	0.002***	(0.042 , 0.157)
Age 18-to-30	-0.425	0.129	-3.3	0.005***	(-0.702 , -0.148)
Governor	-0.006	0.004	-1.29	0.217	(-0.015 , 0.004)
Mine Inspector	-0.022	0.005	-4.09	0.001***	(-0.033 , -0.01)
President	0.034	0.007	4.53	p <0.001***	(0.018 , 0.05)
Secretary of State	0.000	0.003	0.03	0.975	(-0.006 , 0.007)
State Senate	0.009	0.010	0.92	0.375	(-0.013 , 0.031)
PI Superintendent	0.006	0.004	1.52	0.15	(-0.003 , 0.016)
Treasurer	0.000	0.004	0.09	0.93	(-0.008 , 0.008)
U.S. House	0.006	0.012	0.46	0.65	(-0.021 , 0.032)
U.S. Senate	0.030	0.005	5.65	p <0.001***	(0.018 , 0.041)
1980	-0.007	0.012	-0.61	0.549	(-0.032 , 0.018)
1982	-0.068	0.014	-4.88	p <0.001***	(-0.098 , -0.038)
1984	0.010	0.014	0.76	0.462	(-0.019 , 0.04)
1986	-0.067	0.014	-4.85	p <0.001***	(-0.096 , -0.037)
1988	-0.045	0.013	-3.52	0.003***	(-0.072 , -0.018)
1990	-0.069	0.013	-5.13	p <0.001***	(-0.098 , -0.04)
1992	-0.111	0.014	-7.72	p <0.001***	(-0.141 , -0.08)
1994	-0.049	0.012	-4.17	0.001***	(-0.074 , -0.024)
1996	-0.082	0.016	-5.29	p <0.001***	(-0.115 , -0.049)
1998	-0.030	0.012	-2.55	0.023**	(-0.056 , -0.005)
2000	-0.049	0.013	-3.84	0.002***	(-0.076 , -0.022)
2002	-0.034	0.013	-2.54	0.024**	(-0.062 , -0.005)
2004	0.003	0.015	0.23	0.82	(-0.029 , 0.035)
2006	-0.045	0.013	-3.54	0.003***	(-0.072 , -0.018)
2008	-0.016	0.012	-1.26	0.227	(-0.042 , 0.011)
2010	0.045	0.010	4.66	p <0.001***	(0.025 , 0.066)
2012	-0.015	0.011	-1.27	0.223	(-0.039 , 0.01)
2014	0.039	0.007	5.54	p <0.001***	(0.024 , 0.054)
2016	0.017	0.01	1.66	0.12	(-0.005 , 0.039)
Constant	0.3	0.025	11.82	p <0.001***	(0.245 , 0.354)



Table 4: GEE, with County Clusters

Variable	Coef.	SE	t	p-value	95% CI
Primacy	0.009	0.008	1.06	0.29	(-0.007 , 0.024)
Incumbency	0.091	0.007	13.35	p <0.001***	(0.077 , 0.104)
Registration	0.811	0.041	19.55	p <0.001***	(0.729 , 0.892)
Log Population Density	-0.023	0.004	-5.3	p <0.001***	(-0.032 , -0.015)
African American Share	1.301	0.368	3.54	p <0.001***	(0.58 , 2.022)
Hispanic Share	0.104	0.027	3.85	p <0.001***	(0.051 , 0.157)
Age 18-to-30	0.136	-3.03	0.002	p <0.001***	(-0.145 , 0)
AG	-0.030	0.005	-5.68	p <0.001***	(-0.04 , -0.019)
Governor	-0.035	0.004	-8.37	p <0.001***	(-0.044 , -0.027)
Mine Inspector	-0.051	0.007	-7.26	p <0.001***	(-0.065 , -0.037)
President	0.004	0.006	0.72	0.472	(-0.007 , 0.015)
Secretary of State	-0.030	0.006	-4.61	p <0.001***	(-0.042 , -0.017)
State Senate	-0.020	0.01	-1.96	0.05*	(-0.04 , 0)
PI Superintendent	-0.023	0.007	-3.14	0.002***	(-0.038 , -0.009)
Treasurer	-0.029	0.007	-4.31	p <0.001***	(-0.043 , -0.016)
U.S. House	-0.024	0.011	-2.15	0.031**	(-0.046 , -0.002)
1980	-0.009	0.012	-0.76	0.45	(-0.032 , 0.014)
1982	-0.070	0.014	-5.02	p <0.001***	(-0.097 , -0.042)
1984	0.008	0.014	0.58	0.564	(-0.019 , 0.035)
1986	-0.070	0.013	-5.23	p <0.001***	(-0.096 , -0.044)
1988	-0.046	0.013	-3.67	p <0.001***	(-0.071 , -0.022)
1990	-0.070	0.013	-5.33	p <0.001***	(-0.096 , -0.045)
1992	-0.112	0.014	-7.94	p <0.001***	(-0.14 , -0.085)
1994	-0.050	0.011	-4.4	p <0.001***	(-0.073 , -0.028)
1996	-0.083	0.015	-5.5	p <0.001***	(-0.113 , -0.053)
1998	-0.031	0.012	-2.62	0.009***	(-0.055 , -0.008)
2000	-0.048	0.013	-3.64	p <0.001***	(-0.074 , -0.022)
2002	-0.033	0.013	-2.56	0.011**	(-0.058 , -0.008)
2004	0.003	0.015	0.18	0.854	(-0.026 , 0.032)
2006	-0.046	0.013	-3.6	p <0.001***	(-0.07 , -0.021)
2008	-0.018	0.013	-1.4	0.161	(-0.042 , 0.007)
2010	0.043	0.01	4.39	p <0.001***	(0.024 , 0.062)
2012	-0.014	0.011	-1.28	0.201	(-0.037 , 0.008)
2014	0.039	0.007	5.63	p <0.001***	(0.026 , 0.053)
2016	0.018	0.01	1.73	0.083*	(-0.002 , 0.037)
Constant	0.325	0.027	11.91	p <0.001***	(0.272 , 0.379)

Table 5: GEE, with county-race clusters

Variable	Coef.	SE	t	p-value	95% CI
Primacy	0.002	0.007	0.31	0.758	(-0.012 , 0.016)
Incumbency	0.079	0.004	20.84	p <0.001***	(0.072 , 0.086)
Registration	0.808	0.051	15.73	p <0.001***	(0.708 , 0.909)
Log Population Density	-0.020	0.004	-4.96	p <0.001***	(-0.028 , -0.012)
African American Share	1.187	0.333	3.57	p <0.001***	(0.534 , 1.839)
Hispanic Share	0.101	0.027	3.75	p <0.001***	(0.048 , 0.154)
Age 18-to-30	0.114	-3.66	0	p <0.001***	(-0.194 , 0)
AG	-0.031	0.01	-3.02	0.003***	(-0.052 , -0.011)
Governor	-0.039	0.011	-3.61	p <0.001***	(-0.06 , -0.018)
Mine Inspector	-0.043	0.012	-3.51	p <0.001***	(-0.066 , -0.019)
President	0.001	0.012	0.06	0.949	(-0.023 , 0.024)
Secretary of State	-0.033	0.01	-3.5	p <0.001***	(-0.052 , -0.015)
State Senate	-0.025	0.011	-2.3	0.022**	(-0.045 , -0.004)
PI Superintendent	-0.028	0.009	-3.04	0.002***	(-0.045 , -0.01)
Treasurer	-0.030	0.01	-3.08	0.002***	(-0.049 , -0.011)
U.S. House	-0.027	0.012	-2.24	0.025**	(-0.051 , -0.003)
1980	-0.010	0.015	-0.65	0.517	(-0.039 , 0.02)
1982	-0.076	0.01	-7.61	p <0.001***	(-0.096 , -0.057)
1984	0.002	0.014	0.13	0.895	(-0.026 , 0.03)
1986	-0.073	0.014	-5.36	p <0.001***	(-0.1 , -0.046)
1988	-0.053	0.013	-4.12	p <0.001***	(-0.078 , -0.028)
1990	-0.072	0.011	-6.4	p <0.001***	(-0.095 , -0.05)
1992	-0.11	0.016	-6.8	p <0.001***	(-0.141 , -0.078)
1994	-0.046	0.012	-3.93	p <0.001***	(-0.069 , -0.023)
1996	-0.079	0.015	-5.45	p <0.001***	(-0.107 , -0.051)
1998	-0.027	0.011	-2.4	0.016**	(-0.048 , -0.005)
2000	-0.044	0.014	-3.28	0.001***	(-0.071 , -0.018)
2002	-0.031	0.009	-3.62	p <0.001***	(-0.048 , -0.014)
2004	0.008	0.013	0.61	0.54	(-0.017 , 0.033)
2006	-0.045	0.008	-5.58	p <0.001***	(-0.061 , -0.03)
2008	-0.024	0.013	-1.85	0.064*	(-0.049 , 0.001)
2010	0.035	0.009	3.79	p <0.001***	(0.017 , 0.053)
2012	-0.019	0.014	-1.36	0.175	(-0.047 , 0.009)
2014	0.039	0.007	5.99	p <0.001***	(0.026 , 0.052)
2016	0.012	0.01	1.23	0.218	(-0.007 , 0.032)
Constant	0.329	0.029	11.23	p <0.001***	(0.271 , 0.386)

Table 6: Bayesian Hierarchical Model

Variable	Mean	SD	Credible Interval
Primacy	0.005	0.008	[-0.011 , 0.021]
Incumbency	0.091	0.003	[0.084 , 0.097]**
Registration	0.821	0.048	[0.727 , 0.917]**
Log Population Density	-0.021	0.005	[-0.031 , -0.01]**
African American Share	0.110	0.028	[0.057 , 0.166]**
Hispanic Share	1.137	0.362	[0.389 , 1.817]**
Age 18-to-30	-0.384	0.126	[-0.625 , -0.128]**
AG	-0.030	0.013	[-0.055 , -0.004]**
Governor	-0.035	0.012	[-0.059 , -0.012]**
Mine Inspector	-0.051	0.014	[-0.079 , -0.023]**
President	0.004	0.013	[-0.021 , 0.029]
Secretary of State	-0.030	0.013	[-0.054 , -0.005]**
State Senate	-0.020	0.010	[-0.039 , -0.001]**
PI Superintendent	-0.023	0.013	[-0.048 , 0.001]
Treasurer	-0.029	0.013	[-0.055 , -0.004]**
U.S. House	-0.024	0.010	[-0.043 , -0.005]**
1980	-0.010	0.014	[-0.038 , 0.018]
1982	-0.071	0.012	[-0.095 , -0.046]**
1984	0.006	0.017	[-0.028 , 0.04]
1986	-0.072	0.015	[-0.101 , -0.043]**
1988	-0.048	0.014	[-0.075 , -0.02]**
1990	-0.072	0.013	[-0.097 , -0.047]**
1992	-0.114	0.015	[-0.144 , -0.084]**
1994	-0.052	0.013	[-0.078 , -0.026]**
1996	-0.084	0.015	[-0.114 , -0.054]**
1998	-0.032	0.013	[-0.058 , -0.007]**
2000	-0.048	0.015	[-0.078 , -0.018]**
2002	-0.032	0.012	[-0.056 , -0.008]**
2004	0.002	0.015	[-0.027 , 0.031]
2006	-0.046	0.012	[-0.069 , -0.024]**
2008	-0.020	0.015	[-0.05 , 0.01]
2010	0.041	0.013	[0.016 , 0.066]**
2012	-0.014	0.015	[-0.044 , 0.015]
2014	0.039	0.013	[0.015 , 0.064]**
2016	0.018	0.017	[-0.014 , 0.051]
Constant	0.316	0.030	[0.256 , 0.372]**

Table 7: Spatio-Temporal Model

Variable	Mean	SD	Credible Interval
Primacy	-0.010	0.006	[-0.023 , 0.002]
Incumbency	0.089	0.003	[0.082 , 0.095]**
Registration	0.702	0.076	[0.554 , 0.851]**
Log Population Density	-0.003	0.017	[-0.036 , 0.03]
African American Share	0.134	0.094	[-0.05 , 0.317]
Hispanic Share	0.939	0.553	[-0.148 , 2.025]
Age 18-to-30	0.084	0.291	[-0.486 , 0.654]
AG	-0.027	0.013	[-0.052, -0.001]**
Governor	-0.036	0.012	[-0.06 , -0.011]**
Mine Inspector	-0.034	0.014	[-0.062 , -0.006]**
President	0.006	0.012	[-0.018 , 0.03]
Secretary of State	-0.028	0.013	[-0.053 , -0.003]**
State Senate	-0.019	0.010	[-0.039 , 0]
PI Superintendent	-0.025	0.013	[-0.05 , 0]
Treasurer	-0.035	0.013	[-0.061 , -0.01]**
U.S. House	-0.025	0.010	[-0.045 , -0.006]**
Year	0.002	0.000	[0.001 , 0.003]**
Constant	-3.866	0.889	[-5.612, -2.122]**

Table 8: JAGS Bayesian Hierarchical Model

Variable	Mean	SD	Credible Interval
Primacy	0.010	0.005	[-0.001 , 0.021]
Incumbency	0.091	0.003	[0.086 , 0.097]**
Registration	0.735	0.031	[0.674 , 0.797]**
Log Population Density	-0.016	0.003	[-0.022 , -0.009]**
Black Share	1.759	0.243	[1.288 , 2.242]**
Hispanic Share	0.138	0.022	[0.097 , 0.183]**
Age 18-to-30	-0.615	0.094	[-0.805 , -0.431]**
Governor	-0.006	0.004	[-0.014, 0.002]
Mine Inspector	-0.020	0.005	[-0.03, -0.011]**
President	0.032	0.006	[0.02, 0.043]**
Secretary of State	0.000	0.003	[-0.005 , 0.006]
State Senate	0.006	0.005	[-0.004 , 0.016]
PI Superintendent	0.001	0.004	[-0.007 , 0.009]
Treasurer	0.004	0.003	[-0.002 , 0.011]
U.S. House	0.000	0.006	[-0.011 , 0.011]
U.S. Senate	0.010	0.005	[0.001 , 0.019]**
County	-0.008	0.034	[-0.075 , 0.057]
Constant	0.299	0.025	[0.2496, 0.3474]**

# **EXHIBIT 1**

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## **BOOKS**

Larry J. Sabato, ed., *The Blue Wave*, ch. 14 (2019).

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**REAL CLEAR POLITICS COLUMNS**

Full archives available at [http://www.realclearpolitics.com/authors/sean\\_trende/](http://www.realclearpolitics.com/authors/sean_trende/)

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(with Christian C. Burden), “The Economic Loss Rule and Franchise Attorneys,” 27 *Franchise L.J.*, 192 (2008)



## **EXHIBIT 2**

## Modeling Problems in the Voter Identification—Voter Turnout Debate

Robert S. Erikson and Lorraine C. Minnite

IN APRIL 2008, the U.S. Supreme Court upheld Indiana's controversial voter identification (ID) law. Adopted in 2005, the law requires voters to show a current, government-issued photo identification. Opponents worry voter identification rules will place an undue burden on the voting rights of elderly, low income, and minority voters, disputing the need for the rules. Nevertheless, over the last five years, stricter voter identification requirements have been adopted on party line votes in more than a dozen states. Stimulated by the pressing policy debate, recent scientific research on the turnout question suggests that the most stringent rules will have harmful effects. However, the complexity of electoral laws and voting behavior together with the likely marginal effect of photo ID rules makes statistical outcomes quite sensitive to research designs. We see problems with existing designs that rely on individual, self-reported voting records from the Current Population Survey. Our article evaluates this research and disputes the strength of the statistical arguments used to support findings of an observable negative effect on turnout from voter ID laws. Alternatively, we adjust the models using state samples and difference-in-differences techniques and reanalyze the CPS data for the 2002 and 2006 midterm elections. While we do not conclude that voter ID rules

have no effect on turnout, our data and tools are not up to the task of making a compelling statistical argument for an effect.

### INTRODUCTION

In a widely reported story from the 2008 presidential primary in Indiana, twelve elderly nuns were turned away from their resident convent polling place by a fellow sister because they failed to comply with the state's new voter identification rules (Hastings 2008a; 2008b; Gordon 2008; Martelle 2008). The week before, the Supreme Court had upheld Indiana's controversial law which compels citizens to show a current government-issued photo ID in order to vote.<sup>1</sup> As voter registration surged in anticipation of a hotly contested primary (Jacobs and Burns 2008; "Voter Registration Numbers" 2008), voting rights advocates worried that new or vulnerable voters would not be able to vote because of failure to present the appropriate ID. In the end, however, despite record turnout, there were few official reports of vote denial in Indiana (Indiana Secretary of State 2008), leading defenders of stricter voter ID laws to feel vindicated (Hastings 2008c). Important questions, however, remain. They arise from concerns like those expressed by the (*Muncie, IN Star Press* three days after the primary:

While only 20 provisional ballots were cast in Tuesday's election—and not all of

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<sup>1</sup> *Crawford v. Marion County Election Board*, 128 S.Ct. 1610 (2008).

them because of a lack of ID—it is unknown how many were turned away from the polls by inexperienced [poll] workers, but there is anecdotal evidence it happened. [One disabled] veteran, for example, wasn't given a provisional ballot in Precinct 23 until a mob of voters outside demanded it, going so far as to ask a Democratic party official to come to the polling place. (“Indiana Voter ID Law Disenfranchised Some” 2008)

Our vignette from the Hoosier State presents a puzzle for courts that may hear future voter ID disputes and for the social science upon which lawyers, judges, and advocates in voting rights cases often rely. Do voter ID laws deter voting? Do the data and instruments we have allow us to detect marginal influences on voting stemming from a single voting rule? Courts need to know in order to better evaluate the nature of the burden the rules may impose on the right to vote.

The problem is the silence in the available data. Until the current controversy, there was little scientific analysis of the relationship between documentary ID rules and voting, and for good reason: six years ago only 11 states required all voters to present documentary proof of their identity at the polls before casting a ballot (Electionline.org 2006). That number has since more than doubled to 24 (Project Vote 2007). At the same time, while these laws are rhetorically defended as anti-fraud, voter confidence, “good government” reforms, none of the legislative sponsors of voter ID bills have made any credible showing of voter fraud to justify the need for more ballot security.<sup>2</sup>

We could generously conclude that politicians have tightened voter ID laws on the faith that they are, as Indiana elections officials put it, only “a party-neutral, good-government reform . . .” (Brief of State Respondents 2007, 37). But the politics surrounding the statehouse slugfests over the voter ID issue suggest something else. Politicians clearly see this issue through the lens of party politics and electoral advantage. Few other issues are as politically polarizing. For example, 95.3 percent of 1,222 Republican legislators but just 2.1 percent of 796 Democrats voting on

ten voter ID bills introduced by Republican state legislators between 2005 and 2007 supported them. (Brief of Amici Curiae 2007, 28). Given the long history of partisan maneuvers to win elections by excluding certain voters under the guise of “good government” reform (Kousser 1974; Piven and Cloward 2000), the effects of voter ID laws on voting deserve serious scientific scrutiny. In the absence of evidence, the perception of a party advantage in tightening up voter ID requirements is driving the debate.

Are the data and instruments we have up to the task of finding what may be a needle—e.g., 12 elderly nuns in South Bend, Indiana—in a haystack? Researchers analyzing whether voter ID laws influence turnout have approached the question in three ways. Several studies construct statistical models to test for relationships between the degree of burden imposed by voter ID requirements and voter turnout levels, looking for any disproportionate effects among different groups of voters (Lott 2006; Eagleton Institute 2006; Vercellotti and Anderson 2006; Mulhausen and Sikich 2007; Mycoff, Wagner and Wilson 2007; Alvarez, Bailey and Katz 2008; Milyo 2007; Logan and Darrah 2008). Others conduct surveys or match government lists to estimate the proportion of the electorate lacking the requisite ID and to examine whether patterns in the possession of ID vary among groups (Brace 2005; Pawasarat 2005; Brennan Center 2006; Barreto, Nuño and Sanchez 2007a; 2007b; Hood and Bullock 2008). A third approach, using survey data to assess attitudes among voters toward stricter voter ID, tests two different assumptions. One concerns the strength of public support for voter ID as a rationale supporting these laws (finding high levels of support, generally; see, for example, Pastor, et al. 2008). The other frames voter ID laws as at least a partial remedy for a lack of confidence in electoral administration, hypothesizing that as public confidence increases so, too, will turnout (finding little support linking perceptions about the frequency of

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<sup>2</sup> For findings strongly suggesting that incidents of voter fraud are rare in American elections today, see Minnite and Callahan (2003) and Minnite (2007a; 2007b).

voter fraud to a lack of confidence in electoral administration, or to turnout; see Ansolabehere and Persily 2008).

### THE CURRENT POPULATION SURVEYS AND ESTIMATING THE EFFECTS OF VOTER IDENTIFICATION LAW

Our article is concerned with the first approach to the question of voter ID laws and turnout effects, specifically with statistical models using Current Population Survey (CPS) data to measure turnout. Given the wealth of information it provides regarding voter participation, the best data source would seem to be the U.S. Census's post-election turnout surveys—the Current Population Survey's Voter Supplements collected every other November. Approximately two weeks after a national election, CPS respondents are asked whether they voted and, if not, whether they are registered. Even when limited to respondents who claim to be registered, the CPS provides tens of thousands of survey responses to work with every two years.

At least three influential (though unpublished) studies have examined potential vote suppression using CPS data (Vercellotti and Anderson 2006; Mulhausen and Sikich 2007; Alvarez, Bailey, and Katz 2008). In each case the authors conducted multivariate probit or logit analyses of voting amongst registrants as a function of a host of relevant individual characteristics plus a measure of the state laws governing voter identification. The results are somewhat contradictory.

One study, commissioned by the U.S. Elections Assistance Commission (EAC), was performed by the Eagleton Institute of Politics at Rutgers University and the Moritz College of Law at Ohio State University (Eagleton Institute of Politics 2006; Vercellotti and Anderson 2006). Vercellotti and Anderson explored statistical relationships between the stringency of voter ID laws and turnout in the 2004 presidential election. Controlling for demographic variables (i.e., age, race, education, and income) and political context (i.e., a competitive election), factors known to influence voter turnout, the authors found seemingly compelling sta-

tistical evidence of a negative causal relationship between the stringency of a state's voter ID requirements and voter turnout, with the greatest suppressive effect among racial minorities, especially Latinos. Vercellotti and Anderson's findings were challenged, however, in a paper by Muhlhausen and Sikich (2007) of the Heritage Foundation. Once Muhlhausen and Sikich made what they contend are corrections and improvements to the models, the statistical significance of the negative relationship found by Vercellotti and Anderson between ID stringency and turnout in the individual level data largely disappeared.

Alvarez, Bailey, and Katz (2008) offer the most statistically sophisticated treatment of the voter ID-voter turnout modeling problem to date, employing a Bayesian multi-level model to examine turnout in the CPS individual-level data for the four federal elections held between 2000 and 2006. They make useful refinements to the measurement of state voter ID laws, generating an eight-level index of severity. As with Vercellotti and Anderson, they find statistical evidence of a slight relationship between the restrictiveness of voter identification laws and turnout. However they do not find the effects to be strongest among racial minorities.

These papers' findings are sometimes inconsistent, not only across studies but also (sometimes) within the same study. Given the limited size of the effects that are searched for, small changes in choices such as how to measure the independent variables and which controls to impose can alter the conclusions. We therefore address in this article some fundamental issues of research design and statistical inference. Initially, we question whether cross-sectional analysis of CPS data (e.g., of the 2004 election only) is appropriate. Suppose, for instance, that unmeasured causes of state turnout levels (e.g., "culture") affect the states' propensity to pass severe voter identification laws to even a slight degree. This causal process could distort the evidence regarding the small effect, if any, of identification laws on turnout.

This problem is compounded by possible pitfalls in the interpretation of a multilevel model involving state-level causal variables and individual data. While controlling for individual-level variables helps achieve statistical preci-

sion, it is also necessary to statistically treat the independent variable of interest or treatment effect—state voter identification policy—as an aggregate state level variable. This means that when reporting coefficients involving voter identification laws, the studies should report clustered standard errors. The problem is that the large  $N$  of over 64,000 cases (in the 2004 analysis) provides the illusion of more statistical power than is present. Although the individual-level variables provide some controls, with only 50 states plus D.C., the effective  $N$  for calculating standard errors from the individual-level data is merely 51. Only if it were possible to control for all state-level variables affecting voter turnout would clustering cease to be a problem.

Despite frequent discussion in the econometric and statistical literature (e.g., Moulton 1986, 1990; Wooldridge 2003; Donald and Lang 2007), the need to impose clustered standard errors is not always appreciated by practitioners. (For a political science example applied to state legislation, see Branton 2004, and Primo, Jacobsmeier, and Milyo 2007; for an accessible general discussion of clustered standard errors, see Rogers 1993.) Failing to impose clustered standard errors results in the reporting of false positives—findings reported as statistically significant when the proper (larger) standard error would show that they are not. When trying to find small effects of voter identification laws in the states using the CPS Voter Supplement survey data, the danger is that the presence of thousands of individual data points offers a false sense of certainty.

None of the three voter ID studies cited above reports the appropriate clustered standard errors. Both the Vercellotti and Anderson and the Muhlhausen and Sikich studies report using “robust” standard errors. But (as we will show below) this does not properly address the problem at hand. The Alvarez et al. method for reporting their confidence intervals is not fully transparent from their report. Clearly, however, the standard errors reported for state-level variables are smaller than is appropriate. We know this because the reported standard errors (or confidence intervals) are equally small (if not smaller) for dichotomous state-level variables as they are for individual-level

dichotomous variables. This should not be. The effective  $N$  for state level variables is 51. For individuals, the effective  $N$  is in the tens of thousands.

## THE CHALLENGE

We return to the questions at hand. Do voter ID laws suppress turnout? Is their effect particularly severe among certain disadvantaged groups whose erasure from the electorate could tilt the partisan outcome? As social scientists can we document the effect from analyzing the usual turnout data, such as from the CPS?

Let us accept, at least for heuristic purposes, the first two claims, while stipulating that the effects must be small, consistent with some of the research reviewed above. For the sake of argument let us pull some numbers out of the hat as generous conjectures about the short-term effects of a draconian voter ID law. First, assume that when a state goes from no ID required to the demand for a government-issued photo ID, the requirement prevents two percent of the registered electorate from voting. Of this two percent, three out of four would have voted if allowed, which (we assume) is the same rate as those with the required photo IDs. Thus, of the original electorate, 98 percent show up to vote displaying their IDs, while two percent either are intimidated by the law to stay home or are refused when they show up at the polls. Let us also assume that if they could vote, our newly disenfranchised voters would split one-sidedly as 80 percent Democratic versus 20 percent Republican. Before disfranchisement, our missing two percent would add  $.02 \times .80$  to the Democratic vote or  $.016$ . This is  $.06$  above what they would have contributed if they split a neutral 50–50. Now, if, say, the 98 percent with their photo IDs split as evenly as 49.5 percent Democratic and 50.5 percent Republican, our missing voters could make the difference if they voted ( $(.98 \times .495) + (.02 \times 80) = .4851 + .016 = .5011$ ).

If these numbers are approximations of what politicians believe, then on partisan grounds alone, the battle is worth waging. (In effect, our hypothetical numbers would mean that the decisive partisan threshold for the Democratic

party goes from 50 percent to 50.5 percent of the two-party vote.) Given our fake numbers, many would see a normative imperative as well, with facilitation of the exercise of the right to vote outweighing the possible phantom of voter fraud.

But our question here is different. If two percent of the eligible electorate go missing due to voter-ID disfranchisement, are our instruments truly capable of detecting it? In asking this question we must be wary not only of false negatives (as when researchers claim they find evidence that ID laws have no effect) but also of false positives (as when researchers claim they find convincing evidence that voter ID laws do matter).

Here, we analyze the CPS data, using the basic technique of difference-in-differences, in which we ask whether the change from 2002 to 2006 in our dependent variable (turnout among registered voters) varies as a function of the change in our treatment variable (the presence or absence of new voter ID laws enacted between the 2002 and 2006 elections). For possible controls we have the characteristics of the individual voters in the CPS survey. For units, the appropriate level is the set of 50 states plus the District of Columbia. Thus, while using a survey with multiple thousands of respondents, we collapse the data into 51 large state samples.

We do not claim that our methodology is the only one worthy for this task or even the best. But it does illustrate how the task of estimating the effects of voter ID laws is truly daunting. The handicaps are obvious. We start with the expectation that any effect is small as we search for a possible missing two percent of the registered electorate. And even though we can observe treatments in the form of new voter ID laws enacted between 2002 and 2006, these are mostly mild innovations, usually falling short of requiring photo IDs. Therefore, the expected effect is even smaller. In addition, we have the handicaps that come with working with voter surveys. Although this tendency may be minimal in the context of the non-political CPS survey, people do lie to pollsters, exaggerating their voting histories. Perhaps the biggest hurdle of all, we must ask whether the undocumented voters who are otherwise eligible and

registered are fully represented in even well-run Census surveys.

Finally, despite the fact that CPS surveys include thousands of respondents, the effective quantity of cases is not the number of survey respondents but the number of states that generate the treatments by changing or not changing their voter ID policies. This is a central lesson of this article. Now, having listed the arguments against finding anything, let us turn to the data.

## RESEARCH DESIGN

We estimate the possible effects of voter ID laws by means of a difference-in-differences test applied to 2002 and 2006 voter participation data. Difference-in-differences analysis simply is the current econometric term for comparing the degree of change for different treatment groups (Bertrand, Duflo, and Mullainathan, 2004). Some will recognize the method as Campbell and Stanley's (1966) "non-equivalent control group design." Specifically, with states as the units, we ask: did state-level voter participation change between these two midterm elections as a result of changes in the states' voter ID legislation? The idea is simple. The independent variable is change in legislation between the two elections. The dependent variable is change in voter participation among registered voters between the same two elections. If voter ID laws suppress turnout, the relationship should be negative: increased voter ID requirements should be associated with lower voting rates.

Especially in a non-experimental setting, it is helpful to control for additional sources of variation in the dependent variable. The more controls, the less the concern about spurious relationships. And the more the extraneous sources of variance are controlled, the more similar are the treatment groups apart from the independent variable of interest. Limiting the unexplained variance enhances the statistical power of the comparisons across treatment groups. With group level treatments, it is important to take into account the clustering of the group level effects. Although the likelihood of finding a statistically significant result is greater

when there is a large number of “degrees of freedom,” the appropriate degrees of freedom for estimating the standard error of the group treatment effect is the number of groups, not the number of subjects (e.g., potential voters) across groups. At the same time, gains can be made by controlling for individual characteristics (such as the demographic traits of CPS respondents).<sup>3</sup>

Our goal is to tell a cautionary tale, illustrating the limitations of our statistical enterprise. We believe our method of statistical modeling is subject to little bias and approaches the limit in how much information can be reliably wrung from the data. Nevertheless, the errors in our estimates are inherently large, so that the search for small effects of voter registration legislation must be inconclusive. It follows that one cannot yet say much about the effect of voter ID laws from studying voting participation data in the states.

Our study measures voter participation in 2002 and 2006 as the participation rate of registered voters among each state’s sample in the CPS November Voting and Registration Supplements. With over 64,000 registered voters in each survey, the CPS provides state estimates based on more than 1,000 respondents per state. We use the CPS rather than official turnout numbers because of concerns about uneven purging of the registration rolls in the state. Whereas turnout as a percentage of the theoretically eligible is readily available from official sources at the state level (subject to some concerns about who should be included in the eligible voter denominator), the turnout rate as a function of official registration figures is more problematic.

A second reason for using the CPS is that the CPS survey offers controls for some individual characteristics of state electorates. Vercellotti and Anderson (2006), Muhlhausen and Sikich (2007), and Alvarez et al. (2008), model respondents as the unit; we see states as the proper unit, while still using individual-level analysis to adjust state estimates.

Our measure of legislation is the ordering of eight types of requirements for voting at the polls. Borrowed from Alvarez et al. (2008), these are, in order of increasing stringency:

0. Voter must state his/her name
1. Voter must sign his/her name in a poll book
2. Voter must sign his/her name in a poll book and it must match a signature on file
3. Voter is requested to present proof of ID or voter registration card
4. Voter must present proof of ID or voter registration card
5. Voter must present proof of ID and his/her signature must match the signature on the ID provided
6. Voter is requested to present photo ID
7. Voter is required to present photo ID.

There are further variations, and some increments may be more severe than others. Only two states had gone to level 7 by 2006. One, Indiana, required a government-issued photo ID while the other, Florida, was less strict about the source. In our analysis we measure change either as the net change in the numerical value (0–7) or the presence or absence of an increase in severity. When perusing details of the data, we keep a special eye on the two “7” states, Florida and Indiana.

The setup then is a bivariate analysis for 50 state observations. We perform OLS regression equations where the dependent variable is change in turnout. The independent variable is the change in voter identification legislation, either as the change score on the 0–7 scale or the presence or absence of change.

The main measure of voter participation is the observed voting rate among CPS registrants. We supplement this with an adjusted (residual) rate as the mean state rate controlling for a set of individual-level characteristics of the respondent—age, education, income, race, gender, and marital status. These controls (constructed similarly but not exactly as here) play a central role in Alvarez et al.’s (2008) individual-level analysis. Our state-level dataset is displayed in the Appendix.

As a baseline for turnout levels we use the set of individual-level logit equations shown in the first set of columns of Table 1 (labeled

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<sup>3</sup> The classic statement is by Moulton (1986, 1990). See also Donald and Lang (2007).





erably because states differ in their turnout levels apart from their demographic composition. Our task would be simplified if state-level changes in turnout were uniform across states apart from those caused by changes in voter identification laws. In actuality, state voting rates change from one election to the next for a variety of reasons. Such changes increase the size of the disturbance term in the regression equation we use to predict residual turnout change caused by change in the voter identification law.

Because certain types of individuals may be particularly inhibited by voter identification laws, we also performed subgroup analysis. We analyzed observed and demography-adjusted turnout levels for three subgroups: college educated with B.A. degrees or higher (who presumably are little affected), those with no more than a high school diploma, and grade school educated without a high school degree (who presumably are most subject to any deterrent effects of voter ID legislation). We also separately analyze respondents scoring low on a multi-item index of presumed vulnerability based on demographic characteristics (details not shown).

### A WRONG PATH

We could have proceeded, misguidedly, by pursuing a cross-sectional analysis. We might even have been tempted into using our 64,000-plus respondents as our units rather than our 51 states. It is worthwhile considering how we would have been led astray.

Consider again the individual-level equations of Table 1. The second set of coefficients for each year (labeled “With Voter ID Laws”) adds year-specific state scores on the 0–7 index of voter ID legislation to supplement the existing variables. For both 2002 and 2006, the coefficient for voter identification laws is negative, as theory would suggest. Unadjusted, the standard errors for net change in legislation produce absolute *t*-values of greater than 6. In other words voter ID legislation is a “significant” negative predictor of turnout at better than the .001 confidence level. But even apart from important and obvious endogeneity con-

cerns that arise (does the negative coefficient arise because states with less participatory cultures pass strict laws?), we must recognize that the reported significance level assumes the relevant degrees of freedom based on 64,000-plus individuals rather than based on a modest set of 51 states. Table 1 shows that if we employ “robust” standard errors, as do Vercellotti and Anderson (2006) and Mulhausen and Sikich (2007), we produce slightly more conservative estimates of significance for voter identification laws. But the robust standard errors correct only for heteroskedasticity, which is not the main problem. The whole approach, even with robust standard errors, is the wrong solution for dealing with our state-level policy variable, as the standard errors are still seriously deflated compared to what they should be. Table 1 also reports a third version of the standard errors, clustered by states, that corrects the problem. The result is that individual-level standard errors take into account within-state variance. More relevantly, the standard error for the clustered variable (voter ID laws) is now based on the number of states, not respondents. With the standard error for laws now expanded by a factor of about 7, we see that state laws are not close to statistically significant. The clustered standard errors are barely larger than the coefficients themselves.<sup>4</sup>

The intuition for this result may not be immediately obvious. If state turnout levels varied almost entirely based on the changes in voter ID requirements (plus the individual characteristics in the equation), there would be no problem. But of course that is not the case. Aggregated to the state level, the correlation between the predicted vote (from individual characteristics plus voter ID law) and the actual vote is a mere .39 for 2002 and .38 for 2006. States vary in their rate of voting participation

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<sup>4</sup> There are a few minor observations from Table 1 worth noting: almost always, the individual characteristics pass the usual threshold of statistical significance, as their *t*-ratio of coefficient to standard error generally exceeds 1.96. Gender and to a lesser extent, race, are the exceptions. We also note that adding state laws to the equations adds only minimally to the underlying explained variance. This should be no surprise. And the coefficients for the individual-level variables are virtually unaffected by adding state laws. This too should not be a surprise.

largely for reasons that are unmeasured by demographic variables in the Current Population Survey.<sup>5</sup>

### DIFFERENCE IN DIFFERENCES

Working with change over time alleviates the endogeneity problem. Presumably states do not rapidly change their culture of participation because of a change in the law or for other reasons. Potentially, working with change also increases the efficiency of the estimates. The reason is that although states vary in their unmodeled influences on turnout, they presumably vary little in their *change* in un-modeled influences on turnout. High-turnout states in 2002, for instance presumably are high-turnout states in 2006. By this reasoning, there should be less unexplained variance when modeling change in the vote over time rather than cross-sectional turnout. At the same time, since turnout estimates contain sampling error, this source of error will double when examining change scores.<sup>6</sup>

The dependent variables for the difference-in-differences analysis are the change in the turnout rate between 2002 and 2006 among the entirety of states' registered voters, as well as among more demographically select groups. We analyze state change both ignoring and controlling for the effects of demography on turnout within the state CPS sample. The variances of the various potential dependent variables are shown in Table 2. Change scores have less variance, but only slightly so, than levels of turnout. Adjusting the state samples for sample demography also offers a slight reduction of the variance to be explained. The less the variance, the less the uncontrolled variance to be explained.<sup>7</sup>

Still, the gains from the lesser variance turnout to be slight. One might be surprised that adjusting for individual characteristics of the state samples contributes so little. After all, the usual suspects—age, education, income, race, gender, marital status—all matter at the individual level. But many of them, especially gender, marital status, and age, only vary marginally at best when accounting for state-to-state differences.<sup>8</sup>

Table 3 presents the coefficients and standard errors for the effect of change in voter ID legislation utilizing the difference-in-differences analysis. Change is measured two ways, as net change in the state score, 2002–2006, and dichotomously as the presence or absence of any increase in severity. The results are shown for all voters plus three segments based on education. Results are presented with and without the adjustment for sample demographics.

Some of the results are displayed graphically in Figures 1–6. In appearance, these graphs support the hypothesis of a depressing effect on turnout. They show scatterplots overlaid with regression lines. Figures 1 and 2 show the pattern when generalizing to all registered voters. We see that whether using observed (Fig. 1) or adjusted (Fig. 2) turnout estimates, as a state shifts from low to high scores on the voter ID law scale, expected turnout declines by about two percent. This pattern is in the range one might expect and seemingly supports the suppression hypothesis.

The problem, however, is that these estimates are decidedly not significant. None of the estimates for all voters or even for the “target” non-high school educated group is close to being statistically significant. The rough pattern is that as laws become severe turnout declines at about the modest magnitude one might expect. The significance levels (in the .50 range)

<sup>5</sup> The clustered standard error adjusts for the clustering of the dependent variable at the state-level as well as shifting the relevant  $N$  from the number of individuals to the number of states. The standard error for voter identification laws approximates the standard deviation for the aggregate equation where the state-level mean log of the odds of voting is accounted for by the score of the voter identification law.

<sup>6</sup> The sampling variance of a difference between two independent samples (e.g., states in 2002 and 2006) will equal the addition of the sampling variance for each sample separately.

<sup>7</sup> The cross-sectional variance represents sampling variance plus true variance in state effects. The over-time (2002 to 2006) variance represents the doubled sampling variance (see note 6) plus the variance of any state-level effects.

<sup>8</sup> The state samples are sufficiently large that adjusting for demographic characteristics of the state samples (analogous to pollsters post-stratifying their samples by demography) offers little improvement to the state voting rate estimates. For these reasons the gain from residualizing is modest.

TABLE 2. STANDARD DEVIATIONS OF STATE VOTING RATES FROM CPS SURVEYS

	2002		2006		2006 minus 2002	
	<i>Observed</i>	<i>Adjusted<sup>c</sup></i>	<i>Observed</i>	<i>Adjusted<sup>c</sup></i>	<i>Observed</i>	<i>Adjusted<sup>c</sup></i>
All	6.1	5.8	6.7	6.1	5.0	5.1
Grade School <sup>a</sup>	7.6	7.5	9.5	9.2	8.4	8.1
High School <sup>b</sup>	6.2	6.2	7.1	6.7	6.0	5.7
College Graduate	6.5	6.0	5.2	5.2	5.2	5.1

N = 51 (states plus D.C.)

<sup>a</sup>No High School degree.

<sup>b</sup>High School degree but no B.A.

<sup>c</sup>Adjusted standard deviations equal the standard deviations of the deviation of observed state turnout from expected state turnout based on respondent individual characteristics from Table 1.

tell us that if the null hypothesis were true (no effect), the observed pattern could easily be a slight turnout decline with increasing law severity on the order of magnitude that is observed.

One further test might offer hope of a better resolution. We observe that change in legislation has as close to zero “effect” as possible for the college educated, especially when adjusted for individual characteristics. This is consistent with theory, since college-educated citizens should

not be easily deterred by voter ID laws. We could perform a difference-in-differences-in-differences analysis comparing the states’ change among possibly vulnerable non-high school graduates compared to the change among the states’ college educated. In other words, we ask whether an increase in voter ID severity reduces turnout among the non-high school educated more than among the college educated. The answer again is a pattern that is decidedly not significant. See Figures 3–5 for the data display.

TABLE 3. ESTIMATED EFFECTS OF VOTER ID LAWS ON TURNOUT AMONG REGISTERED VOTERS

<i>Independent Variable = Net Change Score in Voter ID Law</i>								
	<i>Dependent Variable = Change in Observed Voting Rate</i>				<i>Dependent Variable = Change in Adjusted Voting Rate</i>			
	<i>coefficient</i>	<i>std. err.</i>	<i>p-value</i>	<i>R<sup>2</sup></i>	<i>coefficient</i>	<i>std. err.</i>	<i>p-value</i>	<i>R<sup>2</sup></i>
All	-.41	.44	.34	-.0017	-.33	.44	.46	-.0087
Grade School <sup>a</sup>	-.43	.72	.61	-.0130	-.29	.70	.69	-.0169
High School <sup>b</sup>	-.54	.52	.30	.0020	-.49	.49	.32	.0002
College Graduate	-.10	.45	.82	-.0193	.03	.44	.95	-.0203
Grade School minus College	-.49	.67	.47	-.0091	-.32	.63	.62	-.0150
<i>Independent Variable = Presence or Absence of Increase in Voter ID Law (0 or 1)</i>								
	<i>coefficient</i>	<i>std. err.</i>	<i>p-value</i>	<i>R<sup>2</sup></i>	<i>coefficient</i>	<i>std. err.</i>	<i>p-value</i>	<i>R<sup>2</sup></i>
All	-1.8	1.5	.25	.0072	-1.5	1.5	.34	-.0014
Grade School <sup>a</sup>	-2.0	2.5	.45	-.0081	-1.5	2.5	.56	-.0131
High School <sup>b</sup>	-1.8	1.8	.31	.0011	-1.8	1.7	.32	.0003
College Graduate	-1.7	1.6	.29	.0025	-1.2	1.5	.46	-.0009
Grade School minus College	-3.1	2.3	.90	-.0200	-3.1	2.2	.89	-.0200

N = 51 (states plus D.C.)

<sup>a</sup>No High School degree.

<sup>b</sup>High School degree but no B.A.

<sup>c</sup>Adjusted data represent the differences between observed state observations and the turnout expected based on respondent individual characteristics from Table 1.

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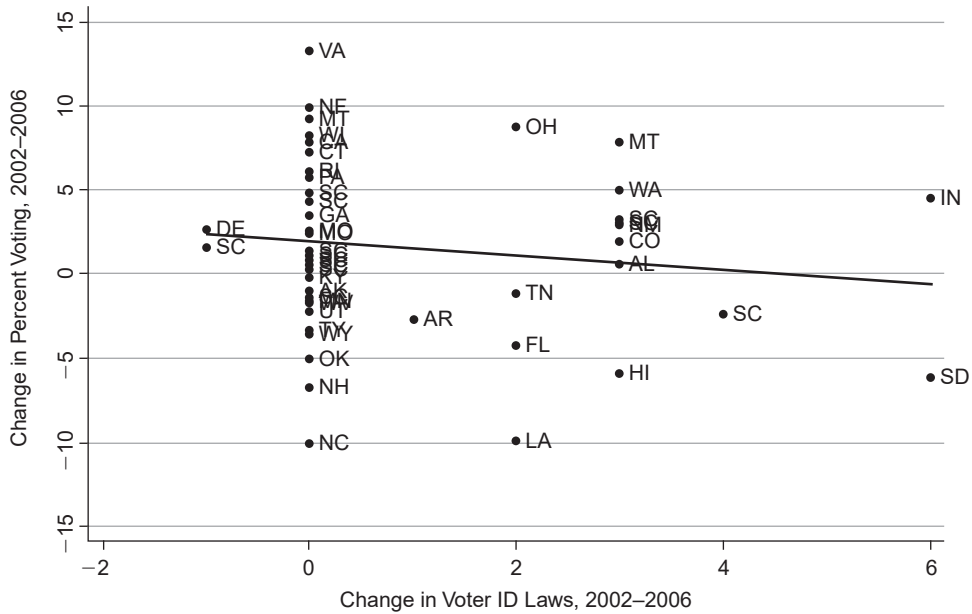


FIG. 1. Change in voter turnout by change in voter ID laws; all cases, observed state turnout data.

Figure 6 further confirms these findings. It shows turnout for voters likely to be the most vulnerable to strict ID laws, measured by an additive scale combining minority status, low income, low education, and age. The scale identifies “voter ID vulnerability” based on a score of 3 or 4 on our index adding one point each for “nonwhite,” “lowest 20 percentile in-

come level,” “no high school diploma,” and “under 25 or over 64.” The effect is bigger than usual, a “loss” of over one point of turnout per point of law severity. But, again, the findings are not statistically significant. The variance by state is high because, as for the lowest educated group, our sample size is small.

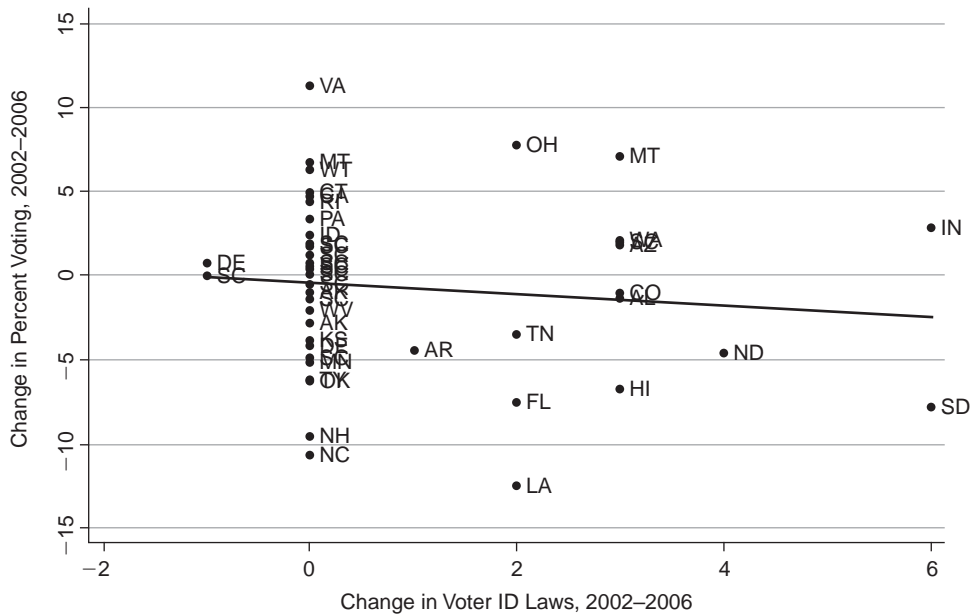


FIG. 2. Change in voter turnout by change in voter ID laws; all cases, adjusted for demographic characteristics of individual CPS respondents.

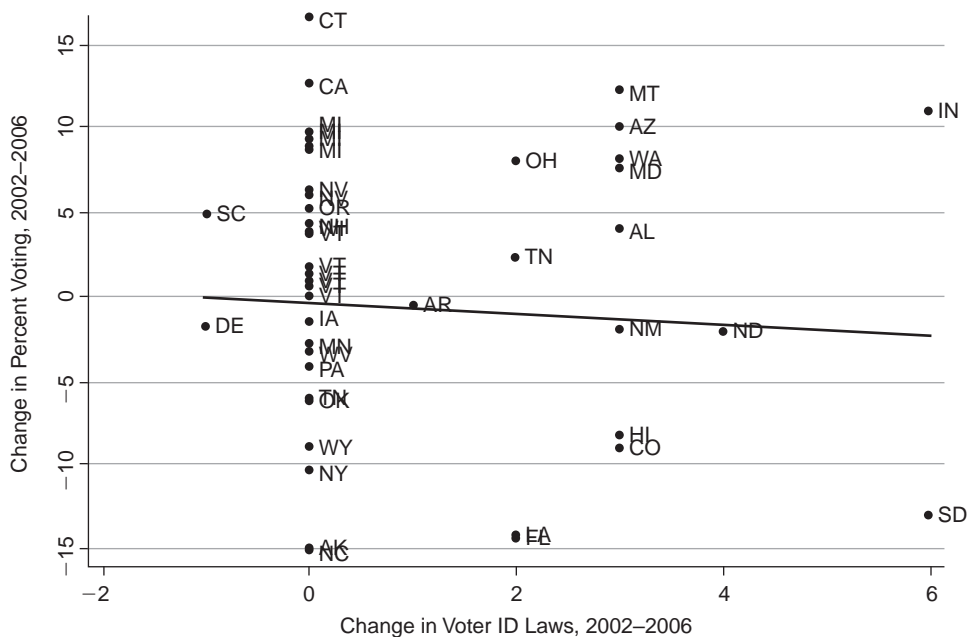


FIG. 3. Change in voter turnout by change in voter ID laws; non-high school graduates, adjusted for demographic characteristics of individual CPS respondents.

DISCUSSION

On the one hand we can observe average turnout “effects” that mimic the plausible complaint of critics. The average estimate is that going from lax to severe voter ID requirements is

associated with a couple of percentage points less in the voting rate, as found by the Vercellotti and Anderson study (2006), Muhlhausen and Sikich (2007), and Alvarez et al. (2008). Moreover, this decline is found mainly among the least educated. But the lesson here is that

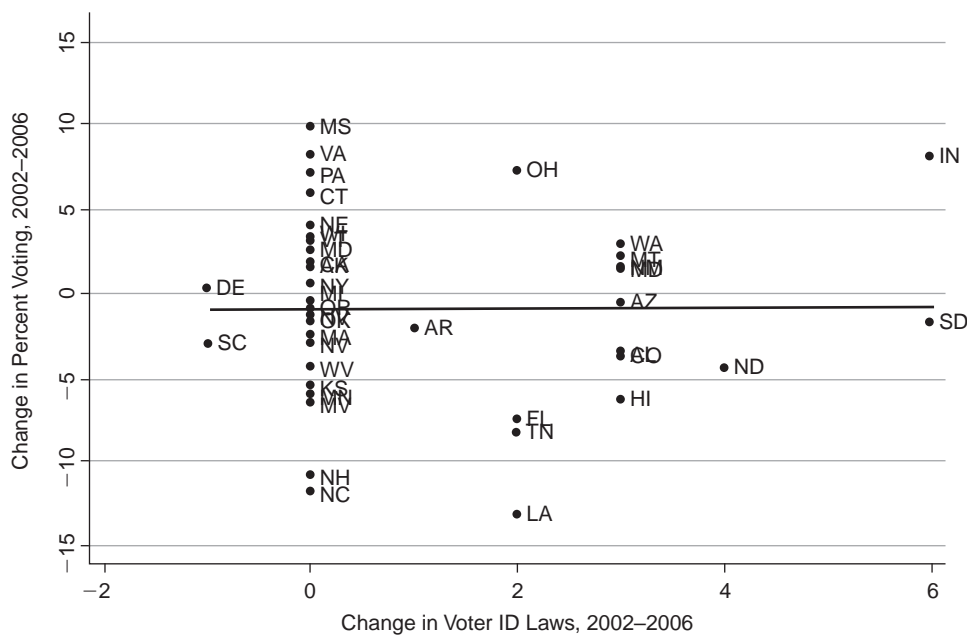


FIG. 4. Change in voter turnout by change in voter ID laws; college graduates, adjusted for demographic characteristics of individual CPS respondents.

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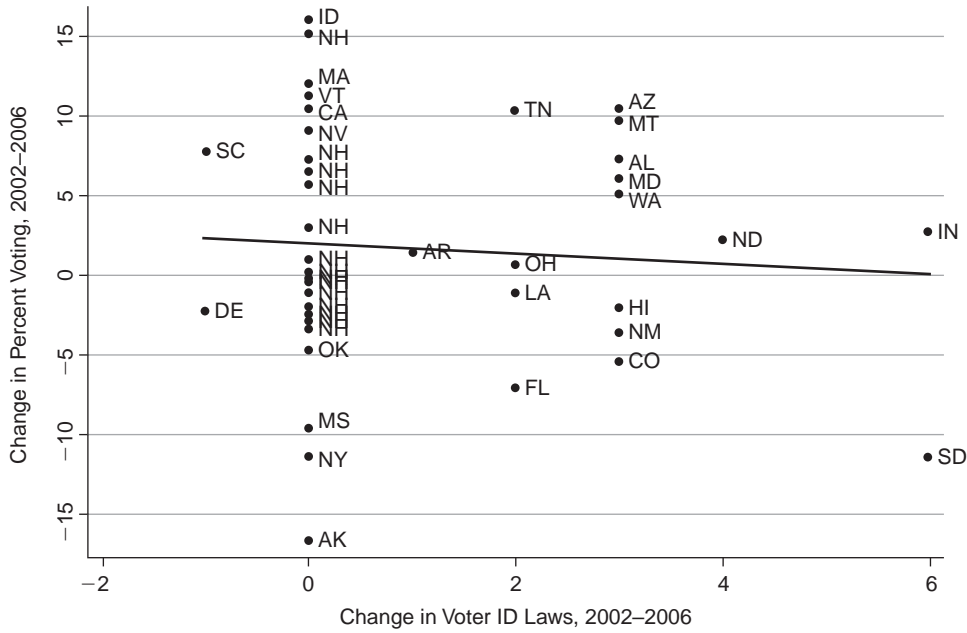


FIG. 5. Change in voter turnout by change in voter ID laws; college educated minus non-high school graduates, difference in differences in differences analysis.

this estimate is statistically inconclusive. The pattern as described is not close to statistical significance. This is true even if we control for the demographic characteristics of the respondents in the CPS state surveys. We could obtain the slight state differences that are consis-

tent with theory by chance even if the true impact of voter identification laws on turnout is a zero effect.

We obtain this inconclusive result because state turnout varies considerably apart from the variables of our analysis. One can see this

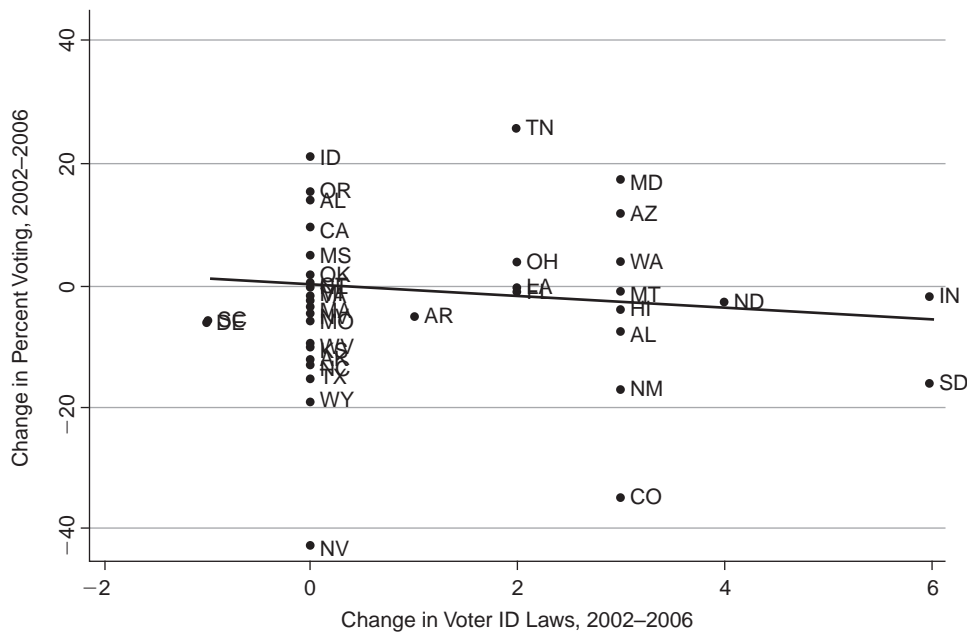


FIG. 6. Change in voter turnout by change in voter ID laws; CPS respondents scoring high on index of voter ID vulnerability.

from Figures 1–6. The observations are considerably dispersed around the regression line. Our imagination might tell us that shifts in voter turnout, especially among registered voters, vary little from state to state. If that were the case, the observations would cluster around the regression lines and we would be obtaining estimates of statistically significant voter ID effects.

Our conclusions are in contrast to the claims of Alvarez et al. (2008) in their analysis of CPS voter participation data. We obtain estimated “effects” of similar magnitude to theirs. Yet we differ in our reports of the precision of our estimates. Whereas we see our results as decidedly non-significant, Alvarez et al. report tight ranges to their coefficients that suggest otherwise. We stand by our interpretation that the evidence is far too shaky to stake a claim of discovery.<sup>9</sup>

The moral is simple. We should be wary of claims—from all sides of the controversy—regarding turnout effects from voter ID laws based on current CPS data. The effects may be there. By all tests there is nothing to suggest otherwise. But the data are not up to the task of making a compelling statistical argument.

## CONCLUSIONS

It should be evident that our sympathies lie with the plaintiffs in the voter ID cases. Yet we see the existing science regarding vote suppression as incomplete and inconclusive. This is not because of any reason to doubt the suppression effect but rather because the data that have been analyzed to date do not allow a conclusive test.

What can be done to boost the empirical analysis of the problem? Additional elections and additional states enforcing strict voter ID laws will provide more and better data. Beyond that, we suggest a more detailed analysis not of survey turnout data, but of aggregate data within and between states. Here is one difference-in-differences-in-differences design: suppose we observe a decline in the voting rate in disadvantaged precincts of a

strict-enforcement state such as Indiana relative to the voting rate of advantaged precincts within the state. This would be evidence that the poor are voting less relative to the rich, but is this because of the voter ID law? A test would be whether the decline is present only in states with new voter ID laws and not in states without them. And then, even if there is an effect, the test will work only if changes in the rich-poor voting gap are rare in the absence of newly enacted voter ID laws. State differences in respondent turnout and change in turnout are too vast for the voter ID law effect to be measured by the CPS with sufficient precision. Conceivably this problem can be alleviated by using within-state aggregate voting returns, which, whatever their demerits, are free of the noise from survey sampling error.

A more modest but still promising approach is to fall back on surveys of who has or does not have the kinds of identity documents mandated in recent voter identification legislation. Turnout questions aside, we don’t see why, for now, a straightforward approach isn’t enough to raise concerns about a disparate impact of voter ID laws. Recent research of this kind strongly suggests that strict voter ID laws will negatively affect certain voters, including minorities, at least in the short-run (Pawrasarat 2005; Brennan Center for Justice 2006; Barreto, Nuño and Sanchez 2007a; 2007b; Pastor et al. 2008; Hood and Bullock 2008). Until we have more experience with restrictive voter ID laws that are already on the books and, therefore, more data to analyze, survey findings and database matching showing thousands, perhaps millions of citizens lacking government-issued photo ID should raise red flags for policymakers and voting rights advocates alike that these laws could prevent eligible voters from voting.

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<sup>9</sup> Alvarez et al. offer few details regarding the nuts and bolts of their Bayesian methodology applied to the problem. The challenge for them is to show reasons for statistical confidence where in our view none exist.

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## DATA APPENDIX

	State	Voter ID Law <sup>a</sup>		2002 Voting Rate <sup>b</sup>		2006 Voting Rate <sup>b</sup>	
		2002	2006	Observed	Adjusted <sup>c</sup>	Observed	Adjusted <sup>c</sup>
1	AL	1	4	67.5	.3	68.0	-.9
2	AK	4	4	75.8	7.4	75.5	4.7
3	AZ	1	4	72.3	1.5	75.6	3.4
4	AR	3	4	72.6	4.4	69.9	-.1
5	CA	1	1	69.4	-.6	77.2	4.1
6	CO	1	4	75.0	5.0	76.9	3.9
7	CT	4	4	67.5	-4.4	74.7	.6
8	DE	5	4	65.8	-4.5	68.4	-3.9
9	DC	1	1	70.1	1.3	68.5	-2.9
10	FL	5	7	73.1	3.1	68.8	-4.4
11	GA	4	4	65.0	-1.7	68.5	-1.6
12	HA	3	6	85.4	10.7	79.5	4.0
13	ID	1	1	74.9	5.7	79.6	8.1
14	IL	2	2	69.4	-.1	69.6	-2.4
15	IN	1	7	65.5	-4.0	70.1	-1.1
16	IA	1	1	70.4	1.9	71.7	.5
17	KS	1	1	72.7	1.8	71.0	-2.0
18	KY	4	4	67.6	.6	68.3	-.4
19	LA	4	6	67.0	-.1	57.1	-12.6
20	ME	0	0	71.5	2.7	74.1	3.3
21	MD	1	4	76.8	4.4	79.9	6.3
22	MA	3	3	73.1	2.1	77.3	3.5
23	MI	1	1	69.6	1.5	78.8	8.3
24	MN	1	1	84.8	16.3	83.8	11.2
25	MS	1	1	61.0	-5.7	62.0	-5.8
26	MO	4	4	71.5	2.7	74.1	3.6
27	MT	1	4	77.6	7.7	85.4	14.8
28	NE	1	1	65.1	-4.0	74.9	2.8
29	NV	2	2	75.4	4.5	76.7	3.3
30	NH	0	0	77.1	5.8	70.4	-3.9
31	NJ	2	2	65.8	-6.3	70.7	-4.6
32	NM	1	4	75.2	7.4	78.1	6.2
33	NY	2	2	65.5	-4.2	67.9	-4.8
34	NC	0	0	69.2	-.7	59.2	-11.5
35	ND	0	4	68.7	2.1	66.3	-2.5
36	OH	2	4	66.5	-2.5	75.3	5.2
37	OK	1	1	72.5	3.6	67.4	-2.7
38	OR	2	2	79.1	9.7	83.9	11.5
39	PA	2	2	68.1	-1.7	73.8	1.7
40	RI	0	0	75.1	4.5	81.2	8.9
41	SC	5	4	68.5	-.3	70.1	-.3
42	SD	0	6	87.4	19.1	81.2	11.2
43	TN	2	4	73.3	5.0	72.1	1.5
44	TX	4	4	61.4	-5.5	58.2	-11.8
45	UT	0	0	68.0	-.4	65.8	-5.3
46	VT	0	0	75.0	4.8	79.8	6.8
47	VA	4	4	59.0	-12.1	72.3	-.8
48	WA	1	4	72.2	2.1	77.3	4.2
49	WV	2	2	61.2	-6.9	59.9	-8.9
50	WI	3	3	72.8	3.0	80.9	9.4
51	WY	0	0	82.6	13.9	79.0	7.8

<sup>a</sup>Scale constructed by Alvarez, Bailey, and Katz (2008).

<sup>b</sup>As a percentage of self-reported registered voters in CPS surveys.

<sup>c</sup>Adjusted state means are mean deviations of observed turnout from in the CPS survey samples from turnout predicted by individual characteristics. See Table 1 for predictor variables.



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## **EXHIBIT 3**

### DOCUMENTS RELIED UPON IN THIS REPORT

- Expert Report of Jonathan Rodden, PhD, articles cited therein, and supporting data
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# **EXHIBIT 4**

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA

Brian Mecinas, et al.,	)	
	)	No. CV-19-05547-DJH
Plaintiffs,	)	
	)	
vs.	)	Phoenix, Arizona
	)	March 4, 2020
Katie Hobbs, in her official	)	2:01 p.m.
capacity as the Arizona Secretary	)	
of State,	)	
	)	
Defendant.	)	

BEFORE: THE HONORABLE DIANE J. HUMETEWA, JUDGE

REPORTER'S TRANSCRIPT OF PROCEEDINGS

PRELIMINARY INJUNCTION HEARING - DAY 1

(Pages 1 through 123)

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Proceedings Reported by Stenographic Court Reporter  
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I N D E X

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1 THE COURT: So they are all admitted, those exhibits  
2 that your experts are testifying to?

3 MS. O'GRADY: Yes.

4 THE COURT: All right.

5 MS. O'GRADY: Thank you, Your Honor.

6 THE COURT: All right. Thank you.

7 You may call your first witness.

8 MS. KHANNA: Thank you, Your Honor.

9 Your Honor, we call Dr. Jonathan Rodden to the stand.

10 THE COURT: Sir, please come forward and be sworn.

11 MS. KHANNA: Your Honor, while Dr. Rodden is coming  
12 up, he prepared a binder that just has his two reports so he  
13 has -- for his ease of reference. Would it be possible to let  
14 him see it on the stand?

15 THE COURT: Yes. Those are the exhibits that have  
16 already been admitted?

17 MS. KHANNA: Yes, Your Honor.

18 THE COURT: Yes.

19 (The witness was duly sworn.)

20 COURTROOM DEPUTY: Please state and spell your first  
21 name.

22 THE WITNESS: Jonathan, J-O-N-A-T-H-A-N, Rodden,  
23 R-O-D-D-E-N.

24

25

DIRECT EXAMINATION

1  
2 BY MS. KHANNA:

3 Q. Good afternoon, Dr. Rodden.

4 A. Good afternoon.

5 Q. I think you've just done this, but can you please state  
6 again your full name for the Court.

7 A. Jonathan Andrew Rodden.

8 Q. And you prepared two reports in this case; is that right?

9 A. Yes.

10 Q. Can you please take a look at the notebook in front of you.  
11 You will see a couple of tabs listed, Plaintiff's Exhibit 3 and  
12 4.

13 Can you please identify those exhibits?

14 A. Tab number 3 is my initial report in this case dated  
15 November 14, 2019. And tab number 4 corresponds to my reply  
16 report dated February 3rd, 2020.

17 Q. And I'm just going to ask you a few questions briefly about  
18 their areas of expertise and the focus of your scholarly work.

19 If you could take a look at exhibit page 61 of  
20 Plaintiff's Exhibit 3. And that would be in the bottom right  
21 corner, the exhibit page number 61.

22 Is that your CV?

23 A. Yes.

24 Q. And is that a complete and accurate summary of your  
25 educational and professional experience?

1 A. Yes.

2 Q. Can you briefly summarize your educational background.

3 A. I received an undergraduate degree in political science  
4 from the University of Michigan in Ann Arbor. After that I was  
5 selected as a Fulbright Scholar where I studied at the  
6 University of Leipzig, in Germany. And after that I went on to  
7 Yale University where I received a Ph.D. in political science.

8 Q. And what year was that when you received your Ph.D.?

9 A. That was 2000.

10 Q. What did you do after earning your Ph.D.?

11 A. My first job was as an assistant professor at the  
12 Massachusetts Institute of Technology. I was the Ford Career  
13 Development Professor of Political Science there. I received  
14 tenure at MIT, and then spent a year at the Center for Advanced  
15 Study in the Behavioral Sciences at Stanford. And, at that  
16 point, I was recruited to move to Stanford permanently, and  
17 I've been there ever since.

18 Q. So what positions do you currently hold at Stanford  
19 University?

20 A. I am a professor in the Department of Political Science.  
21 I'm also a senior fellow in the Hoover Institution. I'm also  
22 the director of the Spatial Social Science Lab.

23 Q. What is the Spatial Social Science Lab? Can you explain  
24 that to us?

25 A. This is something that I started a few years ago. It's a

1 -- I have a little bit of a little space, a classroom, and a  
2 group of students I work with. Occasionally I have a postdoc  
3 at the lab. It's mostly related to teaching and research,  
4 using various kinds of election data, geo spatial election  
5 data, so data that we can place somewhere in space, so usually  
6 individual level data where we have addresses, or election data  
7 at the level of precincts and counties. And we produced, I  
8 think, the first national precinct level geocoded election --  
9 election results and made a map of those available for  
10 researchers, do that kind of research in the United States, but  
11 also for other countries around the world. So it's a lot of  
12 statistical analysis of election data is mainly what we do.  
13 And we have Ph.D. students and sometimes undergraduates working  
14 with us, and postdocs as well.

15 Q. What classes do you teach at Stanford?

16 A. I teach a large intro class, kind of the big broad  
17 introductory class for our undergraduates. And that's  
18 something I put a lot of time into.

19 I also teach a class called spatial approaches to  
20 social science, which is for undergraduates. And it's really a  
21 cross discipline class that focuses on using -- using  
22 statistical data, again, geo spatial data from -- from various  
23 contexts, with a heavy focus on elections and politics.

24 And then there is a more advanced graduate version of  
25 that class for Ph.D. students that also focuses on statistical

1 analysis of election data in the U.S. and around the world.

2 Q. And what would you say are the principal -- your principal  
3 areas of research?

4 A. Analysis of political economy, political geography, and  
5 especially elections.

6 Q. Have you published articles on these topics in  
7 peer-reviewed journals?

8 A. Yes.

9 Q. Approximately how many?

10 A. Somewhere between 25 and 30.

11 Q. Dr. Rodden, what is the purpose of the peer-review process?

12 A. Well, peer review is very important. It's something I  
13 spend a lot of my time dealing with and thinking about. When I  
14 -- when I write a paper in political science, send it to a  
15 journal, and then the journal edits or sends that paper out to  
16 a series of reviewers, and those reviewers take on the task of  
17 finding out everything that is wrong with what I've done. And  
18 so I spend a lot of my time thinking ahead about what reviewers  
19 will say about what I'm doing. And it causes a certain level  
20 of care and craft and detail in -- in doing -- doing my  
21 research. And it's something that I think always makes the  
22 research better when one has to worry about the kind of  
23 accountability that comes from the review process. That is  
24 something that all of us take very seriously.

25 Q. Have you been asked to referee other scholarly work as part

1 of the peer-review process?

2 A. Yes, very frequently. I usually have three or four reviews  
3 sitting on my desk waiting to be done and editors complaining  
4 about the fact that the things are not done yet.

5 Q. And how do you decide which of those to take on?

6 A. Well, there are a lot of journals and there are a lot of  
7 editors. I -- at this point, I try to take on the ones that  
8 are from the top journals, the ones that I would be most  
9 interested in publishing. And where I feel that I'm putting a  
10 burden on other reviewers to read my work, I try to also review  
11 the work that is sent to me by those journals.

12 Q. Is it fair to say that you get far more requests than  
13 you're able to field as a -- to be a peer reviewer?

14 A. Yes, unfortunately.

15 Q. Has your work been cited in other peer-reviewed articles?

16 A. Yes.

17 Q. Do you know approximately how many times?

18 A. Several thousand.

19 Q. And are you on the editorial board of any publication?

20 A. Yes, Journal of Politics.

21 Q. And, Dr. Rodden, have you been accepted as an expert  
22 witness in the United States court before?

23 A. Yes.

24 Q. And the cases in which you have testified, I believe, are  
25 listed on exhibit page 8 of your initial report, Plaintiff's

1 Exhibit 3; is that right?

2 A. Yes.

3 Q. Have any of these cases involved statistical analysis of  
4 elections data?

5 A. Yes. I think almost all of them did.

6 Q. Have any of these cases involved performing a regression  
7 analysis like the one you performed in this case?

8 A. Yes, I think most.

9 Q. Have any of these cases involved an analysis of ballot  
10 order effects?

11 A. Yes, there was one recently in Florida.

12 Q. I want to call your attention to one of the cases that you  
13 cite on that page, it's called Democratic National Committee  
14 versus Hobbs.

15 Did you perform a statistical analysis of election  
16 data in that case?

17 A. Yes.

18 Q. And are you aware that a little over a month ago, on  
19 January 27th, the Ninth Circuit issued an en banc opinion in  
20 that case?

21 A. Yes.

22 Q. And do you know whether it credited your expert report in  
23 that case?

24 A. Yes. I have read the -- I have read the decision and it  
25 cited my -- my report extensively.



1 MS. KHANNA: Your Honor, pursuant to Federal Rule of  
2 Evidence 702, I would proffer Dr. Rodden as an expert in  
3 elections and the statistical analysis of elections data to the  
4 Court.

5 MS. FRIDAY: No objection.

6 THE COURT: He is so designated, so he may testify in  
7 that capacity.

8 MS. KHANNA: Thank you, Your Honor.

9 BY MS. KHANNA:

10 Q. Dr. Rodden, I want to turn to your work specifically with  
11 respect to this case.

12 What were you asked to do in this case?

13 A. I was asked to examine whether there is a discernable  
14 difference between the vote share of the candidate who is  
15 listed first on the ballot in Arizona compared with the  
16 candidates who are listed second on the ballot, holding other  
17 things constant.

18 Q. And at a high level, how did you approach the analysis to  
19 answer this question?

20 A. Well, the first thing I had to do was collect a lot of  
21 data, and was able to put together data at the level of  
22 counties from all of the -- all of the general elections held  
23 since this ballot order practice was in place from 1980 to the  
24 present, so put together a lot of data, and then was able to  
25 analyze that data using three different techniques.

1           One was to conduct regression analysis. Another was  
2 to conduct what I'll call a matching analysis. And another was  
3 to zoom in and focus more carefully on close elections.

4 Q. And we're going to talk about each of those individually,  
5 but, for the time being, can you just tell me, why did you use  
6 three different techniques or three different analyses?

7 A. They each have different costs and benefits. They each  
8 have different advantages, but the main -- the main task I was  
9 concerned with was something I just mentioned, which is holding  
10 other things constant. And each of these three approaches gave  
11 me a little different way to do that. And if I started to find  
12 really different things with each of these approaches, I would  
13 start to wonder whether I -- whether there was, in fact,  
14 effect, but when I see something similar happening with three  
15 different approaches, it starts to increase my confidence that  
16 there is a -- that there is an effect, that ballot order  
17 actually does have an effect on election outcomes.

18 Q. And, Dr. Rodden, were you able to reach any conclusions  
19 regarding ballot order effect in Arizona?

20 A. Yes.

21 Q. And what would -- what did you conclude, generally?

22 A. Well, broadly I found that there -- there is an effect. I  
23 looked at both Democrats and Republicans and found that both  
24 have a -- enjoy a bit of an advantage when they are listed  
25 first, but I especially noticed that that -- for Republicans,

1 that advantage was larger when -- when it was an open seat,  
2 when there was no incumbent running.

3 Q. Okay. So let's walk through your analysis a little bit.  
4 And the Court has had the opportunity to study your report, so  
5 I'm not going to walk through every single paragraph in detail  
6 of your report. I'm just going to try to touch upon some of  
7 the key analyses and conclusions.

8 So let's begin with some background. Can you explain  
9 your understanding of how Arizona's ballot ordering system  
10 works?

11 A. It's my understanding it was just as described earlier,  
12 that each election the gubernatorial results are examined by  
13 county, and then in the subsequent election the party whose  
14 candidate received the most votes in the gubernatorial election  
15 is then listed first in all of the other races for all of the  
16 other offices.

17 MS. KHANNA: Can we please pull up Plaintiff's  
18 Exhibit 3, figure 1, which is on exhibit page 11.

19 BY MS. KHANNA:

20 Q. Okay. So this is figure 1 from your initial report,  
21 Plaintiff's Exhibit 3.

22 Can you explain to me what this figure shows?

23 A. This is very simple. The columns here are the counties,  
24 and the rows are general election years, each one listed for  
25 1980 to 2018. And I've colored in blue the instances in which

1 Democratic candidates were listed first, and colored in red  
2 those in which Republican candidates were listed first.

3 Q. Okay. So figure 1 tells us which party was listed first in  
4 each county in each election.

5 Does this figure suggest that Democrats and  
6 Republicans have been listed first in approximately equal  
7 numbers during this time frame?

8 A. This is only looking at counties. And what we need to know  
9 here, of course, is that the population is distributed across  
10 counties in Arizona in a way that's more asymmetric than almost  
11 any state. A very large share of the population lives in  
12 Maricopa County and a couple of others. So -- so it's useful,  
13 if you want to understand what voters actually see, what share  
14 of the voters see one or the other party listed first, it's  
15 important to actually look at the voters not just the counties.

16 MS. KHANNA: Okay. Can we pull up, please, table 1 of  
17 the same exhibit, exhibit page 13.

18 BY MS. KHANNA:

19 Q. Can you please explain to me what this table shows?

20 A. This is simply displaying the share of registered voters  
21 that are going to see a Republican listed first in a particular  
22 year.

23 Q. So what does this table tell us?

24 A. Well, we can see that there were a couple of waves, so a  
25 couple of elections, 1984, 1986, where there were -- where no

1 one saw a Republican listed first. And we saw that again in  
2 2008 and 2010. But then what we see is those were really  
3 anomalous years. And then the rest of the observations it was  
4 well over half of the population was seeing a Republican listed  
5 first. And then over the years that -- that share has gone up,  
6 and so that in the last -- in the last period starting in 2012,  
7 it's 80 percent, or a little over 80 percent that are -- of  
8 voters who are seeing Republican candidates listed first on  
9 their ballots.

10 Q. Okay.

11 MS. KHANNA: Can we also pull up map 2 of Plaintiff's  
12 Exhibit 3, which is on exhibit page 16.

13 BY MS. KHANNA:

14 Q. What does this graphic demonstrate?

15 A. This is a map, but it's a map that looks a little different  
16 than maps that we're accustomed to seeing. It's a map that  
17 displays the size of each county according to the size of its  
18 population. So it's just a way of visualizing how dominant  
19 Maricopa County is in the population of Arizona.

20 And the colors simply correspond to the number of  
21 elections, out of 20 total, in which Republicans were listed  
22 first. So it's just a way of visualizing the same information  
23 that we could see in the previous table, and really both  
24 tables, but -- but looking at it in a map form where we see the  
25 actual size of the county.

1 Q. Thank you, Dr. Rodden.

2 Let's move on to your regression analysis of Arizona  
3 elections. Can you explain to me in layman's terms, what a  
4 regression model is?

5 A. Yes. It's an effort to establish the relationship between  
6 some variables, between some indicators. In this case there is  
7 a dependent variable, and that's the thing that we're trying to  
8 explain. That's the thing that we'd like to understand. In  
9 this case, it's the vote share for one of the major parties.  
10 So let me describe it in terms of the Republican party. So the  
11 dependent variable will be the Republican vote share.

12 In this case we have an independent variable that  
13 we're interested in understanding. So the independent variable  
14 is something that we are -- we're examining the hypothesis that  
15 that independent variable explains variation and the dependent  
16 variable. So the independent variable in this case is very  
17 simple, it's just whether or not in a particular county in a  
18 particular election the Republican candidate was listed first.  
19 So that's the main independent variable.

20 But the purpose of a multivariant regression is that  
21 we can then include control variables so we can get the impact  
22 of that -- of that ballot order variable, holding constant a  
23 variety of other things. And so the purpose of estimating a  
24 multiple regression model like this is to get that impact of  
25 ballot order on the vote share, holding constant the series of

1 additional things.

2 Q. So what is your model control for -- what is the --  
3 actually, let me step back.

4 What is the key independent variable, as you  
5 mentioned, the key fixed variable?

6 A. It's the ballot order, and it's a simple variable that  
7 takes on the value one if the Republican is listed first, and  
8 zero if not.

9 Q. And what are the other control variables that you  
10 mentioned?

11 A. First one I include is incumbency. One thing we know about  
12 elections is that incumbents are much more likely to get a  
13 higher -- they're likely to get a higher vote share than a  
14 challenger. So many political science models of this kind,  
15 that's the first control variable we might think of, is to try  
16 to account for incumbency in some way.

17 I think even more important in this case, though, and  
18 this is, I think, at the heart of the matter in trying to  
19 understand what's happening in these data, we know that it is  
20 the previous gubernatorial election that determines whether or  
21 not a candidate is listed first. And so one of the obvious  
22 things -- one of the obvious confounders we're worried about is  
23 that if a county is more Republican in a particular year, we'd  
24 like to control for that. We'd like to hold constant the  
25 partisanship of the county in a particular year.

1           And what's really fortunate in this case, unlike a lot  
2 of other states, Arizona collects yearly data on party  
3 registration. So I'm able to look at what is the share of the  
4 population, the share of the registered voters in Arizona who  
5 are Republicans, and I can hold that constant and look at the  
6 impact of ballot order holding Republican vote share constant.  
7 So I view that as the most important control variable in this  
8 analysis.

9 Q. Did you include any other demographic variable, control  
10 variables?

11 A. I did. I collected a good deal of county level census data  
12 on a variety of additional demographic indicators. And I -- I  
13 tried to explore whether it made sense to include those in  
14 addition to this party registration variable. Many of them are  
15 highly correlated with party registration, and when I tried to  
16 include them in the model along with party registration, they  
17 end up not being statistically significant.

18           Another problem with many of these demographic  
19 variables is that they are correlated with one another, so I  
20 tried to be discerning in which of those variables I included  
21 in the model. And I did include a series of additional --  
22 additional models in my -- in my work on the case, and then  
23 reported on one of those in the -- in the report.

24 Q. What were the demographic control variables that you  
25 controlled for in your initial model -- in your model in your



1 initial report?

2 A. Yes. I used population density, which is something that is  
3 clearly correlated with voting behavior in states around the  
4 country, and, in fact, it's something I recently wrote a book  
5 about. It's a topic of great interest to me and it certainly  
6 matters a lot in a lot of contexts.

7 I also looked something -- at something that is  
8 especially important in the Arizona context, a variable I would  
9 not use, perhaps, in a lot of other states, but it's crucial to  
10 use, I think, in Arizona, and that is the share of the  
11 population that is Native American.

12 I -- I also included a variable for a percent of the  
13 population that rents versus owns. This is something that --  
14 that, for various reasons, works fairly well in explaining  
15 election outcomes in lots of places, there is a large  
16 literature on this, but especially it's important in Arizona.

17 And I think I also looked at the share of the  
18 population that was senior citizens.

19 Q. So the -- you chose these -- the demographic control  
20 variables, I believe you mentioned that are the most  
21 statistically significant. Can you explain what that means?

22 A. Yes. It doesn't make sense to add a lot of additional  
23 variables to a model that just add noise, that are not helping  
24 you explain -- when they're control variables -- and if these  
25 things are not helping you explain Republican vote share, and

1 if they're highly correlated with one another and they're  
2 adding noise to the model, it makes sense to exclude them. And  
3 so after -- after trying a lot of different models, I used the  
4 variables that were most consistently helping me explain  
5 variation in Republican vote share.

6 Q. So why -- so you mentioned you collected data on a host of  
7 different demographic variables; is that right?

8 A. Yes.

9 Q. Why not throw all of the variables into the model? Can you  
10 -- can you explain why that -- why you chose not to do that?

11 A. Yes. When we have a specific hypothesis we're trying to  
12 test with a regression model, we want to be able to put  
13 ourselves in a position to see if that -- if that variable has  
14 a significant impact on the outcome variable. And if we add  
15 too much noise to the model, if we add a lot of variables that  
16 are doing no -- that are really giving us no explanatory power,  
17 it just adds noise to the model and it undermines our ability  
18 to see the thing that we're looking for. So it's -- one has to  
19 be discerning and careful in how one estimates a regression  
20 model and which variables are included.

21 Q. So are you aware that the Secretary has hired Mr. Trende to  
22 critique your analysis here?

23 A. Yes.

24 Q. And you read the report from Mr. Trende as well?

25 A. Yes.

1 Q. And you're aware that he specifically critiques your choice  
2 of demographic variables?

3 A. Yes. I believe, above all, he made the case that I should  
4 have controlled for the share of the population that was  
5 African American.

6 Q. So why didn't you do that in this case?

7 A. Well, when I was initially looking at the data, one thing I  
8 notice is that -- well, first of all, the African American  
9 population in Arizona as a whole is relatively small, but there  
10 is also not a lot of the kind of variation across counties that  
11 we see in Arizona with the Native American population, it's  
12 less on display with the African American population. So there  
13 are, you know, something like 10 or 11 counties in which the  
14 African American population is very small, and then there is --  
15 there are a couple of other counties where it's a bit higher,  
16 but the variation is not really very large.

17 And then, furthermore, when I do -- I noticed right  
18 away that when I included the African American share of the  
19 population in the model, it gave me a coefficient that didn't  
20 make a lot of sense. It gave me a large positive coefficient,  
21 suggesting that the larger the African American population  
22 share, the higher the Republican vote share.

23 This is the kind of thing that happens when you put  
24 two variables in the same model that are highly correlated with  
25 one another, you start to get coefficients that don't make

1 sense. It was highly correlated with population density in  
2 this instance. And so what was happening is that this variable  
3 was just capturing -- it was serving as a proxy for something  
4 else, so it didn't make sense to put both of those in the same  
5 model.

6 Q. Why would it not make sense that the higher the African  
7 American percentage, the higher the Republican vote share?  
8 What -- what made you think that that was --

9 A. We can -- we can look in survey data, we can look at other  
10 -- at the individual level. And we know that African Americans  
11 are one of the most reliable constituencies for the Democratic  
12 party in a variety of states and in Arizona as well. So when  
13 aggregate to the county level and we put this in the  
14 regression, we get a result that doesn't make a lot of sense.  
15 And so you don't want to try to -- to put forward a model that  
16 you know is -- contains something that is -- that doesn't make  
17 sense.

18 Q. Do other voting rights cases -- don't other voting rights  
19 cases often analyze the data in terms of the African American  
20 population, including voting rights cases in which you,  
21 yourself, have testified?

22 A. Yes. In many of these other cases, the cases were about  
23 disparate impact of some practice on a racial group. So the  
24 independent variable of interest was race in many of those  
25 cases, and so, of course, it was necessary to focus on race.

1           In this context, this is a control variable. We are  
2 looking at the impact of ballot order, and the question is  
3 whether this is a confounder somehow. If we think there is an  
4 impact of ballot order on election outcomes, is there a reason  
5 why we think the African American population -- is there some  
6 reason, perhaps, why we think that African Americans are more  
7 or less likely to -- to -- to -- to look at -- you know, to be  
8 using ballot order as a heuristic in elections and something  
9 like that. And I couldn't think of any good arguments of that  
10 kind.

11 Q. So in the course of drafting your initial report, did you  
12 run your regression analysis with additional demographic  
13 control variables?

14 A. Yes, I tried to model them in a lot of different ways.

15 Q. And what happened when you did that?

16 A. These had no impact on the -- on the coefficient and the  
17 standard error for the -- for the variable I was trying to  
18 explore. It also did not increase the -- my ability to explain  
19 variation in Republican vote share, which is what you'd like to  
20 see in a model. If you're adding additional control variables,  
21 you would like to see the explanatory power of the model  
22 increased by a lot, but it wasn't really increasing at all as I  
23 tried to include more of these demographic variables, which, in  
24 any case, were not statistically significant in most models, so  
25 I decided to stick with a more streamlined model.

1 Q. Okay. So let's take a look at --

2 If we could call up onto the screen, figure 2 of  
3 Plaintiff's Exhibit 3, which is on exhibit page 22.

4 Is that on your screen, Dr. Rodden?

5 A. Yes.

6 MS. KHANNA: Your Honor, is that on your screen as  
7 well?

8 BY MS. KHANNA:

9 Q. Does this figure depict the key results of your regression  
10 model?

11 A. Yes.

12 Q. Can you please explain to me, what does this figure show?

13 A. Yes. So let's just focus on the left side of the figure.  
14 Remember I explained that there are some models in which the  
15 Republican vote share is the dependent variable, and so the  
16 left side of the model pertains to those models.

17 And so the first thing we see is a model that just  
18 examines all of the elections together, and it gives me one  
19 coefficient that suggests that the Republican candidates do  
20 better by about two percentage points, a little bit more than  
21 that, when they are listed -- when they are listed first.

22 But one of the things I did to go further is analyze  
23 whether this effect might be separate -- whether it might vary  
24 depending on whether the candidate in question -- I'm sorry,  
25 whether there is an incumbent running in the race or whether

1 it's an open seat. And I find that it is really an important  
2 difference here, that this is really driven by the open seats.  
3 That when we look at cases where there are incumbents running,  
4 the effect is very small and it's not significantly different  
5 from zero. So this is really driven by the rather large effect  
6 in the open seats for Republicans.

7 Q. And what was the coefficient for the Republican -- first  
8 listed Republicans in open seats?

9 A. This one was a little bit more than 5 percentage points.

10 Q. And, again, in your report you say 5.6; is that right?

11 A. That sounds right.

12 Q. And for the sake of clarity, where in your report would we  
13 be able to find the exact numerical coefficients that are  
14 reflected in figure 2?

15 A. Those are all in the appendix.

16 Q. Did you run any other regressions not reflected in this  
17 figure?

18 A. Yes. I ran quite a few additional ones all in the spirit  
19 of -- of robustness checks. When I see a result like this, I  
20 have a lot of -- they are always questions for me. I always  
21 want to know whether this is really what it appears to be. And  
22 so one of the ways of checking up on that is I try to think --  
23 you know, again, thinking about the review process. I try to  
24 put myself in the position of a reviewer at a journal, and I  
25 say, what would I ask this researcher to do to probe these

1 results a little further?

2           And so I go through a series of steps to try to see,  
3 can I make these results go away somehow? Are they perhaps  
4 driven by some anomalous kinds of cases? Maybe they're driven  
5 exclusively, for instance, by districted elections. So a lot  
6 of -- when we -- when we draw districts in Arizona, in U.S.  
7 House or in the -- or in the State Senate, we're going to end  
8 up with a lot of observations -- a lot of independent  
9 observations that are these districts, and many of them will  
10 actually be in Maricopa County. So that's one question: Well,  
11 maybe this is all somehow driven by Maricopa County, or maybe  
12 it's driven by those particular elections. So I do some things  
13 like dropping the districted elections and looking only at  
14 statewide elections.

15           I do some things to analyze the possibility, well,  
16 maybe this is really about gubernatorial coattail effects, so I  
17 do some -- I drop some cases that I think are especially --  
18 that would have been especially affected by something like  
19 that.

20           I also estimate some models where I only look within  
21 candidates. I say, well, what happens when the same candidate  
22 is sometimes listed first and sometimes not listed first? If  
23 we just look within candidates, do we still see an effect? And  
24 the answer is yes.

25           And so there were even a couple additional ones. I



1 looked at whether, perhaps, these were really only driven by  
2 certain kinds of down ballot elections. And I did find the  
3 effect was larger in down ballot elections than the top of the  
4 ballot elections. And by top of the ballot, I mean president,  
5 senate, and gubernatorial elections, but I still see an effect  
6 in both instances. So all of these things are kind of -- these  
7 are little additional probes, a little bit different ways of  
8 pushing the data to see if I can make the result go away in  
9 different ways. And in each of those instances it didn't go  
10 away. The size of the coefficient moves within a narrow band,  
11 but it stays quite similar.

12 Q. And are all -- are the results of those additional  
13 regressions reported in your report?

14 A. They are described in the text and then the results can be  
15 -- can be perused in the appendix.

16 Q. In the course of drafting your second report, the rebuttal  
17 report, did you run the regression analysis with additional  
18 demographic control variables?

19 A. Yes. In response to some of Mr. Trende's suggestions, I  
20 tried the model with all the control variables that I had --  
21 that I had included, taking care to enter separately population  
22 density and African American share because those are so highly  
23 correlated. And when I do that, the -- the ballot order effect  
24 I described in the -- elsewhere in the report stayed -- it  
25 remained -- maintained its statistical significance.

1 Q. So you found no significant differences when you ran  
2 additional regressions in your initial report; is that right?

3 A. That's right.

4 Q. And you found no significant difference when you ran  
5 additional regressions in your second report; is that right?

6 A. Right.

7 Q. So what would you say is the -- your main conclusion, or  
8 the main conclusion that you derived from your regression  
9 analysis?

10 A. That ballot order has an effect that we can discern a  
11 difference between the -- the vote share of the first listed  
12 and second listed candidates, and that that effect is  
13 especially large in open seats, and it's really driven by open  
14 seats in the Republican case.

15 Q. I just want to be clear. How would you characterize the  
16 numerical coefficients that are discussed in your report, for  
17 instance, that 5.6 number coefficient for Republican first  
18 listed candidates in open seats? Is that some kind of a magic  
19 number?

20 A. No. I'd like to -- I'd like to be clear about the -- the  
21 fact that these coefficients, they -- when I try a lot of these  
22 various robustness checks, we can get a coefficient that might  
23 be 4.5 in one model, it might be 4 in another, it might be 5 in  
24 another, so these move around a little bit depending on how the  
25 model is structured, which is completely to be expected, but

1 the range in which these -- these coefficients move is  
2 generally quite small.

3 Q. Do you recall, approximately, what the range was for first  
4 listed Republicans in open seats across all of the various  
5 regressions that you performed?

6 A. My recollection, just putting it all together, is somewhere  
7 between 4 and 6.

8 Q. Dr. Rodden, the next analysis that you conducted on the  
9 data that you collected was what you called a matching  
10 analysis; is that right?

11 A. Yes.

12 Q. And can you briefly describe the theory behind that  
13 analysis?

14 A. Yes. This is another way of dealing with the challenge of  
15 holding -- holding things constant and dealing with this  
16 concern that we have a way of allocating ballot order that is  
17 driven by past elections. So this is another cut at solving  
18 that problem. And this cut is trying to -- trying to find  
19 matched pairs of elections in counties, trying to find matched  
20 pairs of those where a Republican is listed first in one of the  
21 pair, and a Democrat is listed first in the other, but where  
22 the pairs are as similar as possible with respect to the  
23 conditions that would have placed them into this condition of  
24 either one party being listed first or another.

25 So what I mean by that, specifically, is we can go

1 back over time to the election that determined whether you  
2 would have a Republican or a Democrat first, and we can find  
3 matched pairs of counties where the Republican registration  
4 share is as similar as possible, and then we can simply compare  
5 whether, in those matched pairs, the ones where the Republican  
6 was listed first, the Republican candidate has a higher vote  
7 share.

8 Q. So I believe you mentioned in your reports that the way you  
9 matched these elections was by generating something called a  
10 propensity score; is that right?

11 A. Yes. This just tells us the propensity given what I just  
12 described. Given the -- the Republican registration share in  
13 the previous election, what is your propensity to -- to have a  
14 Republican listed first, and then we can compare places that  
15 have very similar propensities. That's the way we achieve the  
16 matching.

17 Q. Okay.

18 MS. KHANNA: If you could call up figure 3 of  
19 Plaintiff's Exhibit 3, exhibit page 29.

20 BY MS. KHANNA:

21 Q. Does this figure depict the key results of your matching  
22 analysis?

23 A. Yes.

24 Q. Can you please explain to us what this figure shows?

25 A. I would -- I would describe it in a very similar way that I

1 described the previous one. Again, we see a -- we see an  
2 effect for the Republicans being listed first, which is, in  
3 this case, again, somewhere between 2 and 3 percentage points,  
4 closer to 3. But then, again, when we break it down by seats  
5 in which incumbents are running versus open seats, we see that  
6 the confidence interval -- and what I mean by that, there is  
7 these bars that reach up and down from the coin estimate.

8           So in this one the confidence interval reaches all the  
9 way past zero on the bottom. So that means that for  
10 incumbents, even those there is a positive coefficient, it's  
11 not quite statistically significant. It's not different from  
12 zero in a statistical sense, so the effect for incumbent is  
13 measured with -- with not very much precision.

14           But when we look at open seats again, we see that,  
15 because that error bar, the bottom part of it is well above  
16 zero, this shows us that the effect is statistically  
17 significant for -- for open seats, just as in the regression  
18 model.

19 Q. And I believe -- and I think you state in your report that  
20 the numerical coefficient here for the Republican first listed  
21 candidates in open seats was, is it 4.2?

22 A. Yes.

23 Q. Dr. Rodden, what would you say is the -- your main  
24 conclusion resulting from your matching analysis?

25 A. Again, it's that -- that when Republicans are listed first,

1 or when Democrats are listed first, they enjoy an advantage.  
2 They have a higher vote share, other things equal, when they're  
3 listed first, than when they're listed second.

4 Q. And that's a statistically significant advantage; is that  
5 right?

6 A. Yes.

7 Q. And is it fair to say that advantage is driven for the  
8 Republicans largely by their first listed candidates in open  
9 seats?

10 A. That's correct.

11 Q. Dr. Rodden, you ran one final type of analysis on this data  
12 in your initial report considering close elections; is that  
13 right?

14 A. Yes.

15 Q. And so what is the theory behind that analysis?

16 A. Yes. This is an approach that -- that, again, when I think  
17 -- put myself in the mindset of a reviewer who would be likely  
18 to take this report as a journal article and give me some  
19 comments on it, I believe that most political scientists would  
20 see this dataset, see this structure, and think this is an  
21 ideal setting for conducting what is called a close election  
22 discontinuity. And this is another way of solving this -- this  
23 problem I have, which is to try to disentangle the overall  
24 Republican -- the overall share of the population that prefers  
25 Republican candidates in a county that might have led it to

1 choose a Republican gubernatorial candidate two or four years  
2 ago, disentangling that and the impact of vote share. So this  
3 is another approach to that, that I think would -- is the one  
4 that most political scientists would want to turn to in this  
5 instance.

6 Q. Can you describe that approach of close elections analysis?

7 A. Sure. The idea here is that if we can find some elections  
8 where the previous -- the previous election, that gubernatorial  
9 election, again, the one that assigned you either to what we  
10 might call the treatment status, which is having Republicans  
11 listed first, or the control status, which is having a Democrat  
12 listed first, when we go back to the election that caused that  
13 -- that divergence, if we look at elections that were really  
14 close, and we just ignore all the other elections but we just  
15 focus on the elections in that narrow band, say between  
16 45 percent and 55 percent, where it's more plausible to think  
17 that the difference between a county that went one way and a  
18 county that went the other way is due to some random chance,  
19 that's the kind of logic here. If we focus in on those, we  
20 have a new way of understanding the difference, of kind of  
21 dealing with the problem that counties that have Republicans  
22 listed first might be different than the counties where they're  
23 not listed first. So we think these are hopefully as similar  
24 as possible if we just look at the close elections and throw  
25 everything else out.

1           Now, the down side of that is we have fewer  
2 observations. We're only looking at those observations that  
3 are very close, so it's a very different approach. We're  
4 throwing out a lot of data but we're zooming in on the data  
5 that we think might be very useful in identifying this effect.

6 Q. I believe you mentioned social scientists in this field,  
7 you know, if you were thinking of who might be peer reviewing  
8 the study, would actually want to know the answer to the  
9 questions in the close elections context. Why do you believe  
10 that?

11 A. People view this as -- as the best way to -- to identify  
12 causal effect in this kind of setting that -- looking at these  
13 very close elections. This technique developed, in fact, in  
14 the study of incumbency. People wanted to know whether  
15 incumbents do better -- whether incumbency actually gives you  
16 an advantage or whether it's really just a sign of being a  
17 better candidate, and this is the technique they came up with.  
18 And so there are a lot of studies that use this approach, and  
19 that is the preferred approach of many political scientists for  
20 answering this type of question. So here it's applied to  
21 ballot order.

22 Q. So what was your main conclusion of your -- from your close  
23 election discontinuity analysis?

24 A. Again, this led to a broadly similar conclusion to the  
25 other two we saw, an advantage for the first -- the party that



1 was listed first.

2 Q. And, in fact, it yielded a higher numerical coefficient in  
3 this analysis than in the other ones; is that right?

4 A. It did.

5 Q. And you explain in your report that -- that gives you a  
6 little bit of pause, or you maybe question the precision of  
7 that particular coefficient in particular. Can you explain why  
8 that would be?

9 A. Yes. This is the kind of analysis where the -- the -- the  
10 things we can learn from the close election discontinuity kind  
11 of require that on either side of 50 percent, that the cases we  
12 have on both sides look the same. Remember in the matching  
13 analysis, we could actually verify that they look the same.

14 And the same thing, we can do that here, we can look  
15 at the close elections and see. Did the elections that the  
16 Republicans just barely won look similar to ones that they  
17 barely lost. And that's kind of the -- that's the idea behind  
18 this analysis.

19 But when we look at that, we see that the Republican  
20 registration share is actually a little bit higher than the  
21 ones that they barely won, and so that gives me a little bit of  
22 pause. I don't have the ideal balance on both sides of that --  
23 of that discontinuity that I would want for this -- for this  
24 approach to really kind of nail the effect that I'm trying to  
25 find. So that gives me some pause and it leads me to suggest

1 that this effect size might be a little too large.

2 Q. So what, if any further, insight into the ballot order  
3 effect in Arizona general elections did this close elections  
4 analysis give you?

5 A. Well, it just adds to the confidence that kind of grows  
6 with each of these very different approaches. When we see the  
7 coefficient going in the same direction and we see that it's  
8 significant, it adds to my confidence.

9 Q. Dr. Rodden, you also analyzed the results of recent  
10 elections in North Carolina; is that correct?

11 A. Yes.

12 Q. Why?

13 A. I was especially attracted to looking at the analysis of  
14 North Carolina because of a reform that they enacted very  
15 recently. So I've been -- I follow these things and I -- I  
16 noticed that in the 2018 -- in the run up to the 2018 election,  
17 they had a system that was similar to states like Arizona, and  
18 they suddenly changed it in a way that allowed me an  
19 opportunity to identify -- an experimental opportunity to  
20 identify a causal effect.

21 Q. So what question were you answering in the course of -- in  
22 conducting this North Carolina analysis?

23 A. The question there was if a party has a consistent ballot  
24 order advantage, so if a party is listed first consistently,  
25 what happens if you take away that advantage for roughly half

1 of the -- of the races, and you do so in a way that's  
2 essentially, random? We have a -- then we have a really nice  
3 opportunity. We can look at the before and after in both of  
4 those instances and we can see if it brought about a change in  
5 the vote share.

6 Q. And I believe in your report you refer to the North  
7 Carolina context as a natural experiment. What does that mean?

8 A. Yes. This is the kind of thing that researchers get  
9 excited about. When we see something like this, we feel that  
10 we -- what we enjoy is when a state government does something  
11 for us that we would have liked to have done in the lab, or we  
12 would have liked to encourage them to do. Of course,  
13 governments don't do these things for us very often, but once  
14 in a while, in pursuing some other motive, they kind of stumble  
15 into something that is analytically very useful for us, it's  
16 really crisp. And this is one of those opportunities.

17 When they -- when they reformed the ballot order in  
18 the way they did, it gave me an opportunity to really drill  
19 down and collect the type of data that I would want to really,  
20 truly hold everything constant. The things that I'm holding  
21 constant in this case with regressions and so forth, there I  
22 can hold truly constant.

23 Q. It kind of replicates the laboratory in a real world  
24 setting?

25 A. Right.

1 Q. So can you describe what happened in North Carolina? What  
2 was the ballot ordering scheme in 2016 in North Carolina?

3 A. It was a system in which the gubernatorial -- the winner of  
4 the gubernatorial election was listed first everywhere in the  
5 state, so -- and there are some other states that work that way  
6 as well. So every election -- every ballot in 2016 had  
7 Republicans listed first because the Republican party had won  
8 the most recent gubernatorial election.

9 Q. What happened in 2018?

10 A. So in 2018 there was a gubernatorial election that was very  
11 closely contested. The Republican -- the Democrat candidate  
12 won, and so that in the run up to the 2018 election, the  
13 legislature, right before the election, changed the law. And  
14 the way they changed it was by introducing a modified  
15 alphabetical scheme. So that -- so they chose the letter of  
16 the alphabet to start with, and then used that as a starting  
17 point for an alphabetical arrangement, and so all of the  
18 candidates then were listed alphabetically.

19 Q. And, just to clarify, it was the Republican legislature  
20 that changed the ballot ordering scheme after a Democratic  
21 governor was elected; is that right?

22 A. That's correct.

23 Q. And so all of the races in all of the precincts in 2016  
24 listed a Republican first in partisan elections; is that right?

25 A. Yes.

1 Q. And approximately how many of the precincts within each  
2 race listed Republicans first in 2018?

3 A. It was about half.

4 Q. What about the other half?

5 A. Most of them had Democrats listed first, but there was some  
6 -- there was a small handful, I believe, that had Libertarians  
7 listed first.

8 Q. Does North Carolina list the party affiliation of each  
9 candidate next to the candidate's name like in Arizona?

10 A. Yes.

11 Q. Please pull up figure 4 of your initial report. I think  
12 it's Exhibit 3, on exhibit page 36.

13 Does this depict the results of your North Carolina  
14 analysis?

15 A. Yes.

16 Q. And what does this figure tell us?

17 A. Let's start on the left where it says, all precincts. So  
18 here we're simply looking at -- I want to be clear that this is  
19 a -- what we call a difference in difference. And what I mean  
20 by that is that we're interested in the change in the  
21 Democratic vote share from 2016 to 2018. And this is a year  
22 that -- some call it a blue wave. It was a year in which the  
23 Democratic vote share was increasing across the board. And so  
24 we're not just interested in the increase in the Democratic  
25 vote share, we're interested in the change, you know, the

1 difference in this change between what we might call the  
2 treatment group again and the controlled group.

3           So we'll think of the treatment group as that group of  
4 precincts in which the ballot order changed away from  
5 Republican primacy. And we'll think of the controlled group as  
6 the ones that maintained Republican primacy all along. And so  
7 this is the difference. This is the difference. And it's  
8 something like one-and-a-half percentage points.

9           THE COURT: Let me just clarify for the record. It is  
10 page 37, not 36, at least by my -- by my notebook.

11           MS. KHANNA: You're right, Your Honor. I think I was  
12 looking at the wrong page number of the report page number, but  
13 the exhibit page number is 37.

14           Thank you for clarifying, Your Honor.

15 BY MS. KHANNA:

16 Q. So, Dr. Rodden, you mentioned that the coefficient for all  
17 precincts is about 1.5 percent. Can you explain to me what  
18 that 1.5 percent means?

19 A. Yeah. That just means that the increase in the Democratic  
20 vote share, again, there was an increase across the board in  
21 this election, but the increase was higher by 1.5 percentage  
22 points in the places where the Republican primacy was removed,  
23 so you might think of it as the impact of the reform.

24 Q. Can you tell me a little bit about these -- about the open  
25 seats and the same candidates markers on this figure 4.

1 A. Again, I thought it would be useful having all the data, to  
2 break it down a little bit and see what was happening in  
3 different kinds of seats. And, again, this is very consistent  
4 with what I'm seeing in Arizona. I see the effect is biggest  
5 in open seats.

6 I still see it there for Republican incumbents. I  
7 don't see an effect for Democratic incumbents. But one of the  
8 other things I thought was interesting was that sometimes the  
9 same two candidates are running. So sometimes in 2016 there  
10 was someone running and there was a challenger, and the same  
11 person ran again next time. So that makes the experimental  
12 quality even a little nicer, because we're holding constant the  
13 actual candidates. We're seeing the same two people running  
14 again but with a different ballot order regime. And, again, we  
15 see a significant effect that is even a little bit larger than  
16 for the rest of the analysis. You see the confidence interval  
17 is wide, because there aren't very many of these. I can't  
18 remember the number, it's a rather small number of cases, but  
19 we are able to see what happens with those.

20 THE COURT: Let me just interrupt for a second. I  
21 lost some portion of what you're examining here.

22 You're comparing the results of the 2016 election and  
23 the results of the 2018 changed ballot ordering election. And  
24 those 2018 changes reflect alphabetically placed individuals?

25 THE WITNESS: Yes. And so what's happening with the

1 alphabetical introduction, is that for some candidates  
2 switching to alphabetical doesn't change anything. They're  
3 fortunate enough that, you know, maybe their name starts -- the  
4 thing started with F, so maybe their name starts with G, and so  
5 they're still listed first, so I'm taking them as the control  
6 group. But then there are others who were unlucky and their  
7 name fell further down the alphabet, so now they're listed  
8 second in 2018, so I'm comparing those two groups.

9 THE COURT: Okay.

10 THE WITNESS: And the change is bigger -- there is a  
11 bigger increase in Democratic vote share for the group that was  
12 -- where the Republicans were no longer listed first.

13 THE COURT: All right. Thank you.

14 BY MS. KHANNA:

15 Q. So to clarify, you're comparing the approximately half of  
16 precincts in 2018 where Republicans are listed first, to the  
17 approximately half of precincts in 2018 where Democrats are  
18 listed first?

19 A. Or Libertarians, but mostly Democrats, yes.

20 Q. And finding what the chain with the -- what the differences  
21 are in vote share between those two categories over the 2016  
22 election?

23 A. Yes. It's a little hard to keep track of because we have  
24 -- we're comparing changes over time, and we're finding --  
25 we're comparing that change for one group with that change for



1 another group.

2 Q. So Democratic vote share increased, generally, from 2016 to  
3 2018?

4 A. I say it increased for almost every precinct in the state,  
5 yes.

6 Q. But your analysis found that it increased more where  
7 Republican primacy was removed in those precincts; is that  
8 right?

9 A. That's right.

10 Q. And you find that it was increased even more where  
11 Republican -- where there were now open seats --

12 A. That's right.

13 Q. -- and the primacy was removed?

14 A. That's right.

15 Q. And you found it was increased -- and that open seat -- was  
16 that coefficient around, what, 7 point --

17 A. Yes.

18 Q. -- 8 percent -- 8 percentage points, I believe?

19 A. Yes. So the story that is emerging here is when incumbents  
20 are on the ballot, these effects seem to be smaller in general.

21 Q. And that that increase in Democratic vote share was also  
22 more, around 4 percentage points, when the same pair candidates  
23 was running from one election to the next?

24 A. Yes.

25 Q. Right?

1           Let me --

2           THE COURT: I'm sorry, I might be asking a question  
3 that you may be asking later, but because we are talking about  
4 North Carolina now, my obvious question is what kind of  
5 demographics did you use there?

6           THE WITNESS: Well, that's the nice thing about this  
7 experimental opportunity, is that when I'm just -- I'm looking  
8 at -- I'm not really using any demographics here. I'm just  
9 looking at the change between these two groups. And the idea  
10 is that because ballot order -- because -- because alphabetical  
11 order is something that's, essentially, like -- like random,  
12 that we don't have to worry much about -- about demographic  
13 differences between these -- between these places. That they  
14 are -- that they should be, essentially, the same.

15           THE COURT: All right. Thank you.

16 BY MS. KHANNA:

17 Q. Building on the Court's question, Dr. Rodden, do you think  
18 that these results are informative outside of North Carolina?

19 A. Well, I do, because ballot order is something that is,  
20 essentially, a psychological phenomenon, and this was an  
21 especially good setting for looking at it. And especially it  
22 was in the setting of a reform. And so for other states that  
23 might consider some kind of reform, this suggests that that  
24 reform would have an impact on elections.

25 Q. Could you perform the same kind of analysis that you did in

1 North Carolina in Arizona?

2 A. Only if the state government decided to give me the  
3 opportunity and set up an experiment for me of the right kind.  
4 But, no, this is something that really required this kind of  
5 reform to be enacted for me to be able to do that analysis.

6 Q. North Carolina provided that natural experiment --

7 A. Yes.

8 Q. -- for you; is that right?

9 So does that mean that the only places then where you  
10 can find evidence of a ballot order effect for your purposes  
11 for first listed candidates are in those states like North  
12 Carolina that already provide candidates an equal opportunity  
13 to be listed first?

14 A. No, I wouldn't go that far. I think there are research  
15 settings, such as when the ballot order is rotated across  
16 precincts in a way that's essentially random, or there are  
17 settings like North Carolina where we suddenly go to an  
18 alphabetical ordering that is, essentially, the same thing as  
19 random when we have these experimental opportunities, but that  
20 doesn't mean those are the only chances we have to learn  
21 something about the world.

22 I think in the social sciences if we could only learn  
23 from true experiments, we'd be very limited in what we could  
24 study. And so looking at Arizona, we do have variation in  
25 ballot order that allows me to -- to do some, what we call

1 observational analysis, that I think is also still useful.

2 Q. So we don't just throw up our hands for lack of laboratory-  
3 like conditions when we're trying to study a real world effect;  
4 is that right?

5 A. That's right. I put together some data and do our absolute  
6 best to learn what we can from it.

7 Q. And, in fact, as you mentioned -- as you demonstrated in  
8 your three analyses, there are a variety of statistical methods  
9 in order to discern effects in settings like Arizona; is that  
10 right?

11 A. That's right.

12 Q. So what, if anything, does this analysis tell us about  
13 Arizona, this North Carolina analysis?

14 A. It may suggest to me that -- that reform would have an  
15 impact. They started in somewhat similar places, and we saw  
16 here that when this kind of reform was enacted, it did have an  
17 impact on vote shares of candidates.

18 Q. When you say reform, what are you referring to there?

19 A. A change in the ballot order, away from a system in which  
20 the same party is listed first on every ballot.

21 MS. KHANNA: Thank you, Dr. Rodden.

22 THE COURT: Ms. O'Grady, who is going cross?

23 MS. FRIDAY: I am, Your Honor. I'm Kimberly Friday.

24 THE COURT: Yes. Ms. Friday, come forward, please.

25 MS. FRIDAY: Thank you.

1 THE COURT: And just so you know, counsel, I plan to  
2 take a break for our court reporter at about 3:30, and so we'll  
3 be in break for about ten minutes.

4 MS. FRIDAY: Okay. Thank you for letting me know  
5 that.

6 CROSS-EXAMINATION

7 BY MS. FRIDAY:

8 Q. Good afternoon, Dr. Rodden.

9 A. Good afternoon.

10 Q. Now, do you have a degree in statistics?

11 A. No.

12 Q. Have you taken classes in statistics?

13 A. Yes.

14 Q. Can you tell me about those classes.

15 A. When I was a Ph.D. student, I took the sequence of  
16 quantitative methods classes at Yale in my Ph.D. program.

17 Q. Okay. Anything else?

18 A. I try to keep up on -- it's a constant learning process.  
19 There are always new things happening and I'm constantly trying  
20 to increase my skills, but once one is a full-time professor,  
21 it's hard to continue to take classes, so one tries to keep up  
22 in a variety of ways.

23 Q. So that's no? No, you haven't taken any additional  
24 classes?

25 A. No continuing education or anything like that, no.

1 Q. Okay. I believe you used the Stata program in your  
2 analysis; is that right?

3 A. Yes.

4 Q. How did you learn how to use the Stata program?

5 A. Well, that's a little bit like asking someone how they  
6 learned to talk. It's something I've been using since I  
7 started graduate school, so it's been many years I've been  
8 using it.

9 Q. Are there any classes or anything like that on how to use  
10 the Stata program?

11 A. Sometimes it's embedded in a class. I do some teaching  
12 with my own students that go through some techniques that are  
13 applied in Stata, but I don't know if it was used in the  
14 classroom when I was in graduate school. I think it may have  
15 been.

16 Q. You don't remember being taught about the Stata -- is it  
17 Stata or Stata? You have to excuse me.

18 A. I say Stata. I have heard people say Stata, so it's okay.

19 Q. You don't remember being taught about the Stata program  
20 when you were taking statistics courses?

21 A. I believe I was, but most of the learning we do in  
22 applications of techniques using software is some learning by  
23 doing.

24 Q. And do you typically rely on graduate students to assist  
25 you with your work?

1 A. Sometimes.

2 Q. Did you rely on anyone else to assist you with your work in  
3 this matter?

4 A. I did not rely on anyone to help me with the analysis. I  
5 did rely on a graduate student to help me with the collection  
6 of the county level data. And some of the data we're in pdf's,  
7 and we had to work on get the data from pdf form into a tabular  
8 form that we could work with.

9 Q. But the analysis was all your own?

10 A. Yes.

11 Q. Okay. And you've served as an expert witness a number of  
12 times, I believe you testified?

13 A. Yes.

14 Q. Fair to say you routinely serve as an expert for Democratic  
15 party interests?

16 A. In some of the cases I have. There have been a couple of  
17 others that were not attached to any political party.

18 Q. And what were those?

19 A. There was a -- there was a case that involved the  
20 Ferguson-Florissant School District in Missouri. I was  
21 retained by the -- by the -- the counsel for the school  
22 district, which was a defendant in a voting rights case.

23 Q. Was that a vote redistricting case?

24 A. There were questions of districts involved, but it was  
25 mainly a case about whether -- it was a challenge to a system

1 that was -- it was an at large system that was required by  
2 state law that was being challenged by some plaintiffs who  
3 wanted to introduce electoral districts.

4 Q. Any other cases in which you have not been serving as an  
5 expert for Democratic party interests?

6 A. There was a case in -- in Florida where I was -- I believe  
7 it was a nonpartisan group that -- that were the -- that were  
8 the plaintiffs and who hired me.

9 Q. And what case was that?

10 A. That was a redistricting case.

11 Q. Okay. Have you ever served as an expert witness for a  
12 political party other than the Democratic party?

13 A. Not for a party, no.

14 Q. And in this case here, you do not offer an opinion about  
15 whether ballot order is likely to have a substantial impact on  
16 any 2020 election race in Arizona, do you?

17 A. No.

18 Q. Did you examine whether ballot order is likely to have a  
19 substantial impact in any 2020 election race in Arizona?

20 A. No. I didn't have any good sense of how to do that.

21 Q. Did -- do you offer an opinion about whether the ballot  
22 order historically had a substantial impact on a contested  
23 election in Arizona?

24 A. I might need to ask for a little clarification of what you  
25 mean by that. Do I analyze a specific contested election and



1 claim that it was the difference?

2 Q. Correct.

3 A. That's not something that I do in the report, no.

4 Q. Okay. And did you examine whether, historically, the  
5 ballot order effect you found had a substantial impact on a  
6 contested election in Arizona?

7 A. Well, this is a --

8 MS. KHANNA: Objection, Your Honor. Calls for  
9 speculation of what a substantial impact.

10 MS. FRIDAY: I'm happy to expand on that.

11 THE COURT: Well, yes. I guess it's the form of the  
12 question. I'll sustain the objection.

13 MS. FRIDAY: Okay.

14 BY MS. FRIDAY:

15 Q. So you mentioned earlier in your testimony that you served  
16 as the Democratic party's expert in a Florida case challenging  
17 ballot order, correct?

18 A. Yes.

19 Q. And there you opined that the ballot order effect was  
20 substantively large and likely had an impact on who wins and  
21 who loses. Do you remember that?

22 A. My analysis in Florida was an examination of down ballot  
23 races versus top of ballot races. You'd have to remind me of  
24 what specific phrase or claim you might be referring to. I  
25 don't recall.

1 MS. FRIDAY: Okay. I would like to look at Exhibit DX  
2 4. This is an impeachment exhibit from the defendants.

3 MS. KHANNA: Objection, Your Honor. I'm not sure what  
4 he stated that the exhibit is meant to impeach him on.

5 THE COURT: Well, I think you're proffering it as  
6 refreshing his recollection, not at this juncture impeachment.

7 Correct me if I'm wrong, counsel?

8 MS. FRIDAY: Correct. Correct. That's correct. I  
9 just was referring to the fact that it's listed as an  
10 impeachment exhibit, submitted to the court that way.

11 THE COURT: With that clarification, then I'm going to  
12 overrule the objection.

13 MS. KHANNA: Thank you, Your Honor.

14 THE COURT: Do I have a copy of that, counsel? Did  
15 you provide me with that?

16 MS. FRIDAY: I believe we did.

17 MR. FRANKS: I don't believe -- I think I brought an  
18 extra set.

19 THE COURT: That's okay. Go ahead and let him take a  
20 look. I may not necessarily need to see it at this point.

21 I have -- I have your Exhibits 101 through 105. Is  
22 there another set?

23 MS. FRIDAY: Yes. We have a set of impeachment  
24 exhibits that we submitted on Monday pursuant to the District's  
25 standing orders.

1 THE COURT: It may be in my chambers and so I'll have  
2 to double check.

3 All right. You can go ahead.

4 MS. FRIDAY: Could you, Rob, please put up DX 4 --

5 THE COURT: All right. We -- for purposes of keeping  
6 the exhibits in order, it will be redesignated Exhibit 106.

7 MS. FRIDAY: 106.

8 MS. KHANNA: Your Honor, can I ask that we receive a  
9 copy as well?

10 THE COURT: Yes. Certainly opposing counsel should  
11 have swapped their exhibits prior to the proceeding, but,  
12 please, if there is an extra copy, give it to plaintiff's  
13 counsel.

14 All right. Take a moment to look at that exhibit and  
15 you can ask the previous question, Ms. Friday.

16 BY MS. FRIDAY:

17 Q. Dr. Rodden, do you now have what's been marked as  
18 Exhibit 106 in front of you?

19 A. Yes.

20 Q. And what is this?

21 A. This is my expert report in Nancy Carola Jacobson versus  
22 Detzner.

23 Q. That's the Florida ballot voter case?

24 A. I believe so.

25 Q. Could I direct your attention to the bottom of page 22,

1 please.

2 Do you see the paragraph starting with: This effect  
3 is substantively large and likely has an impact on who wins and  
4 who loses?

5 A. Yes.

6 Q. Does that refresh your recollection that you testified in  
7 the Florida case that there was a ballot order effect that had  
8 an impact on who wins and who loses?

9 A. This is just a paragraph in which I -- in which I pointed  
10 out that elections are very close in -- in Florida.

11 Q. You did not --

12 A. Within a very small margin that was -- that was around the  
13 size of the -- of the -- well, I have to look more carefully  
14 now but --

15 Yeah. This is really just -- just kind of going  
16 through some statistics on how close Florida elections are, as  
17 far as I can tell.

18 Q. Well, you're opining about a ballot order effect that you  
19 saw, right, in statewide elections?

20 A. In this paragraph?

21 Q. Yeah, in this section of your report. And when you say,  
22 this effect is substantively large and likely has an impact on  
23 who wins and who loses, you're talking about the ballot order  
24 effect that you found in that case, right?

25 A. I just need to be clear that this -- this entire report was

1 focusing on a very specific question about the difference  
2 between higher order elections and down ballot elections, so it  
3 needs to be understood in that context.

4 I was not trying to -- I was not opining about an  
5 absolute ballot order effect.

6 Q. Okay. But you did find that -- you did find an effect that  
7 in your view had an impact on who would win and who would lose  
8 an election?

9 A. Yes. I was referring to the -- some of these lower order  
10 elections, that's right.

11 Q. And you did not find that in your work in this case, did  
12 you?

13 A. I did not address that question in this report.

14 Q. And did you examine the question?

15 A. No.

16 Q. Okay. And in this case, you also don't --

17 MS. FRIDAY: You can take that down, Rob. Thank you.

18 BY MS. FRIDAY:

19 Q. You also don't offer any opinion about whether Arizona's  
20 ballot order statute was enacted with partisan animus, did you?

21 A. No.

22 Q. That's just outside the scope of your opinion?

23 A. That's correct.

24 Q. You studied elections, right, Dr. Rodden?

25 A. Yes.

1 Q. I believe you testified in your direct that your areas of  
2 specification are political economy, political geography, and  
3 elections?

4 A. Yes.

5 Q. Do you agree it's important to understand the  
6 characteristics of the elections you are studying?

7 A. Yes.

8 Q. Have you studied Arizona's congressional districts?

9 A. I don't believe I've published a paper on them, but I'm  
10 familiar with them and have looked at them, yes.

11 Q. And in addition to this case, you've also been an expert in  
12 other Arizona cases, I believe you testified on your direct,  
13 right?

14 A. Just one other, yes.

15 Q. So you've had occasion to be familiar with Arizona's  
16 congressional districts?

17 A. Yes.

18 Q. And Arizona's state senate districts?

19 A. Yes.

20 Q. And on your direct you discussed the control variables that  
21 you used in your modeling in this case?

22 A. Yes.

23 Q. Is that right?

24 THE COURT: Ms. Friday.

25 MS. FRIDAY: Yes.

1 THE COURT: I'm going take a break at this time and we  
2 can pick up where you left off.

3 And we will stand in -- I would say, let's take a  
4 15-minute break here and resume at a quarter 'til the hour.

5 MS. FRIDAY: Thank you, Your Honor.

6 THE COURT: All right.

7 (Recess take, 3:31 p.m. - 3:46 p.m.)

8 THE COURT: Ms. Friday, you can continue.

9 MS. FRIDAY: Thank you, Your Honor.

10 BY MS. FRIDAY:

11 Q. Dr. Rodden, on your direct, you discussed the control  
12 variables that you used in your modeling, right?

13 A. Yes.

14 Q. And those were variables that you applied on the county  
15 level?

16 A. Yes.

17 Q. Have you become familiar with the demographics of Arizona's  
18 counties, at least for the variables that you used?

19 A. Yes.

20 Q. So I'm going to ask you some questions now about your  
21 initial report, which is marked as Exhibit 3.

22 Do you still have that in front of you for reference?

23 A. Yes.

24 Q. Do you agree, as an initial matter, that there are multiple  
25 ways to model whether a candidate in Arizona is given an

1 advantage solely by reason of being listed first?

2 A. Yes.

3 Q. And in your initial report you, yourself, used three  
4 different methods to answer this question as you discussed on  
5 your direct exam, right?

6 A. Yes.

7 Q. You had a linear aggression model, which you also referred  
8 to as your basic model?

9 A. Yes.

10 Q. And a matching observation?

11 A. Yes.

12 Q. And, finally, you focused on a subset of elections, this  
13 was the close election discontinuity techniques that you  
14 discussed, right?

15 A. Yes.

16 Q. And you got different results using each of these methods,  
17 right?

18 A. Different coefficients but in the same -- same direction.

19 Q. So the size of the effect was different?

20 A. Yes.

21 Q. And none of those models have been peer reviewed, have  
22 they?

23 A. This report has not been peer reviewed, no.

24 Q. Okay. And nobody else has looked at your report and  
25 checked it for errors or opined on the validity of the models



1 you used?

2 A. Mr. Trende has, but other than that, no.

3 Q. Other than that, no.

4 And your regression analysis found that Republicans,  
5 on average, since 1980 have received a statewide advantage of  
6 around 2.2 percent from being listed first; is that right?

7 A. That was the main regression result, yes.

8 Q. And you talked a little bit on your direct about how  
9 Arizona's population is distributed unevenly among its  
10 counties, right?

11 A. Yes.

12 Q. Your regression analysis is not weighted by population, is  
13 it?

14 A. No.

15 Q. So you use population density as a control variable but you  
16 don't use total population as a control variable, do you?

17 A. No.

18 Q. Your analysis treats all 15 counties in Arizona equally,  
19 right?

20 A. Yes.

21 Q. So you calculated an average statewide ballot order effect  
22 over 40 years of 2.2 percent when Republicans are listed first,  
23 but even assuming that result is accurate, you can't say that  
24 the ballot order effect in Maricopa County is 2.2 percent, can  
25 you?

1 A. No.

2 Q. What your coefficient tells us is that statewide across all  
3 counties the average ballot order effect over 40 years is X,  
4 but it doesn't tell us about the average ballot order effect in  
5 a particular county, does it?

6 A. That's right.

7 Q. Okay. And your matching analysis found an advantage to  
8 Republicans of being listed first of about 2.9 percent over  
9 this same 40-year time period; is that right?

10 A. Yes.

11 Q. And the close election discontinuity technique found an  
12 average of 7.5 percent, which is more than double the  
13 percentage found in the other two models?

14 A. That's correct.

15 Q. And you said in your report that this close election  
16 discontinuity technique was, in your words, probably less  
17 reliable than the other two methods; is that right?

18 A. Yes, for reasons I think I covered in my direct.

19 Q. And as you also discussed in your direct, you had reason  
20 for worry that the size of the effect you found using this  
21 third method was biased upwards?

22 A. Yes.

23 Q. In other words, it was larger than it should be?

24 A. Yes.

25 Q. Is it your opinion that the Court should rely on the

1 results from the close election discontinuity technique to  
2 determine the size of any potential ballot order effect?

3 A. I offered it as a robustness check, and I think that's the  
4 spirit of which I would advise the Court to look at it.

5 Q. So, in other words, the Court shouldn't look at the size of  
6 the effect you found, simply look at it as a check against your  
7 overall conclusion that a ballot order effect exists?

8 A. I think that's fair, yes.

9 Q. Okay. Between the linear of regression model and the  
10 matching observation, is there one or the other you think the  
11 Court should rely on more?

12 A. I don't have a strong preference between those.

13 Q. It would be appropriate to rely on either method?

14 A. I believe so.

15 Q. Even though they use different techniques and reach  
16 different coefficient sizes, different results?

17 A. Yes.

18 Q. Okay. There is no one right method to try to find the  
19 answer to this question, is there?

20 A. I think that's right. I think there are multiple ways to  
21 approach this dataset.

22 Q. Okay. Now, your regression model is built to understand  
23 party vote share, right?

24 A. Yes.

25 Q. And the hypothesis you were testing is that ballot order is

1 something that affects party vote share?

2 A. Yes.

3 Q. You're using variables to control for factors that may  
4 affect that party vote share?

5 A. Yes.

6 Q. And, in your report, I think you discussed why you used  
7 these control variables. You wanted to check that in counties  
8 where there is a higher Republican vote share, it's due to  
9 something more than just having more Republicans in that  
10 county, right?

11 A. Right.

12 Q. So you use these control variables to control for trends in  
13 partisanship; is that right?

14 A. Yes.

15 Q. When you use these control variables, it's important that  
16 your actual data for the controls is accurate, right?

17 A. Yes.

18 Q. If your data is wrong, your results will be wrong?

19 A. Depends on the -- what we're referring to, but, in general,  
20 yes. We'd like to measure without measurement error.

21 Q. It's sort of a trash in, trash out situation, right?

22 A. If I try to measure something and I measure it in  
23 completely the wrong way, then the coefficient on that variable  
24 will not be reliable.

25 Q. So, for example, if -- if you used a variable for

1 Republican party registration for a district of, let's say,  
2 40 percent, it's important that the registered Republican share  
3 variable for that district really is 40 percent, right?

4 A. Yes.

5 Q. Okay. Now, your party registration variable was broken  
6 down by county into Democratic share and Republican share,  
7 right?

8 A. Yes.

9 Q. And you asserted in your reply report that party  
10 registration, in your words, was the ideal control variable?

11 A. In this -- in this case, yes. This is the thing that we  
12 really most worry about.

13 Q. Because we're --

14 A. The biggest confounder, yes.

15 Q. Because we're focusing on looking at party share?

16 A. Yes.

17 Q. Okay. And you also noted in your reply that one could make  
18 a good case for using only party registration as the sole  
19 control variable, right?

20 A. Yes.

21 Q. Now, using party registration as a control variable assumes  
22 that a voter registered as a Democrat will always vote for the  
23 Democratic candidate, doesn't it?

24 A. Not always, just this is the -- this is the best county-  
25 level indicator we have for Democratic -- for how Democratic

1 the county is, but I certainly don't need to assume that  
2 everyone who has a D on their registration always votes for  
3 Democrat.

4 Q. How else, though, are you -- I mean, if you're using party  
5 registration to control for the share of that party you expect  
6 to see in the election, in a situation which, as you said,  
7 party registration is your sole control variable, aren't you  
8 assuming that people are voting with their party registration,  
9 otherwise party registration is not going to tell you anything?

10 A. Well, it's going to tell me something. It's -- nothing is  
11 ever perfect. We have a secret ballot so we can't know exactly  
12 what everyone is -- what everyone is doing. We've got to take  
13 the, unfortunately, aggregate data we have in this case, and  
14 that's what we have to go on.

15 Q. Well, for example, if you were only using party  
16 registration as a sole control variable and it showed you that  
17 the Republican share of registered voters in Maricopa County  
18 was 80 percent, you would be expecting voting results to have a  
19 Republican share of 80 percent, wouldn't you?

20 A. Not necessarily.

21 Q. Okay.

22 A. I should add, there is other -- there is also a -- there  
23 are control variables in the model for years, so it's -- these  
24 capture the fact that support for the parties varies from one  
25 year to another. There are also control variables in the model

1 for office, so that captures the fact that there might be  
2 differences in partisan support from one -- from one office to  
3 another.

4 Q. Do you think it would have been a good idea for you to  
5 simply use party registration as your sole control variable?

6 A. Well, ultimately, it's not what I chose to do, but it's --  
7 I didn't think it was a completely unreasonable alternative,  
8 given the need in some of the models for reducing the amount of  
9 noise in the model.

10 Q. Are you aware that Arizona has a sizeable population that  
11 is not registered as Democrat or Republican?

12 A. Yes.

13 Q. Do you know the percentage of voters in Arizona that are  
14 registered as Independent or third-party voters?

15 A. Not off the top of my head. I know it's a substantial  
16 share.

17 Q. Did you account at all for voters that are registered as  
18 Independent or third-party?

19 A. No, I did not enter that into the regression. I wouldn't  
20 know what to expect, what -- I wouldn't have a hypothesis about  
21 how that would help me explain Republican or Democratic vote  
22 share.

23 Q. So your model, even though party registration is one of  
24 your largest control variables, does not look at all at the  
25 sizeable population in Arizona that is registered as an

1 Independent or a third-party?

2 A. Well, I'm looking at Republican registrants as a share of  
3 total registrants, so that's what it is.

4 Q. And in that instance, you're lumping together Democratic  
5 registrants and Independent, third-party registrants together  
6 as the other, right?

7 A. That is true, yes.

8 Q. And when you're trying to control for the Republican  
9 registration -- I'm sorry, the Democratic registration, you're  
10 lumping together Republicans and Independents as the other; is  
11 that right?

12 A. Yes.

13 Q. But when you look at Republican vote share results, do you  
14 know whether they include voters registered as Independents who  
15 decided to vote for the Republican candidate?

16 A. I'm assuming that there are -- every election there is some  
17 fluctuation. That's why the -- you know, the election results  
18 are not just a reprint of the registration shares. There are  
19 people changing their minds. I'm sure there are people who are  
20 registered as Republicans who vote for Democrats, and vice  
21 versa as well.

22 Q. Your party registration variable is broken down by county,  
23 right?

24 A. Yes.

25 Q. And by using county level party registration as a control,



1 you're attempting to disentangle the impact of ballot order  
2 from that of a county level partisanship, right?

3 A. Yes.

4 Q. But you do not have party registration broken down by  
5 district, do you?

6 A. No, unfortunately not.

7 Q. And the district level results in your regression analysis  
8 are state senate races and U.S. congressional house races?

9 A. Yes.

10 Q. And you use election-level results for those state senate  
11 and U.S. congressional house races, right?

12 A. I use county level election results. All of the  
13 observations in my -- in my dataset are counties.

14 Q. Even the election results?

15 A. Yes, everything is -- it's just a big collection of county-  
16 level election results. Some of them are statewide races.  
17 Some of them are county level counts of district level races.

18 Q. County level -- can you explain that to me? County level  
19 counts of district level races.

20 A. Yes. So if there is a -- if there is a -- if there is a  
21 part of a district that is in Maricopa County, then that will  
22 be -- that will -- that district will -- will be in the dataset  
23 as Maricopa County. And then in the column that identifies the  
24 election result instead of saying, attorney general, it will  
25 say district -- I can't remember the number right now -- but

1 the number of the district. And then there would be a  
2 corresponding county level registration share for all of  
3 Maricopa.

4 Q. And for that result -- let's take a district level election  
5 result. Let's say Maricopa District Number 1. Your result for  
6 Maricopa for the District Number 1 actual election result, is  
7 the actual election result for voters in Maricopa County in  
8 District Number 1, isn't it?

9 A. Yes.

10 Q. Okay. So you're using district level election results,  
11 right?

12 A. The results are reported, broken down by county. So the  
13 fragment of the district that is in the county is what is  
14 reported, so it's not the entire district level result, it's  
15 the -- part of the -- part of the district that was in Maricopa  
16 County that is going to enter the dataset under Maricopa  
17 County.

18 Q. Okay. I understand that.

19 Now, when you are applying your party registration  
20 share variable to these district level races, you're using a  
21 county level party registration share that might differ  
22 significantly from the district level party share, right?

23 A. Yes, exactly. That's -- I believe I expressed reservations  
24 about that in the report, and that's why I conducted analysis  
25 in which I dropped all the districted races.

1 Q. And we will get there.

2 A. Okay.

3 Q. I promise you.

4 So, for example, if you have a county level -- I'll  
5 give you a hypothetical to make sure that this is -- that this  
6 is clear.

7 You have a county level registered Democrat share in  
8 Maricopa County of 36 percent, even though within Maricopa  
9 County there are districts with a much higher share of  
10 registered Democrats in them, right? Let's just take that as a  
11 hypothetical.

12 A. Sure.

13 Q. Because for every single race within Maricopa County,  
14 you're using that same county level district share, right?  
15 County level --

16 A. That's right.

17 Q. -- party registration.

18 So, in that situation, you might see a district level  
19 race within Maricopa County in which a Democrat wins 75 percent  
20 of the vote, for example, it could be a Phoenix election, but  
21 you're still applying that same county level 36 percent  
22 registered Democrat share to that district race, aren't you?

23 A. Yes, because I wasn't able to disaggregate the registration  
24 by district, that's correct.

25 Q. Okay. So a wealthy excerpt of Maricopa County, your model

1 is going to assume the Democratic voter registration share is  
2 36 percent of registered voters, and in a district encompassing  
3 downtown Phoenix, your model will also assume that the  
4 Democratic share is 36 percent of registered voters, right?

5 A. That's right.

6 Q. Isn't there a problem with trying to explain a result in  
7 Phoenix using the same data that is used to explain a result in  
8 an excerpt of Maricopa County?

9 A. It is -- definitely introduces measurement error to that --  
10 to the registration variable for -- for those districted races.  
11 This is why I was -- throughout the period of writing the  
12 report, I was -- I was kind of on the fence about whether to  
13 include the districted races or not exactly because of this  
14 measurement error problem. That's why I reported both -- both  
15 with and without these districted races. I didn't see a way  
16 around this problem, other than dropping them.

17 The other thing that helps is we do have some other --  
18 some of these other demographics, but those are also measured  
19 at the county level, so it's -- those -- those are -- those  
20 analyses that include the district results have -- they all  
21 have that -- that bit of measurement error for some of the  
22 observations.

23 Q. And, as you said, using the control demographic variables  
24 doesn't help because those are also measured at the county  
25 level?

1 A. That's right.

2 Q. Right?

3 So, at the end of the day, you're not able to  
4 disentangle the impact of ballot order from district level  
5 partisanship, right?

6 A. I believe that's just restating what we've been -- what  
7 we've been agreeing on.

8 Q. Okay. Now, just so we're clear, an example of your control  
9 variable -- another control variable that's applied on a county  
10 level basis would be population density, right?

11 A. Yes.

12 Q. So an analysis of voter share and election outcomes is  
13 influenced by population density, right?

14 A. Potentially, maybe not so much within Maricopa County, but  
15 I think across Arizona as a whole that is the case.

16 Q. This is a lot of your scholarly work, right?

17 A. Yes. It's something I'm interested in, right.

18 Q. It's an interesting topic.

19 But I think what you have concluded is that population  
20 density can impact vote shares, because dense places are  
21 generally more likely to vote for Democrats, sparse places are  
22 more likely to vote for Republicans. Is that accurate on sort  
23 of a 10,000-foot level?

24 A. Yes. Although Arizona gets interesting because of the  
25 Native American population.

1 Q. But, for example, looking again at Maricopa County, when  
2 you are doing your regression analysis, you're using the same  
3 standard population density variable regardless of whether the  
4 election is taking place in Phoenix or whether it's taking  
5 place in an excerpt of Maricopa County, right?

6 A. That's correct when we look at the different district  
7 observations within Maricopa County.

8 Q. And it's actually the same with your Native American share  
9 variable, right? You use the same Native American share  
10 variable for a county -- for every race within a particular  
11 county even though a Native American share is going to vary  
12 over the geographic -- the geography of the county?

13 A. Yeah. This is, again -- I think everything we're talking  
14 about right now is really fairly Maricopa specific, but I think  
15 that's -- that's true.

16 Q. Well, why do you say it's Maricopa specific?

17 A. The counties are -- are -- the mapping of counties and  
18 districts is -- is less jagged in other parts of the -- the  
19 counties fit within congressional districts more -- more easily  
20 in other places, but they'll be some versions of this in other  
21 districts as well. I just think that my recollection is that  
22 this problem is a bit larger in Maricopa than elsewhere.

23 Q. And when you say this problem, it's the problem of there  
24 being variation in the variables of interest within a county  
25 that you're looking at?

1 A. I wouldn't say a problem. I would characterize it as a  
2 measurement error.

3 Q. A measurement error?

4 A. Yes.

5 Q. Now, as we have been discussing, you're aware that  
6 congressional districts can cross county lines?

7 A. Yes.

8 Q. And you're aware that state senate districts can cross  
9 county lines, right?

10 A. Yes.

11 Q. And when you're trying to measure a congressional district  
12 that spans several counties, are you running the regression as  
13 if it's several separate elections using the Republican and  
14 Democratic vote shares for a portion of the district in each  
15 county?

16 A. The part of the district that is in -- that is in Navajo  
17 County, the votes for that will be -- will be the -- the  
18 dependent variable in this case and will measure ballot order  
19 at the county in this case. And the control variables that  
20 we're discussing, those will be measured also at the level of  
21 the county. So the county brings together these different --  
22 these different bits of information. That was the only way to  
23 kind of knit this dataset together.

24 Q. Okay. So, for example, we've been talking about the 1st  
25 Congressional District. Are you aware that the 1st

1 Congressional District spans 11 counties?

2 A. I would have to take a look at the first district, but I --  
3 that sounds plausible.

4 MS. FRIDAY: With the Court's permission, I would like  
5 to use a demonstrative to show some congressional districts  
6 across the state.

7 THE COURT: You may.

8 MS. FRIDAY: Thank you.

9 BY MS. FRIDAY:

10 Q. Now, I'm guessing you can't see this, can you, or can you?  
11 Should I bring it over here?

12 A. Yeah, maybe, if it's not too much trouble.

13 THE COURT: Move it closer to the jury box. You're  
14 going to have to tilt it a little.

15 THE WITNESS: Turn it this way a little bit.

16 MS. FRIDAY: Do you mind, Your Honor, if I approach?

17 THE COURT: No.

18 MS. FRIDAY: Thank you.

19 BY MS. FRIDAY:

20 Q. Now, on the map here looking at Congressional District 1,  
21 you can see that it encompasses Coconino, Navajo, Apache,  
22 Greenlee, Graham, Pinal, Gila, Mohave, a little corner of  
23 Yavapai, a little corner of Maricopa, and a little corner of  
24 Pima.

25 Do you see that?



1 A. Yes.

2 MS. KHANNA: Your Honor, with the Court's permission,  
3 may I also stand so I can see?

4 THE COURT: Yes. Yes.

5 MS. FRIDAY: My apologies.

6 BY MS. FRIDAY:

7 Q. Now, did your regression analysis treat the district race  
8 for U.S. Congressional District 1 as 11 separate elections in  
9 11 separate counties?

10 A. Yes.

11 Q. Is that an accurate working assumption to be going by? In  
12 other words, is it accurate to assume that the Republican  
13 candidate, or the Democratic candidate for that matter, acted  
14 as a different candidate in Coconino County than in Maricopa  
15 County?

16 A. Well, we're analyzing the vote shares in those different  
17 counties and we have party registration data at those counties,  
18 so this is -- this is the way we can bring those datasets  
19 together.

20 Q. Now, we've been talking about the Native American share of  
21 the population. I think you've testified you're roughly  
22 familiar with the Arizona demographics. Do you know where the  
23 Native American population in Arizona is concentrated?

24 A. Much of it is in the northeast corner, but there are some  
25 other -- some other pockets in some other places as well.

1 Q. Okay. And so, for example, Apache County has a large  
2 Native American population, right?

3 A. Yes.

4 Q. And Coconino County the same, right?

5 A. Yes.

6 Q. And -- and I think you -- we've already established that  
7 you were not able to get the demographic breakdowns within each  
8 of the counties, right, for a particular congressional races;  
9 is that right?

10 So, for example, you weren't able to get the  
11 demographic breakdown for the portion of U.S. District 1 that's  
12 located in Maricopa County?

13 A. That's right.

14 Q. Do you, Dr. Rodden, know, roughly, the share of the  
15 population of Maricopa County that is Native American?

16 A. No. I'd have to guess.

17 Q. Can we agree it's probably pretty low, less than 10  
18 percent?

19 A. Less than 10 percent, yes.

20 Q. Okay. Let me ask you a hypothetical question.

21 Let's assume that the Native American share of the  
22 population of Maricopa County is 2 percent. Looking at the  
23 map, you can see the -- the slice of Maricopa County that's in  
24 District 1, right? This little slice right here.

25 A. Yes.

1 Q. And are you aware that the slice of District 1 that's in  
2 Maricopa County is the Gila River Indian reservation?

3 A. I was not, no.

4 Q. Do you know what percentage of the Gila River Indian  
5 reservation is Native American?

6 A. I assume it's high.

7 Q. We can agree it's probably really high. Higher than 2  
8 percent?

9 A. Yes.

10 Q. Higher than 10 percent?

11 A. Probably.

12 Q. Your regression analysis, though, is going to use the  
13 Maricopa County-wide average, which for purposes of this  
14 hypothetical we're assuming is 2 percent, could be 10 percent,  
15 for the portion of the election in the 1st District that's held  
16 there, isn't it?

17 A. Yes.

18 Q. So your regression analysis is going to show that the Gila  
19 River Indian reservation in the 1st District is only 2 percent  
20 Native American?

21 A. I would have to check the dataset, but potentially.

22 Q. How do Native American voters, on average, vote between  
23 Republicans and Democrats?

24 A. Democratic vote share is high.

25 Q. Right. That's why you included them as a control variable,

1 right?

2 A. Yes.

3 Q. And I think you testified, in particular, that the Native  
4 American variable was especially important in Arizona?

5 A. Yes.

6 Q. But your regression analysis is using a Native American  
7 share that, in reality, is much lower than the population it's  
8 trying to measure, isn't it?

9 A. In that particular instance, yes.

10 Q. So your control in that instance is inaccurate, right?

11 A. This is -- there is measurement error on the -- the share  
12 of -- the segment of the dataset that involves districts in  
13 these corners of districts where we have these fragments, yes,  
14 there would be measurement error like that. And that was  
15 something I was concerned with and, I believe, mentioned in the  
16 report.

17 Q. So as another example, if we look at Pima County here on  
18 the bottom --

19 A. Uh-huh.

20 Q. -- there is a portion of Pima County that is in the -- so  
21 Pima County itself includes the 1st, 2nd, and 3rd Congressional  
22 Districts. I don't know if you can see that. I'll try to  
23 point it out.

24 So we have 1st, 2nd, and then 3rd.

25 A. Okay.

1 Q. Are you aware that the portion of Pima County that is in  
2 the 3rd District is more Democratic than the portion that is in  
3 the 2nd District?

4 A. I'm having trouble seeing the numbers. But, no, I'm not  
5 aware of -- of how that district line overlaps with  
6 partisanship without seeing it.

7 Q. But when your regression analysis is trying to control for  
8 party registration in Pima County, it's going to assume that  
9 the 2nd and 3rd Districts have the same share of registered  
10 Republicans, right?

11 A. Right.

12 Q. Even though we know that that can't possibly be right?

13 A. Right.

14 Q. This is another situation where, because your inputs aren't  
15 right, your results aren't right either, right?

16 A. This is -- this is a case where there is -- there is  
17 measurement error in the -- in the control variable. This is  
18 not -- again, we should keep in mind this is about how we're  
19 measuring the control variables. This is not how we're  
20 measuring the dependent variable or the key independent  
21 variable. But, yeah, we have -- we have some noise that's  
22 added here from measurement error on these -- on these control  
23 variables.

24 Q. Well, I don't think it's noise. Your results are not  
25 right, right? I mean, in Pima County, for example, do you know

1 that your result for District 1, the U.S. congressional  
2 election in District 1, showed that the Republican had actually  
3 won that election?

4 A. I'm not sure what you mean that I showed the Republican won  
5 the election.

6 Q. Well, let me take a step back.

7 Are you aware that Democrat Tom O'Halleran won the  
8 seat for House District 1?

9 A. Yes.

10 Q. And are you aware that your data for the portion of the  
11 District 1 race in Pima County showed that, in fact, the  
12 Republicans had a higher vote chair than Democrats?

13 A. If there -- if there are problems with the Secretary of  
14 State's data, I'm not aware of that, but it is the -- it is the  
15 part of the district that is in Pima County that is the unit of  
16 analysis here. And if the vote chair for the Republican party  
17 was higher in that -- in that part of the district, then  
18 that's -- that wouldn't be -- that's not wrong unless the --  
19 unless the -- unless the data reported on the Web site are  
20 wrong.

21 Q. But isn't your regression analysis using that election  
22 race, that Pima County District 1 election race, as one of your  
23 observations, one of your independent observations?

24 A. The -- the vote share of the Democratic and Republican  
25 candidates are the observations. And the ballot order is set

1 at the county level, so I can't really analyze ballot order if  
2 I aggregate the entire district, because there is different  
3 ballot order assignment in different parts of the district.  
4 So, to me, this is part of what allows us to see something in  
5 the data is that we can actually see different ballot order,  
6 even within the same district, perhaps, and different vote  
7 shares. So the county level kind of has to be the unit of  
8 analysis, so we're kind of stuck with this sort of measurement  
9 error if we want to use the districted races.

10 So either we include the districted races and we're  
11 stuck with exactly this measurement error that you're  
12 describing, or we have to throw them out. And I've pursued  
13 both strategies in the report.

14 Q. Are you confident in the district level results that you  
15 have given the measurement errors that we've been discussing?

16 A. I'm less confident in those than in the -- than in the --  
17 than in the statewide races, but I still felt that they were  
18 valuable enough to include, because it seemed to me that simply  
19 ignoring that we have these elections and that districted races  
20 existed was also not a very good -- was not a very good  
21 strategy. So including them in part of the report and laying  
22 out all of the -- all of the possibilities seemed like the best  
23 way forward.

24 Q. So all but two of your regression analyses include district  
25 level data, right?

1 A. The regression analyses, um --

2 Q. You only have two that are --

3 A. I believe that's right, yes. I was -- I laid out those --  
4 that as one of the robustness checks. And so it would have  
5 become very cumbersome to run every robustness check both with  
6 and without the district races. That was something I did look  
7 at extensively and these results were not changing for me, so  
8 that was, of all the robustness checks that I considered,  
9 including the appendix, which I think we can agree were fairly  
10 extensive, I had to draw the line somewhere. And that was  
11 about where I drew it.

12 Q. Okay. So, to be clear, only two of your regression  
13 analyses are statewide, right?

14 A. I believe that's right.

15 Q. Okay. The rest of them include this district level  
16 analysis that has the measurement error we've been discussing?

17 A. Yes.

18 Q. Okay. I want to ask you a few questions about the code you  
19 used in your regressions.

20 Now, you used a program that I think we're calling  
21 Stata, or Stata?

22 A. Yes.

23 Q. And Stata has what is called a "do" file that shows a  
24 record of your commands in Stata, right?

25 A. Yes.



1 Q. And this allows someone else coming in to review the steps  
2 that you took in your regression analysis, right?

3 A. Yes.

4 Q. I want to ask you about some of those commands that are in  
5 the Stata "do" file.

6 Now, the reg command means regression analysis, right?

7 A. Yes.

8 Q. And R share means Republican share?

9 A. Yes.

10 Q. And R first means that the Republican candidate was listed  
11 first?

12 A. Yes.

13 Q. And INC underscore R means the Republican was -- the  
14 incumbent was Republican?

15 A. That's a variable that is zero if there is no incumbent  
16 running. It's a one if a Republican incumbent is running. And  
17 it's negative one if a Democrat incumbent is running.

18 Q. Okay. Thank you for that clarification.

19 And the command reg underscore, share, underscore,  
20 rep, means Republican registration share, right?

21 A. Yes.

22 Q. That's the percent or the share of voters that are  
23 registered Republicans?

24 A. Yes.

25 Q. Okay. And in your basic model, your first regression

1 analysis command was to regress on the Republican share with  
2 the Republican candidate listed first, right?

3 A. Yes.

4 Q. So that would be a command of reg, R share, R first,  
5 reg\_share\_rep, right?

6 A. Yes.

7 Q. And then you did the same analysis but for Democrats,  
8 right?

9 A. Yes.

10 Q. And there we're really just a replacing the R with a D.  
11 And so, for example, D share means Democrat share, right?

12 A. Yes.

13 Q. D first means the Democratic candidate was listed first?

14 A. Yes.

15 Q. And reg\_share\_dem means the portion of voters that are  
16 registered as Democrats, right?

17 A. Yes.

18 Q. So when you were doing the analysis for Democrats, your  
19 command was reg, D share, D first, reg\_share\_dem, right?

20 A. Yes.

21 Q. And it's important to replace the Republican values with  
22 the Democratic values, because when you're trying to explain  
23 Democratic vote share, it's important to control for the  
24 Democratic share of the electorate, right?

25 A. Yes.

1 Q. Okay. Now, we talked a little bit about -- on direct you  
2 talked a little bit about dropping the districts, which means  
3 dropping district races and looking only at statewide races?

4 A. Yes.

5 Q. Right?

6 And that uses the dropped districted command, right?

7 A. We're getting a little too far into the weeds. I don't  
8 recall exactly how the -- how the code was -- was written.

9 Q. Okay. I would like to refresh your memory, if I could,  
10 with the copy of your analysis.

11 And that's DX 9.

12 THE COURT: What are we looking at?

13 MS. FRIDAY: This is Dr. Rodden's "do" file in his  
14 Stata and has been marked as DX 9. I believe it would be  
15 Exhibit 107.

16 MR. FRANKS: Can you switch the monitor, please?

17 COURTROOM DEPUTY: Yes. One minute.

18 BY MS. FRIDAY:

19 Q. Okay. Dr. Rodden, you have been handed what has been  
20 marked Exhibit 107. Would you please take a moment and look  
21 through this exhibit.

22 A. Yes.

23 Q. Okay. Is this your "do" file for your analysis that you  
24 did in this case?

25 A. Yes.

1 MS. FRIDAY: I offer Exhibit 107 into evidence.

2 THE COURT: It may be admitted.

3 MS. FRIDAY: Thank you.

4 BY MS. FRIDAY:

5 Q. And we were -- if you turn to page 8, please, Dr. Rodden.

6 At the bottom of the page there is two asterisks and  
7 then a basic model.

8 Do you see that?

9 A. Yes.

10 Q. And this is what we have been discussing, right? This is  
11 your first regression analysis command and your basic model in  
12 which you are regressing on the Republican share, right?

13 A. Yes.

14 Q. And then turning to the next page on page 9, at the top it  
15 says, with two asterisks, now with Democrats as DV.

16 DV means dependent variable; is that right?

17 A. Yes.

18 Q. And we see the same commands, reg, D share, D first with  
19 the incumbent, and reg\_share\_dem, right?

20 A. Yes.

21 Q. Okay. Now, going a little bit further down on page 9, do  
22 you see the section that has two asterisks -- two asterisks,  
23 and it says dropped districted?

24 A. Yes.

25 Q. And this is what we were talking about in terms of your --

1 you use this command in order to drop district races and look  
2 only at statewide races, right?

3 A. Yes.

4 Q. Okay. And there, as before, you did the Republican  
5 analysis first and then the Democratic analysis, right?

6 A. Yes.

7 Q. So the command for the Republican analysis is the same as  
8 before, right, reg, R share, R first, inc\_r, and reg\_share\_rep,  
9 right?

10 A. Yes.

11 Q. But your command for the Democratic analysis was reg, D  
12 share, D first, incumbent, inc\_r, reg\_share\_rep, right?

13 A. It looks like, yeah, I see a mistake there in the -- in the  
14 Democratic regression.

15 Q. Right. So in the Democratic regression analysis, you did  
16 not switch two of the variables to the Democratic party  
17 registration and the Democratic incumbent, did you?

18 A. Well, first of all, the incumbent variable is -- it really  
19 makes no difference. It's just turning the one into a negative  
20 one, so it's just the interpretation changes on that variable.

21 The reg\_share\_rep, that is -- it's -- we're putting it  
22 -- we're controlling for the Republican registration share  
23 rather than the Democratic registration share. So these things  
24 are highly correlated, we're just going to get a negative  
25 coefficient rather than a positive coefficient.

1 Q. So was this an error?

2 A. It's -- I believe it was probably an error when I put  
3 together the -- put together the code to turn over. I would  
4 have to look in the table to see if this error came out in the  
5 -- in the -- in the -- in the actual report.

6 Q. Okay. Because you didn't mean to use the registered share  
7 of Republicans when you were trying to run an analysis  
8 involving Democrats, right?

9 A. Yes. I mean, fortunately, as mistakes go, this is one that  
10 I -- I think is not consequential, but I had intended for that  
11 to be reg\_share\_dem in that -- in that second regression.

12 Q. Well, do you know one way or another whether this error  
13 impacted your finding, that there is a statistically  
14 significant effect, valid effect?

15 A. Well, it certainly wouldn't have affected my -- my finding  
16 about Republicans because we're talking about the regression  
17 for Democrats. It would -- I imagine if we -- if we run it  
18 both ways, we will see that the coefficient for ballot order --  
19 I can say this because I've run all these regressions a million  
20 times and stared at them -- that's -- the coefficient for the  
21 ballot order for -- for D first here, it would be -- it would  
22 shock me if it changed much at all moving from controlling for  
23 the Democratic registration share to controlling for the  
24 Republican registration share. This is not something that  
25 would -- that I would imagine would possibly change the

1 coefficient on Democrats listed first. Because, again, these  
2 two things are highly correlated, I can't remember how  
3 correlated, but they're capturing the same thing, how  
4 Democratic is the county.

5 Q. Okay. So you believe that there wouldn't be much of a  
6 change if you had actually inserted the correct variable there,  
7 but we don't know one way or another, do we?

8 A. Well, we would be able to know if we could look in my --  
9 look in my table in the appendix.

10 Q. Okay. Could you direct me to where you're looking, please.

11 A. I'm just checking to see if, in fact, this mistake made its  
12 way into the appendix or not.

13 I'm trying to remember how I named these -- these  
14 tables.

15 Okay. I believe it's when we get to the ones that say  
16 restricted sample. So I think we can agree that the Republican  
17 regression is not -- there is no problem there.

18 And then we have the Republican regression that breaks  
19 down by open seats.

20 So then we come to -- yes, Democrats as a share of  
21 registrants, the coefficient is .414. I'm talking about table  
22 A 11. So -- and the coefficient for incumbent is also  
23 positive, so the mistake did not make its way into the -- into  
24 the table. This was a mistake that seems to have occurred when  
25 I prepared the code to -- to send over to counsel.

1 Q. Okay. So --

2 A. And I would be happy to correct that.

3 Q. Okay. So what you believe, based on looking at your tables  
4 in your initial report, is that the error that we've been  
5 discussing was not made in your analysis in your report, it was  
6 simply an error that you made when turning over the data to the  
7 secretary?

8 A. Not the data, but the code. It appears that I -- that I --  
9 that I made a mistake when I was copying the code that -- the  
10 final code that I used in pasting it over to the "do" file to  
11 produce a final file, that there was a mistake made there.

12 Q. Okay. If we could --

13 A. If it was -- if it was -- just to be clear, I just want to  
14 make sure everyone understands. If I had done -- if this was,  
15 in fact, what was here, the coefficient would be negative for  
16 Democrats as a share of registrants. Because if it was  
17 actually Republicans as a share of registrants, I would think  
18 that would be a negative coefficient, that as we get more  
19 Republicans -- more Republican registrants, we would see that  
20 the Democratic vote share would go down, so that's how I know  
21 the mistake didn't make its way into the table.

22 Q. Okay. If we can turn to page 10, please, of Exhibit 107.

23 Now, you also studied the effect of ballot orders in  
24 top ballot races compared to down ballot races, right?

25 A. Yes.



1 Q. I think you testified about that on your direct.

2 A. Yes.

3 Q. And your goal, basically, was to determine whether the  
4 ballot order effect was stronger in one or the other of top  
5 ballot or down ballot races, right?

6 A. Yes.

7 Q. Now, on page 10, starting in the middle of the page, you  
8 have four regressions listed here that study top ballot versus  
9 down ballot effects, right?

10 A. Yes.

11 Q. And the first and third regressions look at the Democratic  
12 share, right?

13 A. Yes.

14 Q. And we know that because it says reg D share, to start the  
15 first and third regressions?

16 A. Yes.

17 Q. And the second and fourth regressions look at Republican  
18 share. And we know that because it -- they start with the  
19 command reg R share, right?

20 A. Yes.

21 Q. But don't all four of these analyses regress vote share on  
22 the Democratic share of registered voters as shown by the  
23 reg\_share\_dem command in each regression?

24 THE COURT: You're at page 10, correct?

25 MS. FRIDAY: Yes, Your Honor. I'm looking in the

1 middle of the page, the --

2 If you can -- thank you, Rob -- blow that up, please.

3 Those are the four regressions.

4 THE COURT: You're looking at -- sir, you're looking  
5 at page 10 of DX 9 which is on the screen.

6 THE WITNESS: Yes. It's just, again, a situation  
7 where I'm -- it looks like a similar mistake was made in the --  
8 in the -- in the code that was turned over. And I just wanted  
9 to look at the tables in the -- in the report to see if, again,  
10 whether it was an actual mistake in the analysis or a mistake  
11 in the -- in the code that was turned over.

12 And it would appear that, again, the coefficients are  
13 all -- are all exactly what one would expect. So there was --  
14 again, I apologize, it looks like the code that I -- that I  
15 turned over does not have the right -- the right control  
16 variable typed in there.

17 BY MS. FRIDAY:

18 Q. And can you tell me, Dr. Rodden, what you were looking at  
19 to reach your conclusion that in your actual analysis you used  
20 the correct code variable? You were looking at one of the  
21 tables in your exhibit.

22 A. Yes. Again, I'm looking at -- at the tables -- the only  
23 thing that I believe is at issue here is I appear in the code  
24 to have controlled in a -- in a regression for Democrats, to  
25 have controlled for Republican registration share, which had I

1 done that, I still don't think would affect the -- the  
2 coefficient of interest, but I'm trying to verify whether I  
3 had, in fact, done that. And I can see that the -- the listing  
4 of -- the listing of results here --

5 THE COURT: And the question is what are you looking  
6 at?

7 THE WITNESS: Yes. I'm -- I'm looking at table -- I'm  
8 trying to make -- I want to make sure I tell the right one.

9 We are now looking at --

10 THE COURT: What page of Exhibit 3 are you looking at?

11 THE WITNESS: I am still trying to find it.

12 There are so many tables in the appendix. I  
13 apologize.

14 BY MS. FRIDAY:

15 Q. Well, I don't see a table that's discussing top ballot and  
16 down ballot.

17 A. I'm not finding it either, so it's possible that there was  
18 a -- that I neglected to put this -- to put this in the -- to  
19 put this table in the appendix.

20 Q. So you can't say one way or another whether you made this  
21 error in your analysis, right?

22 A. I would have to go -- I would have to go back and open my  
23 computer and take a look.

24 Q. Your "do" file, which is your list of commands, indicates  
25 that you did make the error, but you don't know one way or

1 another?

2 A. That's correct.

3 Q. Okay. Now I'd like to shift topics a little bit.

4 You have read Dr. Krosnick's expert report in this  
5 matter?

6 A. In a previous case, but not in -- not in this -- not in  
7 this case.

8 Q. You haven't read his reports in this case?

9 A. No.

10 Q. Okay. Do you have any -- well, let me represent to you  
11 that Dr. Krosnick has opined that the ballot order effect is  
12 partially explained due to lack of voter information at the  
13 ballot box.

14 Do you agree with that opinion based on your review of  
15 the literature in your experience with this effect?

16 MS. KHANNA: Objection, Your Honor. I'm going to  
17 object as beyond the scope of his report and his direct  
18 examination, to the extent he's being asked to opine on another  
19 expert's report.

20 THE COURT: Sustained.

21 BY MS. FRIDAY:

22 Q. Did you examine whether the ballot order effect exists in  
23 Arizona with mail-in ballots?

24 A. No.

25 Q. Did you examine whether the ballot order effect in Arizona

1 differed based on whether the vote was at the precinct or done  
2 by early balloting?

3 A. No.

4 Q. Do you understand that there is a sizeable portion of  
5 voters in Arizona that vote by mail?

6 A. I do.

7 Q. But your model does not examine whether the ballot order  
8 effect would be smaller when those mail-in ballots are used?

9 A. No.

10 Q. You don't know one way or another?

11 A. That's correct.

12 Q. Now, looking at the question of the control variables that  
13 you used, you claimed in your report that you experimented with  
14 various control variables, and only included those that were,  
15 in your view, statistically significant. Is that accurate?

16 A. Yes.

17 Q. And on page 18 of your initial report, you listed the  
18 various control variables that you downloaded from the U.S.  
19 Census to experiment with?

20 A. Yes.

21 Q. And I believe there you listed seven variables, which were  
22 rents share, poverty share, foreign born share, Hispanic share,  
23 white share, African American share, and Native American share.

24 Do you see that?

25 THE COURT: Where are you in the exhibit?

1 MS. FRIDAY: I apologize, Your Honor.

2 Could we put up please, Exhibit 3, page 18.

3 THE COURT: Eighteen?

4 MS. FRIDAY: Yes, Your Honor.

5 BY MS. FRIDAY:

6 Q. And this is the last paragraph on the page. Starting with,  
7 I have also collected a good -- yes.

8 These are the variable -- variables that you  
9 downloaded from the U.S. Census, at least that you listed here,  
10 right?

11 A. Yes.

12 Q. And I think, although you didn't list them here on page 18,  
13 you also downloaded --

14 THE COURT: Let me stop you here, because I'm not --  
15 I'm not finding that paragraph on my Exhibit 3, page 18. In my  
16 exhibit book it's filed Document 15-1, page 19, and so just be  
17 mindful that we're --

18 MS. FRIDAY: I'm one page behind you.

19 THE COURT: Okay. So on my exhibit or -- well, my --  
20 what was filed as Plaintiff's Exhibit 3, it is Document 15-1,  
21 page 19.

22 All right. Go forward.

23 MS. FRIDAY: Thank you, Your Honor.

24 BY MS. FRIDAY:

25 Q. Did you use other variables that are -- did you download

1 from the census other variables that are not listed here?

2 A. I don't think so.

3 Q. Did you download the variable for the 18 to 30 share?

4 A. I'm sorry. Where is the list?

5 I believe I may have downloaded that later, after --  
6 after Mr. Trende suggested that I use it.

7 Q. Okay.

8 A. I know that I eventually had it, but I can't remember when  
9 I -- when I collected that one.

10 Q. I apologize. I didn't mean to interrupt you.

11 And, similarly, with the data regarding the 65 and  
12 older share, is that something you downloaded at the very  
13 beginning or only later?

14 A. At the beginning.

15 Q. And I think you had -- had actually said earlier that you  
16 included a variable for the senior citizen population in your  
17 analysis on your direct?

18 A. Yes. I was not looking directly at the -- at the tables at  
19 that time. I know that was -- that was just going from my  
20 recollection.

21 Q. Could you look at the tables and confirm that you didn't  
22 actually include a variable for the senior citizen population.

23 A. I'm sorry. I may have been confusing the two reports at  
24 that point. Let me just clarify for the Court what was  
25 included if in the initial report and what was added later.

1 Yes. It was population density, Native American  
2 share, and renter share.

3 Q. Those were the variables that you opted to use, but I was  
4 asking which ones you downloaded from the U.S. Census as a  
5 starting matter to choose from and to run your experiments on?

6 A. Yes. I know there were others. We can look in the -- for  
7 a full list, we can look at my second report, so Exhibit 4,  
8 page 27, we can see a list of the variables that I collected.  
9 They include Native American share, renter share, poverty  
10 share, foreign born share, Hispanic share, age 18 to 30 share,  
11 age 65-plus share. And if we turn to the next page, there is  
12 African American share as well.

13 Q. Okay. The census bureau makes many other variables  
14 available, doesn't it?

15 A. Yes.

16 Q. So, for example, median income?

17 A. Yes. And I believe I also -- that household income, or  
18 median income, I can't remember, I may have had some of those.  
19 I had poverty share. I'm sorry, I don't remember which. There  
20 is several income variables one could choose from.

21 Q. Or education, for an example, you could download  
22 information regarding the share of college educated voters or  
23 the share of high school educated voters?

24 A. Yes.

25 Q. Your report doesn't provide any explanation for why you



1 downloaded the variables that you did, does it?

2 A. These are the variables that, at the time that I was  
3 collecting the data, thinking about the literature and thinking  
4 about my own -- my own understanding of -- of possible -- my  
5 own thoughts about what would be good control variables, these  
6 are the ones that I thought of.

7 Q. Okay. And you included African American share as a  
8 potentially good control variable, right?

9 A. I included all of the race variables.

10 Q. And did you -- I think -- I believe you testified on your  
11 direct that you experimented with using these different race  
12 variables in your data, with using Hispanic status and with  
13 using African American status; is that right?

14 A. Yes. I wanted to be careful not to include several highly  
15 correlated race variables. That's a problem one always runs  
16 into. Then everything becomes meaningless if we put them all  
17 in there.

18 Q. But you didn't actually include in your report the results  
19 of those experiments, right?

20 A. No. There was no reason to.

21 Q. And you state that these variables are highly correlated,  
22 but your report actually does not include the amount of -- or  
23 value for correlation between these variables, right?

24 A. No.

25 Q. Do you know sitting here what the amount of correlation

1 between African American share and population density is?

2 A. Something like .76 or 77.

3 Q. And what about the correlation between African American  
4 share and Hispanic share?

5 A. That I don't recall.

6 Q. And what about the correlation between African American  
7 share and age?

8 A. I don't recall.

9 Q. Do you recall running all of the analyses to see exactly  
10 what the correlation values were for these variables?

11 A. No.

12 Q. Did you do that analysis or did you just use your  
13 assumption that these variables were highly correlated?

14 A. When -- when I estimated regressions and I started to see  
15 the signs of -- of multicollinearity, when I saw coefficients  
16 that didn't make sense and when I saw variables that were not  
17 statistically significant, then I would probe further. I did  
18 not -- I did not analyze the correlations between all of the  
19 variables at one -- at one time, at least I don't recall doing  
20 that.

21 But the point here was to -- these are control  
22 variables. The point is not to search for the perfect model.  
23 There are many different approaches. And once one tries lots  
24 of models with lots of variables and sees the result not  
25 changing, it -- it becomes a question of trying to -- trying to

1 include the variables that are -- that are most important, that  
2 help you -- help you explain the variation and the outcome the  
3 best. And that's how I went about it.

4 Q. But you didn't actually include the results of all those  
5 experiments and all those runs in your report, did you? We  
6 just have to take your word for it that you did these runs and  
7 they resulted in what, in your view, was a multicollinearity?

8 A. We don't have to take my word for it that the results are  
9 unaffected by including these variables, because we have  
10 appendix table A 1 in my second report that includes all of  
11 these variables, so we can dispense with this entire set of --  
12 set of questions and just examine that.

13 It's -- it's -- the main -- the main question here, in  
14 thinking about which variables to include, the question is --  
15 is -- is in terms of robustness and whether we believe the  
16 result, has to do with whether the result is affected by  
17 including these various additional variables, many of which are  
18 not statistically significant when they're all entered  
19 together. So if we enter all of them together, we start  
20 getting lots of things that are correlated.

21 Q. But you -- other than including results for all of the  
22 control variables at the same time, you didn't include any  
23 results from your experiments with controlling one variable  
24 over the other, right?

25 A. That's not something I would ever typically do in composing

1 a paper for a journal, and it's not something I considered  
2 doing here for the court either.

3 Q. Okay. And you chose rent share as one of your control  
4 variables, right?

5 A. Yes.

6 Q. Can you cite to any articles that establish a correlation  
7 between rent share and party status?

8 A. Well, I have a couple of graduate students who are working  
9 on the question of home ownership and voting. There are --  
10 there is a fairly large -- a large literature in economics  
11 looking at home ownership and looking at political battles  
12 between homeowners and renters. I believe there is a paper in  
13 economics by Epple and Romer that is -- is examining --  
14 examining these political battles between -- between renters  
15 and owners. But it's something that just in my own research  
16 I've noticed is a really powerful predictor of voting behavior.  
17 Especially in a place like -- like Arizona where renting versus  
18 owning, it captures something beyond what we might capture with  
19 population density. The neighborhoods that have a lot of  
20 renters tend to be -- tend to be people who have moved more  
21 recently, tends to be a younger population, and it's -- it's --  
22 I believe it's probably also correlated with age. So this is  
23 why, when we start throwing all these variables together, they  
24 may not be as -- it's not as clear what the impact is. But, in  
25 my own experience, the share of the population who rents is a

1 very good predictor of vote share.

2 Q. Well, can you point to anyone else that is using rent share  
3 as a variable to predict voter behavior?

4 THE COURT: Let me back up, because I heard the  
5 question -- the original question was the correlation between  
6 rent share and party status, and you answered the question in  
7 regard to voting. In your mind, does that -- party status and  
8 voting, does that mean the same thing?

9 THE WITNESS: I was interpreting it to mean the same  
10 thing: Is there a relationship between the share of the  
11 population who rents and the Democratic vote share? And this  
12 is something that I have a graduate student who is writing a  
13 dissertation to this effect, so that's one reason why it's in  
14 my mind. But there is a literature that this person's  
15 dissertation draws upon that certainly is examining -- some of  
16 it's in economics, some of it's in political science --  
17 examining the role of -- distinction between renters and owners  
18 in vote choice.

19 BY MS. FRIDAY:

20 Q. Okay. But other than your graduate student, can you point  
21 to any peer-reviewed literature that is using rent share as a  
22 control variable?

23 A. I certainly could if I had a little time to go back and  
24 look. Nothing -- nothing pops into my head right now.

25 THE COURT: Counsel, you have about five minutes left.

1 MS. FRIDAY: Okay. Thank you, Your Honor.

2 BY MS. FRIDAY:

3 Q. Now, you take issue with the control variables that are  
4 used by the Secretary's expert, Sean Trende, right?

5 A. I wouldn't say that I take issue with, for instance,  
6 controlling for Hispanic share or age, I don't take issue with  
7 those as -- as variables that are -- that we know are often  
8 correlated with voting behavior. And that's why I included  
9 them in my follow-up report.

10 Q. Okay. Well, you claimed in your reply report that you  
11 believe Mr. Trende simply was trying mixtures of variables  
12 until he found the results that he wanted.

13 Do you recall saying that?

14 A. Yes. And the reason I -- I made -- I drew that conclusion  
15 is there was really only one combination of variables in which  
16 the -- the variable of interest for -- for ballot order lost  
17 its statistical significance. That was one in which both  
18 population density and African American share were included in  
19 the same regression along with other -- with other things. So  
20 if we included each of those individually, there is -- the  
21 effect is of -- of -- of ballot order is, basically, the same.  
22 But if we include them together, along with some other  
23 variables, then that's the situation in which we see it look  
24 marginally statistically significant.

25 So that's really -- if the question here is really

1 just trying to get at the facts about whether this is a robust  
2 result, the point I'm trying to make is we would not want to  
3 reject this finding because there is one way we could take all  
4 these census data and we can put them together in this one way  
5 knowing that these two things are highly correlated, and the  
6 coefficient on one of them doesn't make a lot of sense, the  
7 fact that we can estimate the model in that one way and the P  
8 value sneaks up above point one, that's not a reason for me to  
9 reject the result that I see in the -- in the data. That is --  
10 and I don't think that's something that a reviewer for a  
11 journal would buy into either. That's the point I was trying  
12 to make.

13 Q. But you don't actually know what Mr. Trende did, right?

14 A. No.

15 Q. And you didn't include all the results of the various tests  
16 you ran in reaching your conclusion that he must have tried  
17 everything and only used the one that worked, right?

18 A. Well, I think that by -- by looking at the first column of  
19 table A 1 in my -- in my follow-up report, we can get that  
20 basic gist, because we can control for -- we can control for  
21 all these variables.

22 I'm sorry. Looking at both the first two columns, we  
23 can see that we can just basically control for everything, and  
24 the -- the effect for ballot order does not -- does not go  
25 away. So I think the question -- I wasn't trying to make a

1 point about -- about what Mr. Trende had done, I was trying to  
2 make a point about the robustness of the result, which I think  
3 is what -- is what -- my presumption is that's what the Court  
4 is interested in.

5 Q. So did you do the same analysis when you were looking at  
6 the question of the ballot order effect in Florida?

7 A. My -- my analysis in Florida was quite different. It was  
8 not looking for an absolute ballot order effect. I was looking  
9 at -- purely at the difference between the top of ballot races  
10 and down ballot races.

11 Q. And so in Florida your model employed what are called fixed  
12 effects at the county level, right?

13 A. Yes.

14 Q. And that meant that you controlled for every future of a  
15 county that was stable over time, and your results were driven  
16 exclusively by variations within the counties, right?

17 A. In Florida that was the only variation we had. There was  
18 -- it was a different type of ballot order system. There was  
19 no variation across counties in ballot orders. So the only  
20 variation we had was over time within counties.

21 This situation is very different. We have several  
22 counties where there is no variation over time. This is a  
23 situation -- and that was what that little -- that little table  
24 with the -- with the blue and the -- and the red earlier was  
25 demonstrating. There were lots of counties where there is no



1 variation over time.

2 Q. And in Florida, in fact, you opined that there would --  
3 that multicollinearity would result if you used the same  
4 variables that you used here, right, the variables for  
5 population density and party registration, right?

6 A. This was a situation where I had already -- in that model I  
7 already had included county fixed effects. So I was already --  
8 I was already controlling for all the things that -- that vary  
9 across counties. So that was not a setting in which it made  
10 much sense for me to start adding a lot of demographic control  
11 variables.

12 Q. So there your opinion was the correlation between party  
13 registration and population density was so high that those  
14 variables could not be used because multicollinearity would  
15 result?

16 A. I don't recall making a -- I don't recall the specific  
17 claim about particular variables. I would have to take a look  
18 at what I may have said. That's -- that is a report that was a  
19 while ago. I'm not remembering exactly what the specific  
20 situation was there.

21 Q. You can't remember one way or another?

22 A. Remember what exactly?

23 Q. Whether you opined in the Florida case that using the  
24 control variables for population density and for party  
25 registration would result in multicollinearity because those

1 two variables were so highly correlated?

2 A. I don't -- I don't recall.

3 Q. Okay.

4 THE COURT: All right. We are at 4:59. Ms. Friday,  
5 we can continue tomorrow.

6 How much longer with this witness?

7 MS. FRIDAY: Probably about ten minutes, Your Honor.

8 THE COURT: All right. And so, with that, we will  
9 resume at 9:00 a.m. precisely. All right.

10 MS. KHANNA: Your Honor.

11 THE COURT: Yes.

12 MS. KHANNA: Just as a kind of procedural matter, the  
13 cross-examination of this witness has taken significantly  
14 longer than the direct examination, and we have one night to  
15 prepare for our own cross-examination of defendant's proffered  
16 expert. We would appreciate the opportunity to consult with  
17 Dr. Rodden as we prepare that cross-examination, despite the  
18 fact that he seems to be in the middle of -- the  
19 cross-examination has not yet concluded.

20 THE COURT: What's the position of defendants?

21 MS. FRIDAY: May we have a moment to confer, Your  
22 Honor?

23 THE COURT: Yes.

24 (An off-the-record discussion was held between defense  
25 counsel.)

1 MS. FRIDAY: We don't have any objection, Your Honor,  
2 as long as they stick to the parameters of preparing  
3 Mr. Trende's cross and not discussing what I've discussed with  
4 Dr. Rodden today.

5 THE COURT: And, sir, you are advised to adhere to  
6 that admonition as well, Mr. Rodden.

7 And so, with that, we will be in recess.

8 (Proceedings concluded at 5:01 p.m.)

9 \* \* \*

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C E R T I F I C A T E

I, CHRISTINE M. COALY, do hereby certify that I am duly appointed and qualified to act as Official Court Reporter for the United States District Court for the District of Arizona.

I FURTHER CERTIFY that the foregoing pages constitute a full, true, and accurate transcript of all of that portion of the proceedings contained herein, had in the above-entitled cause on the date specified therein, and that said transcript was prepared under my direction and control.

DATED at Phoenix, Arizona, this 5th day of March, 2020.

/s/ Christine M. Coaly  
Christine M. Coaly, RMR, CRR

# **EXHIBIT 5**

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF ARIZONA

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Brian Mecinas, et al.,	)	
	)	No. CV-19-05547-DJH
Plaintiffs,	)	
	)	
vs.	)	Phoenix, Arizona
	)	March 5, 2020
Katie Hobbs, in her official	)	8:58 a.m.
capacity as the Arizona Secretary	)	
of State,	)	
	)	
Defendant.	)	

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BEFORE: THE HONORABLE DIANE J. HUMETEWA, JUDGE

REPORTER'S TRANSCRIPT OF PROCEEDINGS

PRELIMINARY INJUNCTION HEARING - DAY 2

(Pages 124 through 251)

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		<u>I N D E X</u>		
		<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>
<b><u>WITNESSES FOR THE PLAINTIFF:</u></b>				
	DR. JONATHAN RODDEN		127	133
	DR. JONATHAN A. KROSNICK	150	173	186
<b><u>WITNESSES FOR THE DEFENDANT:</u></b>				
	SEAN PATRICK TRENDE	191	213	245



P R O C E E D I N G S

1  
2 THE COURT: All right. Good morning. And please be  
3 seated.

4 All right. Let's have the witness back on the stand.

5 And you may continue with the cross-examination,  
6 Ms. Friday.

7 MS. FRIDAY: Thank you, Your Honor.

8 THE COURT: And, Mr. Rodden, I do remind you, you  
9 remain under oath for purposes of your testimony.

10 THE WITNESS: Yes. Thank you.

11 THE COURT: All right. You may continue.

12 MS. FRIDAY: Thank you, Your Honor.

13 CONTINUED CROSS-EXAMINATION

14 BY MS. FRIDAY:

15 Q. Good morning, Dr. Rodden.

16 A. Good morning.

17 Q. Your matching analysis looks at county level observations,  
18 correct?

19 A. Yes.

20 Q. And for county -- for each county election observation in  
21 which Republicans are listed first, you tried to find the most  
22 similar observation in which Democrats were listed first,  
23 right?

24 A. Yes.

25 Q. For your matching analysis, you used both district and

1 statewide races, right?

2 A. Yes. I have also conducted the analysis broken down by  
3 only statewide races.

4 Q. That was my next question. So did you do any matching  
5 analysis of just statewide races?

6 A. Yes.

7 Q. And when doing a matching analysis, the key assumption is  
8 whether a candidate is listed first on the ballot or not,  
9 appears as if random.

10 Do you agree with that?

11 A. The -- the purpose of this analysis is to -- is to create a  
12 situation that comes closer to randomization than --

13 Q. I'm sorry to interrupt you. We're a little pressed for  
14 time this morning. Could you please answer yes or no.

15 Is the assumption in a matching analysis that whether  
16 a candidate is listed first on a ballot or not appears as if  
17 random?

18 A. Yes.

19 Q. And -- but here the ballot order in Arizona isn't random,  
20 because it's based on who won the gubernatorial popular vote in  
21 that county in the prior election, right?

22 A. That's right.

23 Q. Isn't the outcome of the matching analysis affected by the  
24 fact that the first listed candidates were not selected at  
25 random?

1 A. That's the whole purpose of the matching analysis is to  
2 come closer to the random assignment by matching on -- matching  
3 on something that is -- that we know is driving the -- driving  
4 the assignment. So we're trying to find cases that are as  
5 close as possible on Republican registration in the previous --  
6 in the previous election.

7 Q. But you're not able to find cases in which the treatment  
8 condition, in other words, whether the candidate listed first  
9 was Republican or Democrat, was random, right?

10 A. That's right. We don't have random assignment. We're  
11 trying to get closer to that with this technique.

12 Q. Matching analysis is also sensitive to the selection of  
13 variables, right?

14 A. That's right.

15 Q. So when you change the variables you're attempting to  
16 match, your result will also change?

17 A. Yes, because we need to achieve a good match on the  
18 variables we care about.

19 Q. And so do you agree that a matching analysis needs to  
20 include all relevant variables in the match?

21 A. It needs to include the most important variables. In this  
22 -- in this case, I made the case that it's -- it's the  
23 Republican registration share that is the most important  
24 variable to achieve -- for achieving the match.

25 Q. You don't include year in your matching pairs, do you?

1 A. I may have included that in some robustness checks. I  
2 don't recall at the moment.

3 Q. You agree, though, that the prior year election will affect  
4 whether or not a Republican or Democratic candidate is listed  
5 first, right?

6 A. Well, that's the point. That's the purpose of the  
7 analysis, yes.

8 Q. But you're not sure whether you included the year in your  
9 patching pairs?

10 A. These are -- the matches are based on the previous years'  
11 election, so it's included in that sense.

12 Q. But you didn't include year as a variable?

13 A. Again, I think in some robustness checks I did, but I don't  
14 -- I don't recall.

15 Q. Do you agree that the power of a significance test to  
16 detect a real difference between groups of voters who saw  
17 different ballot orders depends on the number of independent  
18 observations on which the significance test is based?

19 A. Yes.

20 Q. Observations have to be independent of each other,  
21 otherwise the significance of a result might be overstated.

22 Do you agree?

23 A. That's correct.

24 Q. You claim in your report that you have 2,129 observations;  
25 is that right?

1 A. Yes.

2 Q. And as we discussed yesterday, you count each election  
3 outcome within a county as a separate observation, right?

4 A. Yes.

5 Q. In some instances, one election can have several  
6 observations if it spans multiple counties, correct?

7 A. Yes.

8 Q. And you treat those observations as if they are  
9 independent?

10 A. In the first report, yes.

11 Q. But election outcomes are related to when and where they  
12 occur, right?

13 A. That's right.

14 Q. As we discussed yesterday, in Arizona, certain counties  
15 have consistently voted Democratic while others have voted  
16 Republican?

17 A. Yes.

18 Q. And we see trends in those county voting patterns over  
19 time?

20 A. Yes.

21 Q. Do you agree that an analysis of voting behavior needs to  
22 take into account the similarities within counties over time?

23 A. Yes.

24 Q. But your basic model treats a 2018 election in Apache  
25 County as completely independent from the same election in 2016

1 in Apache County, doesn't it?

2 A. In the -- in the basic model presented in the first report,  
3 yes.

4 Q. And your basic model in your first report also treats the  
5 2016 election in Apache County -- a 2016 election in Apache  
6 County as completely independent from other 2016 elections in  
7 Apache County, right?

8 A. That's the assumption in the -- in the model, yes.

9 Q. Do you agree that one way to take into account similarities  
10 within counties over time is to cluster the counties?

11 A. To cluster the counties, meaning to -- to calculate  
12 standard errors that are clustered at the level of county?

13 Q. Correct.

14 A. Yes.

15 Q. And do you agree that the question of when to cluster data  
16 is the subject of debate among statisticians and political  
17 scientists?

18 A. Yes.

19 MS. FRIDAY: Thank you. I have no further questions.

20 THE COURT: Thank you. And it's my determination that  
21 the use of the county map yesterday was an important part of, I  
22 think, the examination, and I think it is informative to the  
23 overall issues here, and so I think we will make that part of  
24 the record and an exhibit, and so we will number it as the last  
25 exhibit.



1 the application of statistical methods generally and to  
2 election data specifically; is that correct?

3 A. Yes.

4 Q. You've taught master's students, correct?

5 A. Yes.

6 Q. You've taught Ph.D. students, correct?

7 A. Yes.

8 Q. You have also developed and run the Spatial Social Science  
9 Lab at Stanford which is devoted to the statistical analysis of  
10 election data; is that correct?

11 A. That's correct.

12 Q. And, in fact, the Court yesterday qualified you as an  
13 expert in statistical analysis of election data; is that right?

14 A. Yes.

15 Q. You were also asked on cross-examination whether you have  
16 determined the ballot order impact in any specific 2020  
17 election.

18 Do you recall that?

19 A. Yes.

20 Q. And you testified you have not?

21 A. I have not.

22 Q. And I believe you testified you examined the last 40 years  
23 of Arizona election data provided by the Arizona Secretary of  
24 State; is that right?

25 A. Yes.



1 Q. And you concluded in your report, based on your analysis of  
2 that last 40 years of elections data, that first listed  
3 candidates see a statistically significant electoral advantage,  
4 correct?

5 A. Correct.

6 Q. Is it fair to say you do not have the data on the  
7 November 2020 Arizona elections?

8 A. That is fair to say. I don't have a crystal ball.

9 Q. Do you have any reason to believe that the ballot order  
10 effect that you observed from the last 40 years of Arizona  
11 election data would disappear in the November 2020 election?

12 A. No.

13 Q. Yesterday counsel asked you on cross-examination about the  
14 three different statistical methods that you applied to discern  
15 whether there is evidence of a ballot order effect in Arizona.

16 Do you recall?

17 A. Yes.

18 Q. And you testified, both on direct and cross, I believe, to  
19 your -- to the certain limitations inherent in your close  
20 elections analysis; is that right?

21 A. Right.

22 Q. And you expressly raised a caveat on the close elections  
23 analysis in your initial report when discussing that analysis;  
24 is that right?

25 A. Yes.

1 Q. So where you had reason to question the magnitude of a  
2 specific coefficient, you specifically alerted the Court to  
3 that fact in your report; is that right?

4 A. Yes. I believe there are caveats throughout the report at  
5 various places.

6 Q. Why did you do that?

7 A. Well, I think it's important for the Court to know what the  
8 -- what the weaknesses are of the various approaches,  
9 especially when navigating through to why we're looking at so  
10 many different -- so many different results in the report.

11 Q. Is that consistent with your scholarly approach in your own  
12 work outside of this expert report?

13 A. Yes.

14 Q. You were also asked by counsel during your cross about your  
15 use of the Stata or Stata program; is that right?

16 A. Yes.

17 Q. I believe you said you prefer Stata?

18 A. Yes.

19 Q. And you used Stata in performing your regression analysis;  
20 is that right?

21 A. Yes.

22 Q. Now, Mr. Trende critiques your Stata regression analysis  
23 for failing to cluster standard errors; is that correct?

24 A. Yes.

25 Q. At the county level?

1 A. Yes.

2 Q. And he recommends a model that has 15 clusters for the 15  
3 counties; is that right?

4 A. Yes. That's the main recommendation I believe he's making.

5 Q. And how many control variables does Mr. Trende suggest  
6 should be included in that clustered model?

7 A. I think he includes 36.

8 Q. What happens to the Stata analysis that you run when there  
9 are more than twice as many control variables as there are  
10 clusters, as Mr. Trende suggests?

11 A. It will produce -- it will produce coefficients and  
12 standard errors, but it does provide -- in the basic model  
13 statistics, it won't provide those, instead it provides an  
14 error message. And when one reads the error message, it  
15 explains that a model that has more covariates than clusters --  
16 and this goes for a GEE model, for a Bayesian hierarchical  
17 model, or for an ordinary least squares regression model that  
18 has clustered standard errors. In all these instances, it  
19 really doesn't make sense to estimate a model that has more  
20 variables than clusters in it, and it actually won't produce  
21 basic model statistics for that reason. It just gives us an  
22 error message.

23 Q. You were also asked a few questions yesterday about your  
24 analysis in the Florida ballot order case.

25 Do you recall that?

1 A. Yes.

2 Q. And you testified that the focus of your inquiry in the  
3 Florida ballot order case was actually different than the focus  
4 of your inquiry in this case; is that right?

5 A. Yes.

6 Q. And you were presented with a single sentence in your  
7 Florida report where you indicate that Florida has had some  
8 close elections; is that right?

9 A. That's right.

10 Q. Do you know if Arizona has also had close elections?

11 A. Yes, I know firsthand from my previous work in Arizona. It  
12 was a case pertaining to -- to the counting of out-of-precinct  
13 ballots. And I recall that there were some -- there were some  
14 races that were so close that parties were suing one another to  
15 try to have the out-of-precinct ballots counted. So those are  
16 some very close elections that I can recall. And, of course,  
17 we've seen very close statewide elections and so forth. It's a  
18 hotly contested state.

19 MS. FRIDAY: I'm going to lodge an objection, Your  
20 Honor. These questions are getting to be pretty leading.

21 THE COURT: I'm sorry?

22 MS. FRIDAY: These questions are becoming pretty  
23 leading.

24 MS. KHANNA: Your Honor --

25 THE COURT: I would agree.

1 MS. KHANNA: I can make them more open-ended. I'm  
2 trying to -- I know we are limited on time, so I'm trying to be  
3 as expeditious as possible, but I will keep that to a minimum.

4 BY MS. KHANNA:

5 Q. You mentioned that you had done some work in a case about  
6 out of precinct -- where out-of-precinct votes were being  
7 fought over because the elections were so close; is that right?

8 A. Yes.

9 Q. What case was that?

10 A. I'm sorry, I forgot the name of the case, but it was here  
11 in this -- in this building.

12 Q. Is that the DNC versus Hobbs case we talked about yesterday  
13 that the Ninth Circuit recently affirmed en banc -- or ruled on  
14 en banc?

15 A. Yes.

16 Q. And I think you also mentioned some resent statewide close  
17 elections that you're aware of. Anything in particular that  
18 you recall?

19 A. I think we all notice the recent senate election was very  
20 close.

21 Q. Okay. Yesterday counsel for the Secretary showed you the  
22 -- your "do" file, which is the code file that you produced to  
23 the other side in this case; is that right?

24 A. Yes.

25 Q. And she pointed out an area where in calculating the ballot

1 order effect that accrues to Democratic first listed  
2 candidates, the code suggested that you had mistakenly included  
3 the control variable for the Republican voter registration?

4 A. That's right. I controlled for a Republican registration  
5 share in a model where the Democratic vote share was the  
6 dependent variable.

7 Q. And was that notation in your main regression analysis?

8 A. No.

9 Q. Where was it?

10 A. That was one of the robustness checks that we discussed.

11 Q. It did not affect your main regression analysis reported in  
12 your initial report?

13 A. That's correct.

14 Q. And you also testified that it reflected a copy and paste  
15 error that had not actually made its way into your analysis in  
16 the report; is that right?

17 A. That's right. When I look at the appendix tables, I don't  
18 see that -- see evidence of having included the wrong variable  
19 there.

20 Q. And I believe you also testified that even if it had made  
21 its way into your analysis, it would be of little consequence?

22 A. Yes, just because the Democratic registration share and the  
23 Republican registration share are highly correlated. We get  
24 very similar results just with the sign on the coefficient  
25 being different.

1 THE COURT: Mr. Rodden, I'm going to instruct you to  
2 wait for the question rather than jumping in and assuming what  
3 counsel is asking you to answer. So focus your answer narrowly  
4 to the question.

5 THE WITNESS: Certainly. Thanks.

6 MS. KHANNA: Thank you, Your Honor.

7 BY MS. KHANNA:

8 Q. So let's assume for the moment that -- that the mistake  
9 that counsel identified in the transmission of the variable in  
10 the document somehow wholly infected your analysis of ballot  
11 order effect in favor of first listed Democrats.

12 Can we assume that for the moment?

13 A. Okay.

14 Q. And I just want to clarify that that's -- it is your  
15 position that that was not the case; is that right?

16 A. That's right.

17 Q. Would the mistake that counsel focused on yesterday have  
18 any effect on your calculation of the ballot order effect for  
19 first listed Republican candidates?

20 A. No, those are separate analyses.

21 Q. And you read Mr. Trende's report in this case?

22 A. Yes.

23 Q. Did Mr. Trende, in his report, provide any analysis that  
24 the control variable in that instance made any difference to  
25 the results of your report?

1 A. No.

2 Q. Counsel for the Secretary spoke extensively with you  
3 yesterday regarding the potential disparity between county  
4 level partisanship data and district level election results in  
5 districted elections; is that correct?

6 A. Yes.

7 Q. And what -- what elections are affected by the -- what  
8 elections are districted in your analysis?

9 A. Just the U.S. House and State Senate.

10 Q. Under Arizona's ballot order law, is ballot order set at  
11 the county level or the district level?

12 A. It's set at the county level.

13 Q. So to the extent that there was any measurement error,  
14 which I believe was the term used yesterday, was it in the  
15 independent variable?

16 A. It was in the -- not in the main independent variable.  
17 That's the ballot order variable which is set at the county  
18 level, so there is no measurement error in that.

19 Q. It was not in the main independent variable?

20 A. That's right.

21 Q. And it was not in the main dependent variable, or the  
22 dependent variable?

23 A. No. Those are all election results that are coming  
24 directly from the Secretary of State at the county level.

25 Q. So the measurement error existed, perhaps, in various



1 control variables?

2 A. Yes.

3 Q. Does that necessarily mean that the coefficient for the  
4 main independent variable is wrong?

5 A. No.

6 Q. Why not?

7 A. The -- the measurement error is -- is affecting the  
8 coefficients on the control variables, so if we're interested  
9 in those variables, we know that we probably have some -- some  
10 bias in those, and we have a harder time interpreting those,  
11 but it doesn't necessarily affect the -- the -- what we can  
12 learn about ballot order.

13 Q. Just to clarify. You've been using this term measurement  
14 error. That is not an error in your measurement of anything in  
15 the course of your analysis; is that right?

16 MS. FRIDAY: I'm going to object again. This is still  
17 pretty leading questioning.

18 MS. KHANNA: I can rephrase, Your Honor.

19 THE COURT: Sustained.

20 Wait for my ruling. We don't want to talk over one  
21 another. We have our court reporter who is working very hard.

22 So sustained.

23 MS. KHANNA: Thank you, Your Honor.

24 BY MS. KHANNA:

25 Q. Can you please clarify for the Court what this measurement

1 error is?

2 A. This is just a necessary byproduct of using the data at the  
3 -- using the counties as a unit of analysis when the -- some of  
4 the control variables are measured at -- at -- when we have  
5 districts that are not perfectly coterminous with counties. So  
6 it's something that is built into the -- the use control  
7 variables, and there is not really anything I can do about it  
8 other than -- other than, you know, pay attention to that and  
9 try the analysis without those districted races.

10 Q. Because the data is maintained at the county level, as you  
11 mentioned; is that right?

12 A. Right.

13 Q. Secretary's counsel also discussed with you Congressional  
14 District 1 yesterday.

15 Do you recall that?

16 A. Yes.

17 Q. And I think she -- she suggested that -- I believe she  
18 asked you whether the result reported for that election in your  
19 analysis was wrong; is that right?

20 A. I believe that was the question.

21 Q. And who was the winner -- do you recall who the winner was,  
22 just from your testimony yesterday?

23 A. I have forgotten now the name.

24 Q. I -- if I can represent to you that yesterday they  
25 discussed -- we discussed on cross that the winner in that

1 District 1 election was the Democrat Tom O'Halleran?

2 A. Yes.

3 Q. And the Secretary's counsel asked you -- or she represented  
4 to you that you had reported the winner in the Pima County  
5 portion of that district as his opponent Republican Wendy  
6 Rogers; is that right?

7 A. That's right.

8 Q. When the Arizona Secretary of State reports election data,  
9 at what -- at what level does the office report that data?

10 A. The data I collected from the Web site or at the county  
11 level.

12 Q. So the Arizona Secretary of State's office election data,  
13 does it report data for districted elections at the county  
14 level?

15 A. Yes.

16 Q. So as reported by the Secretary of State, did the  
17 Republican challenger actually win in the Pima County portion  
18 of District 1?

19 A. Yes.

20 Q. Even though she was not the winner of the district overall?

21 A. That's correct.

22 Q. So to address the concern raised by Secretary's counsel,  
23 did you input any incorrect election data into your analysis?

24 A. Not to my knowledge.

25 Q. Are you aware that the -- that the election data reported

1 by the Secretary of State is somehow incorrect?

2 A. No, I don't have any reason to think that.

3 Q. Okay. Now, in your initial report you recognized, as you  
4 testified yesterday, the drawbacks -- potential drawbacks of  
5 including districted elections in the analysis; is that right?

6 A. Yes.

7 Q. And did you do any robustness checks based on that  
8 recognition?

9 A. Yes. I simply reran the analysis without those districted  
10 races.

11 Q. And did you find any -- did you find a statistically  
12 significant ballot order effect when you did that robustness  
13 check?

14 A. Yes.

15 Q. I want to turn back to Plaintiff's Exhibit 3, your initial  
16 report, to figure 2, which is on exhibit page 22.

17 If we could pull that up on the screen.

18 And this is the figure that you said represented kind  
19 of the key results of your main regression analysis; is that  
20 right?

21 A. Yes.

22 Q. And what is the estimate for the average ballot order  
23 effect for Republican first listed candidates?

24 A. Around a little over 2 percent.

25 Q. And what about for Republican first listed candidates in

1 open seats when there is no incumbent running?

2 A. It was about 5 percent.

3 Q. 5.6 percent, as reported in your report; is that right?

4 A. Yes.

5 Q. And you testified that you reviewed Mr. Trende's report  
6 critiquing your analysis; is that right?

7 A. Yes.

8 Q. And does Mr. Trende contend that you should have looked at  
9 other statistical methods in analyzing this question?

10 A. Yes.

11 Q. Is it fair to say that in your second report you explain  
12 your disagreement with Mr. Trende's assessment about which  
13 techniques are appropriate?

14 A. Yes.

15 Q. In the interest of time, I'm not going to walk you through  
16 your -- each and every critique -- response to Mr. Trende's  
17 critique as stated in your report, but if we could pull up  
18 Mr. Trende's report, which is Defendant's Exhibit 101.

19 MS. FRIDAY: Your Honor, I'm going to object here as  
20 being beyond the scope of my cross-examination. I didn't use  
21 Mr. Trende's report in the cross.

22 MS. KHANNA: If I may respond, Your Honor?

23 THE COURT: Yes.

24 MS. KHANNA: We discussed yesterday with counsel about  
25 the timing issues. We specifically noted we wanted to reserve

1 time for rebuttal. Counsel objected to that yesterday after we  
2 discussed, outside the courtroom, and said that they would  
3 disagree that we would have a chance for rebuttal.

4 They specifically did raise issues with Mr. Trende's  
5 reports and his clustering analysis on his cross-examination.  
6 We had originally assumed that we would have a chance for  
7 rebuttal, which is why we shortened Mr. -- Dr. Rodden's direct  
8 examination. And I -- this is a very short discussion of the  
9 issues that were raised both in the direct examination and in  
10 the rebuttal reports.

11 THE COURT: Well, I think you can cover the ground  
12 that was covered by Ms. Friday yesterday regarding the  
13 questions she asked about the report, but if you go beyond the  
14 scope of her cross-examination, then I'm sure there is going to  
15 be an objection, and I will likely sustain it. So just be  
16 aware of that.

17 MS. KHANNA: May I reserve five minutes of time at the  
18 end to ensure that we have an opportunity to put on rebuttal  
19 testimony?

20 THE COURT: And let me just point out, counsel, my  
21 understanding is you contacted my chambers early this morning  
22 seeking to begin 15 minutes early. And I think -- in the first  
23 instance, you have to understand, we schedule staff to be here  
24 at a certain time to begin at a certain time, so those last-  
25 minute kinds of requests are not looked upon favorably.

1           But, that being said, I understand you're going a  
2 little bit further into detail, and I do appreciate that, and  
3 so what I'm inclined to do, because our cutoff time really is  
4 at noon, I'll permit the parties to take up to about 12:30 this  
5 afternoon. And so with that little bit of a buffer -- and do  
6 keep in mind -- and I guess I direct this more to the  
7 defendant's counsel -- that if Mr. Trende spills over, he  
8 certainly is welcome to come back on Tuesday.

9           Again, I set aside sufficient time for you to argue  
10 the legal portion, but if for some reason we need to spill over  
11 into Tuesday with presentation of his information, we can do  
12 that. So I don't want you to feel that you're being squeezed,  
13 but, at the same time, I need to remind you that we're adhering  
14 to the rules and the procedural rules, and so don't go beyond  
15 what was covered in the cross-examination.

16           MS. KHANNA: Thank you, Your Honor.

17           THE COURT: All right.

18           MS. KHANNA: I have no further questions at this time,  
19 Your Honor.

20           THE COURT: All right. Thank you.

21           Sir, you may step down. I appreciate your coming.

22           THE WITNESS: Thank you.

23           THE COURT: All right. You may call your next  
24 witness.

25           MS. KHANNA: Our witness is just in the witness room,

1 Your Honor. He's coming right now.

2 THE COURT: Please call your next witness.

3 MR. GEISE: Plaintiffs call Dr. Jon Krosnick to the  
4 stand.

5 THE COURT: Sir, please come forward and be sworn.  
6 (The witness was duly sworn.)

7 COURTROOM DEPUTY: Please state and spell your name  
8 for the record.

9 THE WITNESS: Jon, J-O-N, Alexander,  
10 A-L-E-X-A-N-D-E-R, Krosnick, K-R-O-S-N-I-C-K.

11 COURTROOM DEPUTY: Thank you. Please proceed to the  
12 witness stand.

13 THE WITNESS: Good morning.

14 THE COURT: Good morning.

15 MR. GEISE: Your Honor, I have Dr. Krosnick's exhibits  
16 that have been admitted, I have them in a binder just for his  
17 reference. Can I approach?

18 THE COURT: You may, yes.

19 MR. GEISE: Thank you.

20 THE WITNESS: Thank you.

21 DIRECT EXAMINATION

22 BY MR. GEISE:

23 Q. Good morning, Dr. Krosnick. I would like to just start  
24 with some brief questions about your background and expertise.

25 Where are you currently employed?



1 A. I am currently a professor at Stanford University. And  
2 there I'm a professor in three departments: Political science,  
3 communication, and psychology. And I'm also employed as a  
4 research psychologist at the U.S. Census Bureau where I am an  
5 advisor on research methods on the projects that they conduct.

6 Q. And how long have you been a full tenured professor at  
7 Stanford?

8 A. I've been a full tenured professor at Stanford since 2004,  
9 although I spent the prior year as a visitor on their faculty  
10 as well.

11 Q. And prior to Stanford, were you a professor anywhere else?

12 A. I was a professor at Ohio State University in Columbus,  
13 Ohio, for 18 years, on the faculty there in political science  
14 and psychology.

15 Q. And you also said you're a research psychologist for the  
16 Census Bureau. Just, briefly, what does that involve?

17 A. Well, the Census Bureau, of course, conducts the decennial  
18 census every ten years that we all know about and that they're  
19 doing right now. But, in addition, they conduct lots of  
20 surveys of very high quality throughout the years in between.  
21 For example, one of the most visible statistics to come from  
22 the Census Bureau is the U.S. unemployment rate, which has  
23 tremendous consequences for the economy. That is gained  
24 through surveys. And so it's important that the Census Bureau  
25 know how to design their surveys according to best practices,

1 and that's the role that I play there in helping them do that.

2 Q. Thank you. I would like to turn to your education just  
3 briefly. What's your educational background?

4 A. My B.A. is from Harvard University in psychology, and my  
5 Ph.D. and master's degrees are in psychology from the  
6 University of Michigan, where I worked with faculty in  
7 psychology and political science and in sociology. And my  
8 dissertation advisor was jointly appointed in political science  
9 and psychology.

10 Q. And since you obtained your Ph.D., what's been the focus of  
11 your professional and academic career?

12 A. There really are two principal foci of my work. The first  
13 is on the psychology of politics, and I'm focused especially on  
14 the thinking and actions of American citizens. And so what I  
15 do in that work is to study how people decide whether to vote  
16 or not; how they decide who to vote for; how they decide  
17 whether to approve or not of the president; how they decide  
18 whether to become passionate about particular policy issues,  
19 and what happens cognitively and behaviorally when they do  
20 that.

21 And one of the areas of research for me for more than  
22 two decades has been the study of the impact of ballot design,  
23 and in particular the order of candidate names on choices. So  
24 that's the first domain, the political psychology domain.

25 The second domain of my work is in the arena of

1 research methodology, with a special focus on surveys. I'm  
2 writing a book called the Handbook of Questionnaire Design.  
3 I've edited the handbook of survey research where -- and that  
4 work is all devoted to understanding best practices and  
5 surveys, but I'm also cofounder of the group on best practices  
6 in science at Stanford, and our mission is to help scientists  
7 do their work as well as possible.

8 Q. Great. And you mentioned some books. Has your research  
9 ever been published in peer-reviewed journals or books?

10 A. Yes, it has. I've had, I think, more than 150  
11 peer-reviewed journal articles and book chapters. And I think  
12 I may have something like seven books published or in press at  
13 the moment.

14 Q. And, just briefly, what does it mean for an article to be  
15 published in a peer-reviewed journal?

16 A. Well, the peer-review process is the centerpiece of  
17 science. It involves a process whereby if I write an article  
18 that I'd like to have published in a high prestige journal, it  
19 gets submitted to the editor at that journal who manages my  
20 submission. That person has a Ph.D. and expertise in the topic  
21 that I'm going to -- that I'm writing about.

22 That editor then sends the article out to between two  
23 and five of my peers who are also experts with Ph.D.s in the  
24 area, and have, ideally, decades of experience in the field.  
25 And that group, the editor and the reviewers typically write

1 long letters of feedback to the author, providing guidance on  
2 what would be needed in order to make the paper publishable.

3 The journals that I publish in are of the most  
4 competitive, highest impact journals. And, as a result, their  
5 rejection rates are typically in the region of 90 percent,  
6 which means that the likelihood is that papers will be rejected  
7 rather than accepted. Mine almost always involve letters of  
8 advice from the peer-review process to improve and then  
9 ultimately do get published in those journals. And so peer  
10 review is really the centerpiece of science.

11 Q. And do you view that process as a critical means to improve  
12 as a professor and as an academic?

13 A. Always. My work and the work I'm going to talk about today  
14 in court is work that has been subjected to this process. And  
15 having multiple eyes with multiple areas of expertise looking  
16 at science and process, always helps us make our work better.  
17 My work, certainly, has always benefited from peer input.

18 Q. So having been -- having been subject to the peer-review  
19 process has made you more meticulous in your work in general.  
20 Is that fair to say?

21 A. No doubt. Every time I submit an article, I'm always try  
22 to think ahead and be the devil's advocate, try to think about  
23 what could the reviewers say that would be hesitations or  
24 concerns for them, and to anticipate those in a way that allows  
25 me to address them in advance, so that when the paper is

1 ultimately submitted to the journal and reviewed, the chances  
2 that they will like it and see it as meeting high standards is  
3 maximized. And that's all part of the process to make science  
4 both as good as possible and as efficient as possible.

5 Q. And do you -- do you think that meticulous check is present  
6 here when you're testifying as an expert in a courtroom as  
7 well?

8 A. Absolutely. So I think, as an expert, I am here to testify  
9 always based upon scientific literature that's gone through the  
10 peer-review process. And the studies that I'll talk about  
11 today are certainly ones that have gone through that process.  
12 And so as much as one might say, gee, there are quite a few  
13 studies here, quite a few authors, the number of eyes of  
14 individuals who have seen and approved of that work is much,  
15 much greater than that prior to publication.

16 But also an important indication of quality is the  
17 citation count of the papers, that after the papers are  
18 published, if they inspire other scientists to study the same  
19 topics and if they are cited in many subsequent publications,  
20 that's a sign of peer review and approval. And that's the case  
21 for this literature I'll tell you about as well.

22 MR. GEISE: Great. Now, Your Honor, pursuant to  
23 Federal Rule of Evidence 702, I want to proffer Dr. Krosnick as  
24 an expert in the psychology of voter decision making and  
25 elections, and research methodology, data analysis, and

1 statistics.

2 MS. O'GRADY: No objection, Your Honor.

3 THE COURT: Yes. The Court will recognize him as  
4 such. Thank you.

5 MR. GEISE: Thank you, Your Honor.

6 BY MR. GEISE:

7 Q. Dr. Krosnick, you have in front of you a binder. And I  
8 believe -- could you just identify in there, I believe there  
9 are two things marked Exhibit 1 and Exhibit 2?

10 A. Exhibit 1 is the first report that I submitted to the Court  
11 in this case, and Exhibit 2 is the second report that I  
12 submitted to the Court in this case.

13 Q. Great. Now, taking a step back. Dr. Krosnick, you said  
14 your research has involved studying order effects, and I  
15 believe you specifically said candidate name order effects, so  
16 I want to break those in two.

17 So, first, what are order effects?

18 A. Well, order effects are a part of life and a part of being  
19 human, that in many situations as we navigate through our days,  
20 we're encountering objects of choice and we encounter them in a  
21 particular order. So every time we go into a restaurant and we  
22 see a menu, the items on that menu are presented in a  
23 particular order. We typically start reading at the top of the  
24 menu and we move down. And that very nature of the experience  
25 we have as humans means that we encounter our selections, our

1 opportunities, in a sequenced way rather than all at once.  
2 And, as it turns out, we now know that in many arenas of life,  
3 the order in which people encounter objects affects the choices  
4 that they make among them.

5 Q. And so is there a name for the tendency for someone, when  
6 presented with stuff visually, to pick the first option?

7 A. Yes. So when we -- when we encounter objects visually,  
8 there is a tendency to lean towards selecting the first things  
9 that we see, and that's called a primacy effect.

10 Q. Great. Are there contexts, separate from elections, and I  
11 think you've semi-answered this question, where primacy effects  
12 have been observed?

13 A. Yes. So primacy effects have been observed in many  
14 different contexts. For example, if I were to put out four  
15 glasses of beer here from different manufacturers, unmarked  
16 glasses, and ask a hundred people to taste them, randomize the  
17 order in which the brands are presented to different people,  
18 people will manifest a tendency to prefer the first beer that  
19 they taste over the others.

20           When people cross parking lots coming in on one  
21 corner, going out on the opposite corner, and at some point  
22 needing to turn left to go through the rows of cars to get to  
23 the other side, they tend to turn left as soon as possible.

24           When students answer multiple choice questions on  
25 tests incorrectly, they tend to do so by selecting options that

1 are presented first.

2 THE COURT: You said incorrectly.

3 THE WITNESS: Incorrectly, right. So if they answer  
4 correctly, the answer is wherever the professor puts them, but  
5 when they answer wrong and they don't know the answer exactly,  
6 they tend to lean toward what they see first.

7 And it's also true in surveys, when respondents are  
8 given a list of choices, for example, what's the most important  
9 problem facing the country today, is it unemployment,  
10 inflation, crime, education, budget deficit, the order in which  
11 those options are presented, when they are presented visually,  
12 people tend to lean towards selecting what they read first. So  
13 order effects and primacy effects, in particular, are a part of  
14 life.

15 BY MR. GEISE:

16 Q. And in context, other than elections, are you aware of  
17 efforts to control or account for these effects?

18 A. Absolutely. The survey researchers, for example, are now  
19 very aware of order effects in surveys. And so routinely  
20 survey researchers rotate the order of answer choices and  
21 questions so as not to introduce a bias. Researchers never  
22 want to introduce a bias, but they may not have realized in the  
23 old days that they were doing so, but since then we've now  
24 adopted this practice of rotation to avoid that.

25 And in tests of beers and other products, researchers



1 know it makes sense to rotate that order in order to avoid bias  
2 as well.

3 Q. So fair to say these are a pretty broadly understood part  
4 of human nature?

5 A. Absolutely. Order effects are now, among people studying  
6 choice, are very well known.

7 Q. Great. And now I'd like to segue to candidate name order  
8 effects. What are candidate name order effects?

9 A. Well, stated generally, the interest here is in whether the  
10 order of candidate names on ballots influencing voting  
11 behavior. And given the prevalence of name order effects  
12 throughout the rest of life, it would be surprising if they  
13 didn't show up in elections. And, as it turns out, they do.  
14 We now have a large literature showing that candidates whose  
15 names are listed first on the ballot enjoy an advantage of a  
16 couple of percentage points. It's not a huge number, it's not  
17 20, or 30, or 40 percent, but it is reliably a couple of  
18 percentage points on average.

19 Q. And I believe you said you've studied those for about three  
20 decades. Have you published on candidate name order effects in  
21 elections?

22 A. I have. My first publication was dated 1998. I have  
23 published a series of papers in peer-review journals and books  
24 since then. And I now have a new paper under review at a  
25 journal presently.

1 Q. And have you testified as an expert on candidate name order  
2 effects in other court cases?

3 A. I have. I testified in New Hampshire a few years ago,  
4 where the supreme court there declared the law unconstitutional  
5 and required the legislature to begin rotating names.

6 I testified recently in federal court in Florida where  
7 the Court made a similar determination.

8 Q. Great. And, just broadly, what are the two psychological  
9 -- what are the two explanations people usually have for why  
10 candidate name order effects occur in elections?

11 A. There are two theoretical perspectives. One is lack of  
12 information, that there are many races on most ballots, and in  
13 California, for example, we have lots of referenda as well.  
14 The referenda are complex. For a voter to become informed  
15 fully about all of the candidates running is quite a time  
16 consuming task. And voters may sometimes confront ballots when  
17 they feel the obligation to be a good citizen and to  
18 participate in the election, but may not be as fully informed  
19 as they could be. And so when looking at the ballot somebody  
20 might say, well, I know a couple of good things about this  
21 candidate, I know a couple of good things about that candidate,  
22 I'm not really sure. And at that moment of uncertainty, the  
23 ballot design is as if there is someone standing next to the  
24 voter who just nudges that person a little bit on the shoulder  
25 without them even realizing that they're being -- they've been

1 nudged, and they pick the first one. That's the -- that's the  
2 first explanation is lack of information.

3           The second one, though, is importantly different.  
4 This is the notion of ambivalence. The idea here is that when  
5 you think about the American electorate and the Arizona  
6 electorate, that about a quarter of Americans call themselves  
7 Republicans, about a quarter of Americans call themselves  
8 Democrats, but about a half of Americans call themselves  
9 Independents. Those people are conflicted in the sense that  
10 when they look at the menu of choices on any ballot, they see  
11 pros and cons on both sides. And so they are torn, and in some  
12 races they're especially torn.

13           We know, for example, that in the 2016 U.S.  
14 presidential election, the two major party candidates running  
15 for president had the most negative ratings of major party  
16 candidates running for president in the history of polling.  
17 And so in a situation like that where voters are saying, not  
18 this one, not this one, that's, again, a situation in which  
19 somebody can know a great deal, but a little nudge on the  
20 shoulder is enough to push a person toward that first listed  
21 name.

22 Q. Great. And, Dr. Krosnick, I'd like to move now to focus  
23 specifically on your work in this case.

24           What were you asked to do?

25 A. In this case I was asked to prepare a review of the

1 literature in academic research on the impact of candidate name  
2 order on voting behavior and election outcomes.

3 Q. And what did you conclude about that literature?

4 A. Well, my conclusion is that that literature is remarkable.  
5 That in many areas of science we are trying to figure things  
6 out, studies disagree with each other, there isn't necessarily  
7 consistently in conclusions, but that's not true here.

8           The literature on candidate name order is remarkable  
9 in its consistency. In fact, what -- what I have concluded in  
10 looking at it is that from a variety of studies done in general  
11 elections in the U.S., in primary elections in the U.S., and in  
12 elections in more than a dozen other countries, we see clear  
13 evidence of the prevalence of primacy effects overwhelming  
14 often, statistically, significantly so.

15 Q. And how did you come to that conclusion regarding the  
16 literature?

17 A. Well, step one of is reading the literature and reading the  
18 studies carefully. Step two for me was conducting my own  
19 studies where I know for sure how I've done everything and I  
20 can assure that the quality is of what I need. And, in that  
21 case, my own work produced results that looked very much like  
22 what was in the literature.

23           But in the end for this report, I prepared what's  
24 called a meta-analysis, M-E-T-A, hyphen, analysis. Meta-  
25 analysis is a standard scientific practice that involves

1 bringing together the results of a wide range of studies and  
2 counting up the -- what the results say and analyzing them as a  
3 group. So, in other words, instead of reading only one study  
4 at a time, I'm saying, what does this entire literature show?

5 And what I found was that the literature offered more  
6 than 1,000 tests of the impact of name order on voting  
7 behavior. And 84 percent that, I think, of those tests, were  
8 showing a pattern in the direction of primacy, meaning that a  
9 candidate got more votes when listed first on the ballot than  
10 when listed later on the ballot.

11 And when that 84 percent is subjected to a test of  
12 statistical significance, it comes out to be extremely highly  
13 significant, meaning that there is a more than 99 percent  
14 chance that this tendency toward primacy that appears in the  
15 literature is real and prevalent.

16 Q. Great. And when you talk about statistic -- actually, one  
17 second.

18 So what you're saying is that, based on that  
19 84 percent, there is over a 99 percent likelihood that name  
20 order effects are real?

21 A. Absolutely.

22 Q. Now, in addition to conducting a meta-analysis, you said  
23 you actually reviewed the underlying name order effects  
24 literature here; is that correct?

25 A. Yes, it is.

1 Q. Has name order been studied extensively?

2 A. It has been. There are dozens of studies in the  
3 literature, dating back to the 1950s at the earliest. And the  
4 -- those studies are remarkably consistent in their conclusions  
5 even though their methodology has changed over time.

6 Q. Now, are the over 1,000 unique tests you looked at enough  
7 of a sample to draw a conclusion about primacy effects?

8 A. The 1,000 tests is huge in science, absolutely, and the  
9 consistency across them is remarkable as well.

10 Q. And did all of those 1,000 tests show statistically  
11 significant findings of primacy effects?

12 A. No. When you look at each individual test, each individual  
13 candidate one at a time, it's as if you're looking at a small  
14 planet very far away through a small telescope with some dirt  
15 on the lens.

16 And what I mean by that is that -- and if you take one  
17 race, you and me competing for dogcatcher here in Arizona, that  
18 there is a -- what we would think of as a small effect, let's  
19 just say a 2 percentage point advantage from being listed  
20 first, that's in the numerator of the statistic that we  
21 calculate, and we're comparing that to the denominator.

22 The way these tests are conducted, the denominator is  
23 a function of the heterogeneity of, let's say, the precincts in  
24 Arizona. So, as it turns out in politics, there are some  
25 precincts that are very homogeneous, they vote for Republicans

1 overwhelmingly often. There are other precincts homogeneous on  
2 the other end, they vote for Democrats overwhelmingly often,  
3 and then there is precincts in between.

4           And because of that homogeneity, the variance in the  
5 denominator of these tests is very large. And that, as I say,  
6 is as if the telescope is small and there is dirt on the lens.  
7 So we can't be completely sure that that 2 percent is real with  
8 one test of one contest with one pair of candidates. But when  
9 we put together a thousand tests with thousands of candidates,  
10 and we see overwhelmingly often it keeps coming out that the  
11 candidate first is doing better, that allows us to,  
12 essentially, do a test with a very powerful telescope.

13           And that is, of course, exactly what scientists do.  
14 What we've learned is that repeated measurement and replication  
15 is the fundamental currency for determining whether something  
16 is real. And that's what we see in this literature.

17 Q. Great. And I believe you spoke about some of the methods  
18 having changed over time. Could you detail, I guess looking  
19 broadly at the literature, what are the -- how have the methods  
20 changed over time?

21 A. Well, in the early studies before computers were developed  
22 and the computers had impact both on the recording of votes on  
23 the data gathering side and on the data analysis side, those  
24 folks had lots of pieces of paper and they were counting  
25 numbers. What they reported was how many votes were cast for a

1 candidate when his or her name was first versus when his or her  
2 name was in another position. That was about the best they  
3 could do.

4 Now, over the decades we have much more sophisticated  
5 statistics and we can more quickly process huge amounts of  
6 data. So recent publications are based on many more elections,  
7 many more candidates, but they also statistically control for  
8 potentially confounding factors to eliminate alternative  
9 explanations. And, more importantly, over the years we know  
10 that there are -- for analyzing any one dataset, there are  
11 multiple different types of statistics that could be used.

12 So just as when you walk into a hardware store, in the  
13 hammer section there are a bunch of different size and weight  
14 hammers, we also have variety of different statistics. And  
15 what we've seen in this literature recently is that it kind of  
16 doesn't matter which hammer you use, you're going to reach the  
17 same conclusion about the presence of name order effects. So  
18 we understand it all now much better than we did 30 or 40 years  
19 ago because of these advances.

20 Q. But it sounds like what you're saying is that those earlier  
21 studies are still valuable, right?

22 A. They're absolutely valuable because they show us the basic  
23 patterns of results that we can now add into a meta-analysis  
24 and allow us to reach an even stronger conclusion. And, again,  
25 the important point here is that we don't see these effects



1 showing up only in some states and not others. We don't see  
2 them showing up only in some types of elections and not others.  
3 We don't see them only showing up in some years and not others.  
4 We don't see them showing up only in some countries and not  
5 others. What we see is a pattern that's very, very general.  
6 The effects get bigger and smaller under conditions that we  
7 understand, but they're really prevalent.

8 Q. And, Dr. Krosnick, I'd like to turn now -- do you  
9 understand that the defendants in this case have retained Sean  
10 Trende as an expert?

11 A. I do understand that.

12 Q. Have you read and analyzed the report submitted by  
13 Mr. Trende in this case as it relates to your first report?

14 A. I read the section of his report, which is a few pages,  
15 pertaining to mine.

16 Q. Is there anything in Mr. Trende's report that would make  
17 you call into question any of your conclusions concerning the  
18 literature about position bias?

19 A. There is not.

20 Q. Do you recall Mr. Trende's conclusion, ultimately,  
21 regarding your literature review?

22 A. I believe in the end he said he agreed with my assessment  
23 of what the literature says.

24 Q. So do you -- do you agree with that conclusion of his?

25 A. I do.

1 Q. Thank you.

2 Now, Dr. Krosnick, of the studies you reviewed, do any  
3 focus solely on U.S. general elections?

4 A. Yes, many do.

5 Q. Is there a consensus in the literature regarding whether  
6 name order effects exist in U.S. general elections?

7 A. Yes, absolutely, there is.

8 Q. And in what states have name order effects been found in  
9 general elections?

10 A. Well, so far name order effects, primacy effects in  
11 particular, have been documented in Ohio, California, North  
12 Dakota, New Hampshire, Colorado, Michigan, and Florida, and  
13 maybe Illinois as well.

14 Q. And are you aware of any studies that have been published  
15 on name order effects in general elections in Arizona?

16 A. I am not.

17 Q. Does the lack of published studies on name order effects in  
18 Arizona make you question whether primacy effects exist here?

19 A. It really doesn't, because every time we look for these  
20 effects, we see them in elections. Arizona is a state that I  
21 have learned much about. My parents moved here more than ten  
22 years ago and I've spent a considerable amount of time here.  
23 Politics in Arizona has some unique features, but there is so  
24 much of politics in Arizona that's the same as we see  
25 everywhere else. Everybody is reading newspapers, watching

1 television, listening to the radio, talking to each other.  
2 Candidates campaign with the same methods. The substance of  
3 discussion about policies and performance are the same. There  
4 is every reason to believe that Arizona is typical of politics.

5 And, as I've described earlier, the notion of name  
6 order effects is a part of order effects more broadly. And, as  
7 far as I know, everybody in Arizona is human, and that,  
8 therefore, suggests that we should expect to see those effects  
9 here.

10 Q. And I would like to turn to your own personal work. Have  
11 you, yourself, in fact, published studies on name order effects  
12 in general elections in the United States?

13 A. I have.

14 Q. And what states have you published studies on?

15 A. So my peer-review publications to date involve Ohio  
16 elections, North Dakota elections, California elections, and  
17 the paper that's under review now is documenting these effects  
18 in New Hampshire.

19 Q. I'd like to just focus on two of the states you've studied.  
20 First, I believe you published the study in 1998 regarding Ohio  
21 elections?

22 A. I did.

23 Q. And what did that study find, just broadly?

24 A. I think we looked at about 108 elections in three counties  
25 there. And what we found was about the same pattern that I've

1 described to you earlier, just about 85 percent of candidates  
2 manifested more votes when listed first than when listed later  
3 on the ballot, a highly, highly significant pattern.

4 Q. And I believe you cite that study in your report that's  
5 Exhibit 1. Why do you think that primacy effects in Ohio are  
6 informative about primacy effects in Arizona?

7 A. Well, the nice thing about Ohio, from my point of view as a  
8 scientist, is that Ohio has a procedure whereby they rotate  
9 candidate name order from precinct to precinct. So that means  
10 in a race for president of the United States or governor, there  
11 are thousands of precincts across the state, and those are what  
12 we call the units of analysis.

13 And when name order is rotated by elections officials  
14 across those precincts, that gives me a very strong telescope  
15 with which to assess the presence of name order effects. And  
16 because they are so clearly prevalent there, they give me a lot  
17 of confidence that they are occurring here as well.

18 Q. And do you know, actually, whether Arizona has more low  
19 profile nonpartisan races than Ohio?

20 A. I do not.

21 Q. Well, let's -- let's assume Arizona does have more low  
22 profile nonpartisan races, would you expect higher or lower  
23 primacy effects in Arizona?

24 A. Well, the research that we've done suggests that in  
25 nonpartisan races and in low profile races, name order effects,

1 and in particular primacy effects, become more prevalent and  
2 stronger. And so if there are more of those races in Arizona  
3 than in Ohio, I would expect the prevalence and strength of  
4 primacy effects here to be even greater than what we saw in  
5 Ohio.

6 Q. Great. And I'd like to turn to California. You said you  
7 published -- I believe you published a study on California  
8 elections in 2014?

9 A. Yes.

10 Q. Do you recall the years of the elections of California that  
11 that study considered?

12 A. So that study was focused on statewide office elections in  
13 even numbered years between 1976 and 2004.

14 Q. And do you recall if those years included a number of  
15 elections with the substantial use of absentee ballots?

16 A. Yes. There were a substantial use, and the use of absentee  
17 ballots in California has been growing over the years.

18 Q. Did you have any hypothesis before that study about whether  
19 absentee use would increase or decrease the prevalence of name  
20 order effects?

21 A. I did. When we did that study, I speculated in advance  
22 that perhaps it might be the case that absentee voters might  
23 show weaker name order effects. And I can explain why.

24 The notion here is that when somebody is standing in  
25 line waiting at a voting booth to get in, cast their vote, get

1 to work, people behind them putting some pressure on to get out  
2 of there quickly, if they're feeling conflicted about  
3 candidates or uncertain about how to vote, in that situation  
4 maybe that nudge happens in a way that has more consequences.

5           Whereas, when somebody is sitting at home filling out  
6 an absentee ballot, and there is no line and there is no rush,  
7 one could imagine a situation where those voters take their  
8 time and they're less nudgeable.

9 Q. Now, you actually looked at the data underlying that  
10 hypothesis. And what did the data show?

11 A. I did test that hypothesis, and it turned out I was wrong.  
12 That, in fact, in the paper that we published in 2014, there is  
13 a regression analysis that tests the impact of the presence of  
14 absentee ballots and variety of other, what we call, moderator  
15 variables. And, as it turns out in that analysis, the presence  
16 of absentee ballots had no impact on the size of name order  
17 effects.

18 Q. So, in fact, the conclusion of that study, which was cited  
19 in Mr. Trende's report, was that substantial absentee voting  
20 actually does not weaken name order effects?

21 A. Correct.

22 Q. And why do you think that is?

23 A. Well, it appears that in those situations when people are  
24 voting absentee, that they are also lacking information,  
25 feeling ambivalent. Extra time doesn't make all of that go

1 away. And it's the case that a small number of voters --  
2 remember, we're not talking about huge numbers of people here.  
3 We're talking about 2, 3, 4 percent on average, as large as 5  
4 or 6 percent at the maximum -- end up being nudged.

5 Q. Okay. And, Dr. Krosnick, just to conclude one more time.  
6 Do you think it's likely primacy effects have impacted Arizona  
7 elections?

8 A. Extremely likely.

9 Q. And why?

10 A. Because in situations like this with a very sizeable  
11 scientific literature with more than a hundred scholars  
12 studying the phenomenon in U.S. elections and abroad, when they  
13 have studied more than a thousand tests of this phenomenon, the  
14 prevalence of the effect is overwhelmingly frequent. And, as I  
15 say, it's a part of human nature, and so therefore it's  
16 extremely likely to be happening, has happened in the past, and  
17 will happen in Arizona elections in the future.

18 Q. Great. Thank you, Dr. Krosnick.

19 MR. GEISE: No further questions, Your Honor.

20 THE WITNESS: Thank you.

21 THE COURT: Ms. O'Grady.

22 CROSS-EXAMINATION

23 BY MS. O'GRADY:

24 Q. Good morning, Dr. Krosnick.

25 A. Good morning.

1 Q. Now, you acknowledge that none of the studies you reviewed  
2 analyze the effect of ballot order in Arizona, correct?

3 A. Correct.

4 Q. And the studies that you included here include studies of  
5 nonpartisan elections, correct, in other jurisdictions?

6 A. Some of the elections that have been studied were  
7 nonpartisan elections.

8 Q. And primary elections, correct?

9 A. Some of the them were primary, yes.

10 Q. So they weren't all general elections, correct?

11 A. That's correct.

12 Q. And none of the studies that you cite show a ballot order  
13 effect in every election; is that correct?

14 A. I can neither agree nor disagree. I would have to look at  
15 the papers to tell you the answer to that question.

16 Q. So you don't know the answer to that?

17 A. Right. If you want to give me some papers, I can answer  
18 for you, but I don't have individual paper, by paper memorized.

19 Q. Okay. Well, let's maybe -- the study of Ohio, you  
20 referenced that study. Do you remember that study?

21 A. Well, there are multiple studies of Ohio.

22 Q. Let's talk about the 1992 elections, the study of the 1992  
23 elections.

24 A. Thank you. Yeah.

25 Q. Okay. And isn't it true that less than half of the races



1 studied in that showed any statistically significant name order  
2 effect?

3 A. So I described earlier that when you look at one race at a  
4 time, that's like using a small microscope with dirt on the  
5 lens. And in that case, 48 -- sorry, I'll finish -- 48 percent  
6 of the candidates who we examined in those cases manifested  
7 statistically significant trends toward primacy, but nearly  
8 90 percent manifested differences in the direction of primacy,  
9 showing the overwhelming prevalence of those effects.

10 Q. Less than half was statistically significant?

11 A. As I said, when --

12 Q. Do you agree?

13 A. -- when analyzed individually, right, that's correct.

14 Q. And not all the studies that you reference in your report  
15 were peer-reviewed published studies, correct?

16 A. You'd have to remind me if there are some that are not.

17 Q. Well, for example, there is an undergraduate thesis that  
18 you cite?

19 A. Thank you. Yes, uh-huh.

20 Q. So that was not peer-reviewed, correct?

21 A. Not exactly. Undergraduate theses at Stanford are reviewed  
22 by faculty.

23 Q. Well, and that was the study of the Ohio 2004 election,  
24 correct?

25 A. Correct.

1 Q. And the Vermont House study, that was also an unpublished  
2 study; is that correct?

3 A. I'm not remembering where that's published, you could  
4 remind me. I mean, it's someplace, right, it's -- I don't  
5 remember where.

6 Q. Let's look at page 17 of your report, footnote 27,  
7 unpublished manuscript.

8 A. Right, but it's described somewhere that is published.

9 Q. But not peer-reviewed?

10 A. That's what I'm telling you I'm not sure of. I think it  
11 may have been that the outlet through which I learned about  
12 that work was subjected to peer review.

13 Q. And the New Hampshire --

14 THE COURT: Ms. O'Grady, let me just back up. I'm  
15 lost as to where the report that you were referring to, the --  
16 is that the 2004 -- where is it on the exhibit?

17 MS. O'GRADY: Yes. I'm looking at his -- his --  
18 Dr. Krosnick's report.

19 THE COURT: Yes, Exhibit 1.

20 MS. O'GRADY: And on page 17, and footnote 27.

21 THE COURT: All right. And let me just, once again,  
22 say that on my exhibit --

23 MS. O'GRADY: Oh.

24 THE COURT: -- it is on page 18 --

25 MS. O'GRADY: Thank you, Your Honor.

1 THE COURT: -- of Document 15-2, so you'll just have  
2 to bear with me as I keep up.

3 MS. O'GRADY: Thank you, Your Honor.

4 BY MS. O'GRADY:

5 Q. And the New Hampshire 2016 report that you reference in  
6 your study --

7 A. Right, that's --

8 Q. -- that's also an un -- you describe it in your report as  
9 an unpublished report being drafted, correct?

10 A. That's the work that's under review now at a journal.

11 Q. And so the only studies of general elections -- tell me if  
12 this is correct -- Ohio 1992 and 2000, California, North  
13 Dakota, is that correct, in published studies?

14 A. I would have to review the studies to answer your question.

15 Q. Can you think of any others?

16 A. I am happy to go through here, if you would like, you know,  
17 I would need to look at --

18 Q. If you need to refer back to your report, that's fine.

19 A. I'll see if I can determine it from there.

20 Q. Just for ease of reference, your general election studies  
21 are on -- begin at page 12.

22 A. Could you just repeat the list of states that you  
23 mentioned?

24 Q. I mentioned Ohio in 1992 and 2000, California, North  
25 Dakota.

1 A. Thanks. So if you would like to turn in my report -- I'm  
2 going to use the page numbers in the lower right-hand corner  
3 that, I think, Your Honor, you were relying on -- page 17 of  
4 148.

5 So in the bottom paragraph of the main text on that  
6 page, the first sentence says, Brockington 2003 found evidence  
7 of primacy effects in lower profile municipal elections as  
8 well, combining across city council elections in Peoria,  
9 Illinois. So we would add Illinois to your list.

10 Q. And, Illinois, you're talking about lower profile municipal  
11 elections. Let's talk about things that have statewide general  
12 elections. That's what I'm focusing on.

13 A. Ah, thank you. So the term -- we -- when we use the term  
14 general elections, that is the category other than primary.

15 Q. Okay.

16 A. So we have primaries and general elections.

17 Q. I'm interested in partisan general elections.

18 A. So that would be these --

19 Q. Well, let's use statewide, if that's an additional  
20 clarification. I want to get elections that are similar to  
21 what we're considering in this case. Okay?

22 A. I see. Okay.

23 So at the top of page 18 of 148, Stuart 2008 analyzed  
24 races for the Vermont House of Representatives. You would say,  
25 even though everyone in the State of Vermont is represented in

1 the House, you would prefer not to call those statewide races.

2 Is that the way you're thinking of it?

3 Q. So that's another -- that's -- you would count Vermont on  
4 the list of where there has been a study?

5 A. Sorry, I'm just trying to understand what --

6 Q. Go ahead.

7 A. -- what category you're asking me --

8 Q. Go ahead. Any other states?

9 A. Okay.

10 THE COURT: I think we're trying to identify the  
11 definition of what the two of you are referring to as a general  
12 election.

13 THE WITNESS: Right. So --

14 BY MS. O'GRADY:

15 Q. Partisan general election. And I -- I included statewide  
16 because that's been at issue in this case, but I -- but I see  
17 your reference to Vermont.

18 A. Yeah. So why don't I just answer the question the way I  
19 interpret it, and then we can clarify in a moment.

20 So, also on page 18 of 148, there is a description of  
21 findings of general elections in Colorado and Michigan. So if  
22 you wish to narrow down the focus only to statewide offices,  
23 that I don't know from memory. I would have to look back at  
24 the studies.

25 Q. And isn't it true that Colorado there is a study that found

1 no primacy effect; is that correct?

2 A. Yes, there is.

3 Q. And isn't it true there also is a published study by  
4 Dr. Alvarez in California that found no primacy effect,  
5 correct?

6 A. Are you speaking of the study described at the top of  
7 page 19 of 148 of Exhibit 1, or whatever this is?

8 Exhibit 1, yeah.

9 Q. Yes.

10 A. Okay. Thank you.

11 So what it says there is that the authors did not  
12 report tests of name order effects for Republican candidates,  
13 and they only described tests for Democratic candidates. And  
14 their investigation yielded evidence of 32 statistically  
15 significant primacy effects. So I would say your  
16 characterization was not correct.

17 Q. Well, haven't you characterized the study in that manner,  
18 whether there -- as having a report that is not observed  
19 significant name order effects?

20 A. I -- I'm not sure what you're referring to. This  
21 description here is what I'm here to testify about today.

22 Q. I'm looking at your study from 2014, The Impact of  
23 Candidate Name Order on Election Outcomes in North Dakota.  
24 Would you like me to refresh your recollection?

25 A. I'm happy to look at the paper, if you'd like to give it to

1 me.

2 Q. I can pull that up, impeachment Exhibit 13.

3 And let's go to table 1. And I'm looking at Alvarez  
4 2006, all statewide races. And then the column that says, were  
5 significant name order effects observed, and there it says they  
6 were not observed.

7 A. Right. So I've described to you here in my report an  
8 accurate description of what that article shows.

9 Q. Okay.

10 A. That's -- when I say here, I mean Exhibit 1 in this case.

11 Q. And you also omitted studies that didn't have -- didn't  
12 report proper statistical significance tests, correct, in  
13 this -- in this table? That's what your note indicates,  
14 correct?

15 A. That's what the footnote says, correct.

16 Q. And so as of 2014, these were the existing ballot order  
17 studies that you acknowledge in the state of the literature,  
18 correct?

19 A. These are some of the studies.

20 Q. But those were the only ones you chose to cite in this  
21 public peer-reviewed article, correct?

22 A. Those are the ones that appear in this table, correct.

23 Q. And didn't you see a need for more studies of general  
24 elections in the United States?

25 A. I'm sorry, you need to be more specific in your question.

1 Q. Didn't you see a need for more studies of general elections  
2 to add to this literature?

3 A. I'm sorry, when are you referring to?

4 Q. In this published -- in 2014.

5 A. I see. Yeah. So the idea here of scientific investigation  
6 is that we are always interested in collecting more data.

7 There is no time at which we decide we don't need more data.

8 And we reason -- the reason we are always supportive of more

9 data collection is because the more we have, the more we can

10 understand the conditions under which effects are larger,

11 conditions under which effects are smaller, conditions under

12 which effects don't occur at all. And so it's always helpful

13 to have more data to evolve our theories.

14 Q. If we could look at your article here that you published.

15 And let's go to section 1.2, the need for replication, and that

16 opening paragraph, and just that last -- let's go to the next

17 page, if we may. And, again, the opening paragraph at the top

18 of the page. And, specifically, the last sentence there:

19 Therefore, in order to have confidence in the generalized

20 ability of the name order effect evidence from other states

21 that employ other name order assignment would be desirable.

22 So you saw a need for additional research back in

23 2014, correct?

24 A. I see that same need today.

25 MS. O'GRADY: I'd like to move to admit this article



1 which we had marked as impeachment Exhibit 13.

2 BY MS. O'GRADY:

3 Q. And you mentioned one study --

4 THE COURT: Well, wait. Wait.

5 MS. O'GRADY: I'm sorry.

6 THE COURT: Is there an objection?

7 MR. GEISE: No objection, Your Honor.

8 THE COURT: Yes. Exhibit 13 is admitted.

9 BY MS. O'GRADY:

10 Q. And in direct you mentioned one study of the impact of  
11 absentee voting on ballot order issues.

12 A. I described how in our 2014 publication we examined the  
13 impact of absentee voting, correct.

14 Q. And which 2014 study are you referring to?

15 A. First author of that paper is Pasek, P-A-S-E-K.

16 Q. Are you aware of any other studies of the impact of mail-in  
17 voting on ballot order effect?

18 A. There may, I don't -- if there was work of that sort, we  
19 may have cited it in that 2014 paper. You could hand me that  
20 paper, if you like, but I'm not remembering other studies at  
21 the moment.

22 Q. So you mentioned 1,061 studies of name order, and you're  
23 only aware of one that studies the impact of absentee ballots,  
24 correct?

25 A. That's correct.

1 Q. And nothing that studies Arizona, correct?

2 A. Correct.

3 Q. And do you acknowledge that there is less impact of name  
4 order in general elections than in other types of -- partisan  
5 general elections, where the partisan identifier is on the  
6 ballot?

7 A. No. I wouldn't -- I wouldn't acknowledge that.

8 Q. You would not acknowledge that the -- there is less of a  
9 ballot order effect observed in those types of elections?

10 A. No.

11 Q. Page 39 of your report.

12 A. Is that 39 of 148 on the right-hand side?

13 Q. The ballot order is more likely to impact races where  
14 candidates do not have party affiliations, correct?

15 A. Right. You're not -- yeah. I think there is some  
16 confusion here, so let's talk about the way you characterized  
17 the statement earlier versus now.

18 So earlier you said are effects weaker in partisan  
19 races than nonpartisan races, I think; is that right? And  
20 what --

21 THE COURT: The question was: Is there less of an  
22 impact?

23 THE WITNESS: Right.

24 THE COURT: Okay.

25 THE WITNESS: And so that -- what's important here is

1 that the way you phrased that is a general statement: All  
2 partisan races versus all nonpartisan races. What we study is  
3 the impact of partisanship being listed on the ballot,  
4 controlling for other features of the races. And the reason  
5 for that is because there are other factors, for example, the  
6 amount of publicity that a race has received in the news that  
7 makes voters more educated and reduces the strength of name  
8 order effects. The amount of roll off of low information  
9 voters in the race and so on.

10 So in, for example, that 2014 paper that we're  
11 discussing, regression analysis is conducted in order to  
12 isolate the impact. And so the statement that I have made, and  
13 that I feel very comfortable making, is that listing the party  
14 affiliation of the candidates on the ballot, all other things  
15 equal, reduces the size of the primacy effects. And since you  
16 left that phrase "all other things equal" out of your question,  
17 I could not agree with you.

18 But my findings do indicate that, all other things  
19 held constant across races, that adding the partisan  
20 affiliations of the candidates next to their names on the  
21 ballot does weaken the size of primacy effects. It does not  
22 eliminate them, because we have many high visibility, high  
23 profile races, such as the race between Donald Trump and  
24 Hillary Clinton for president in 2016, where we saw a 1.5  
25 percentage point primacy effect. So it isn't the case that

1 listing party affiliations eliminates primacy effects, it just  
2 weakens them on average.

3 BY MS. O'GRADY:

4 Q. You have no studies, again, of the impact in Arizona,  
5 correct?

6 A. Yes, that's correct.

7 MS. O'GRADY: Thank you.

8 THE WITNESS: Thank you.

9 MR. GEISE: Thank you, Your Honor. Just very brief  
10 redirect.

11 REDIRECT EXAMINATION

12 BY MR. GEISE:

13 Q. Dr. Krosnick, you know, the DNC is a plaintiff in this  
14 case? Are you aware of that?

15 A. I was -- yes. I am aware of that, yeah.

16 Q. Does, just from your knowledge, does the DNC only care  
17 about statewide races?

18 A. I have no knowledge one way or another, but I assume that  
19 they care about all races.

20 Q. All races where Democrats run, would you assume?

21 A. Seems reasonable.

22 Q. All right. Now, I would like to actually turn -- I believe  
23 it was -- and if I could pull it up -- Exhibit 10 -- it's  
24 marked as Exhibit 107, your study on North Dakota, and just  
25 pull up -- I believe you were shown table 1.

1           Would there be a way to put that on the screen? If  
2 not, I can hand it to you.

3           And I believe the Court has a copy too.

4           If you look at table 1 on Exhibit 107.

5           THE COURT: Well, I don't --

6           THE WITNESS: Do you want this copy?

7           MR. GEISE: I'm sorry, Your Honor, it's an impeachment  
8 copy so that's the -- it's an impeachment exhibit, so that's  
9 the only one I have.

10 BY MR. GEISE:

11 Q. The vast majority -- I don't know, do you have it in front  
12 of you, Dr. Krosnick?

13 A. No, but go ahead and ask the question.

14 Q. The vast majority of the studies on that table show  
15 observed position bias effects, don't they?

16 A. Yes, they do. I remember that.

17 Q. Are you, in fact -- are you -- you are aware of studies  
18 that have found no position bias effects, right?

19 A. Yes.

20 Q. Does that make you more or less confident in the existence  
21 of candidate name order effects?

22 A. Well, actually, the consistency of findings across the  
23 literature in general, being accompanied by a small number of  
24 exceptions, is exactly what we expect to see in a solid  
25 scientific literature. In other words, if every study and

1 every test always showed exactly the same thing over and over  
2 again, that's not what normal science looks like.

3           Whereas, when we see the overwhelming prevalence, with  
4 some exceptions, as we see here, that's the way normal  
5 scientific literature looks. And bear in mind, of course, that  
6 there are -- there is reason to believe that when individual  
7 studies are done, we know that the size of a name order effect  
8 in a particular race between you and me, that size of that  
9 effect, even though it's extremely likely to happen, will be  
10 bigger or smaller in some cases. Depending upon  
11 characteristics of the race, characteristics of the voters, the  
12 publicity of the candidates, the design of the ballot, and all  
13 of the factors that I outlined in my report.

14           And so the fact that there would be a few examples in  
15 which there is no name order effect, that is what we would  
16 expect to see in the literature where we have a variety of what  
17 we call moderators making the effect bigger and smaller.

18 Q. Are you aware of any examples of, I would say relatively  
19 commonly accepted scientific knowledge, where there are studies  
20 that find no effect?

21 A. Absolutely. I mean, so one -- most good literatures are  
22 like that. One prominent example is the research on cigarette  
23 smoking. Starting in the 1960s, the scientific community came  
24 together through a report of the U.S. Surgeon General telling  
25 the United States and the rest of the world that scientists had

1 concluded that cigarette smoking caused cancer and other health  
2 problems, even though no experiment had ever been done randomly  
3 assigning some people to smoke and some people not to smoke,  
4 which would be the strongest scientific design.

5           So through observational data of many times,  
6 understanding the physiological mechanisms, just as we  
7 understand the cognitive mechanisms here, that literature  
8 reached a consensus that is so widely accepted that, not only  
9 is it accepted among medical professionals, but it's accepted  
10 among legislators, because public policy now reflects the  
11 belief that public smoking is dangerous to public health.

12           And if you look at that literature, there are  
13 certainly a few studies that failed to find the relationship,  
14 even though we know it's real and prevalent.

15 Q. Just to turn to absentee voting. So the only study you're  
16 aware of that examined the effect of absentee voting on name  
17 order found that it had no impact?

18 A. That's the only study I'm remembering today.

19 Q. And counsel didn't give you any other study other than --  
20 did she?

21 A. No, I have -- that's -- I have not been given any others to  
22 consider.

23 MR. GEISE: All right. Thank you, Your Honor.

24 Thank you, Dr. Krosnick. No further questions.

25 THE COURT: Thank you, sir. You may step down.

1 THE WITNESS: Thank you.

2 THE COURT: Do you have any other witnesses?

3 MS. KHANNA: No further witnesses, Your Honor.

4 THE COURT: All right. Why don't we go ahead and take  
5 our -- a brief break. We'll stand in recess for about  
6 15 minutes.

7 And then let me just inquire, is it the -- the only  
8 witness that we have is Dr. Trende; is that right?

9 MS. FRIDAY: That's correct, Your Honor.

10 THE COURT: Okay. All right. And so I think we're  
11 within our time frame, if you all agree. But, in any event,  
12 we'll be in recess for 15 minutes, and so we can reconvene  
13 then. Thank you.

14 (Recess, 10:21 a.m. - 10:38 a.m.)

15 THE COURT: Ms. O'Grady, you may call your witness.

16 MS. O'GRADY: We call Mr. Sean Trende, and Emma  
17 Cone-Roddy is going to handle the examination.

18 (The witness was duly sworn.)

19 COURTROOM DEPUTY: Please state your full name and  
20 spell your last name.

21 THE WITNESS: Sean Patrick Trende, S-E-A-N,  
22 P-A-T-R-I-C-K, T-R-E-N-D-E.

23 THE COURT: Ms. Cone-Roddy, you may begin.  
24  
25



DIRECT EXAMINATION

1  
2 BY MS. CONE-RODDY:

3 Q. Mr. Trende, can you just state your name again for the  
4 record.

5 A. Sean Patrick Trende.

6 Q. Did you prepare an expert report in this case, Mr. Trende?

7 A. I did.

8 MS. CONE-RODDY: Your Honor, may I approach? This is  
9 just a copy.

10 THE COURT: Yes.

11 MS. CONE-RODDY: Mr. Trende's expert report and the  
12 two other expert reports.

13 BY MS. CONE-RODDY:

14 Q. Mr. Trende --

15 THE COURT: I'm sorry, did you say and the other two  
16 expert reports?

17 MS. CONE-RODDY: Yes, the two reports that he was  
18 rebutting, just so he can reference them.

19 THE COURT: All right. Thank you.

20 BY MS. CONE-RODDY:

21 Q. Mr. Trende, can you identify Exhibit 101 for me?

22 A. This is the expert report of Sean P. Trende.

23 Q. And can you turn to page 48 of that exhibit.

24 A. Yes.

25 Q. Is this a current copy of your CV?

1 A. It is.

2 Q. Is it a complete and accurate summary of your educational  
3 and professional experience?

4 A. Yes.

5 Q. Can you briefly summarize your educational background for  
6 me.

7 A. So I received a bachelor's from Yale University in 1995,  
8 with a double major in history and political science. In 2000  
9 -- or 1998 I went to law school at Duke, and I graduated with a  
10 J.D.

11 At the same time, Duke offered a program where  
12 students could -- law students could earn a master's degree at  
13 the same time, with a little bit of extra coursework, so I  
14 earned a master's degree in political science from Duke.

15 I went back to graduate school in 2016, and I have  
16 since completed a master's degree in applied statistics at, I  
17 will have to say, The Ohio State University, and I'm expecting  
18 a Ph.D. in political science either next year or the year  
19 after.

20 Q. In your applied statistics degree at OSU, can you just tell  
21 me what that is?

22 A. Yeah. So the master's of applied statistics program is an  
23 opportunity for students to take courses within the Department  
24 of Statistics. It requires about 30, I think 33 credit hours  
25 of statistics classes in the Department of Statistics. I think

1 I ended up taking in excess of 40.

2 And the classes range from a couple of classes on  
3 statistical theory. There is an entire class dedicated to  
4 regression analysis that we have to take. I took a class on  
5 machine learning, a class on logistic regression analysis, some  
6 classes on design of experiments and nonparametric statistical  
7 work, a variety of other statistical classes.

8 Q. For your political science degree, can you describe a  
9 little bit to me about what that degree is, the current one?

10 A. So this is a Ph.D. in political science. You're required  
11 to take 80 credit hours in political science, although the bulk  
12 of that will be your dissertation. You get course credit for  
13 doing dissertation research and writing. I completed my  
14 coursework for my political science degree in my second year.

15 Q. Can you turn to page 2 of your report.

16 In paragraph 10 you mention that you have passed  
17 comprehensive examinations. Can you just tell me what that  
18 means?

19 A. So comprehensive examinations are examinations that -- that  
20 you have to take. So I took them for the -- they're required  
21 for the master's degree in applied statistics, so I took a set  
22 of just pure statistics comprehensive exams for that degree. I  
23 also took comprehensive exams for my doctoral candidacy.  
24 You're required to take them at the end of your coursework and  
25 that's what allows you to proceed to the dissertation phase.

1 THE COURT: I'm going to stop you there, because my  
2 exhibit notebook is not the same. I don't have this page. And  
3 so let me just see what it is you're looking at.

4 We were looking at, originally, his CV at  
5 Document 30-1, which is page 48 --

6 MS. CONE-RODDY: Yes, Your Honor.

7 THE COURT: -- of your exhibit book. The next page --

8 MS. CONE-RODDY: Oh.

9 THE COURT: -- says real clear politics column. The  
10 next page says publications from the last ten years. So I  
11 don't have whatever it is that --

12 MS. CONE-RODDY: Sorry, Your Honor. I wanted to go  
13 back to page 2 of his report.

14 THE COURT: Page 2 of the report. Okay.

15 MS. CONE-RODDY: I apologize for not being clear about  
16 that.

17 THE COURT: Okay. There -- okay. I'm with you now.

18 Okay. You can continue.

19 BY MS. CONE-RODDY:

20 Q. Mr. Trende, are you required to do any teaching for your  
21 Ph.D. program?

22 A. Yes. I was asked to begin teaching in the third year of my  
23 program, which is unusual, but they had a need for it.

24 Q. What classes have you taught?

25 A. So, actually, before I even began my coursework, my second

1 year as a, at the time, a doctoral student, I was asked to  
2 teach a class on mass media in American politics at Ohio  
3 Wesleyan University. But then at Ohio State I taught the large  
4 intro to American politics class for three semesters. This  
5 semester I'm teaching voter turnout and participation.

6 Q. Can you tell me a little bit about the voter turnout and  
7 participation class?

8 A. So the voter turnout and participation class is a class  
9 that hasn't been taught in the last six years that I'm  
10 resurrecting. I have chosen to divide it into two halves. The  
11 first half is a theoretical half which talks about, you know,  
12 some of the peer-reviewed literature on what causes people to  
13 decide to vote and not to vote, what factors influence vote  
14 choice. The second half of the class focuses on, kind of,  
15 modern issues and debates in political science about voter  
16 turnout and behavior.

17 Q. Does any of your teaching involved statistical analysis?

18 A. Yes. So for undergrads we tend to try to keep things at a  
19 higher level, but for the voter turnout and participation class  
20 and the mass media class at Ohio Wesleyan, I think higher level  
21 classes should at least be taught from the peer-reviewed  
22 literature and not from a textbook, and so we do use the  
23 peer-reviewed literature. And I try to explain what's going on  
24 in the literature at a level that the undergrads can  
25 understand.

1 Q. Are you a full-time student currently?

2 A. Yes.

3 Q. Do you do anything else besides your coursework?

4 A. Yes. I'm also the senior elections analyst at Real Clear  
5 Politics.

6 Q. What does -- what does that entail?

7 A. So being the senior elections analyst at Real Clear  
8 Politics entails following U.S. elections, commenting on them  
9 and trying to explain what's going on with elections at a level  
10 that readers can understand.

11 Q. Does that work require you to use any statistical analysis?

12 A. Yes, all the time. Regression analysis is the basic  
13 toolkit of anyone trying to do large scale understanding of  
14 datasets. When I'm trying to build a statistical model, if I'm  
15 trying to explain what's going on at a high level and the data  
16 are available, absolutely.

17 Q. If you turn to page 3 of your report, it mentions that  
18 you're the author of a book called, *The Lost Majority, Why the  
19 Future of Government is Up for Grabs and Who Will Take It*.  
20 What can you -- can you just tell me what that book is about,  
21 generally?

22 A. So that book talks about political coalitions in the United  
23 States and how they've changed over time. So I took a look  
24 from the 1920s to the present as to how political coalitions  
25 have shifted, look at how -- how demographics have interacted

1 with elections in the United States, and make some statements  
2 about what -- whether realignment theory is a good theory or  
3 not.

4 Q. Does -- did that book involve statistical analysis?

5 A. It does. I use regression analyses throughout it.

6 Q. Mr. Trende, if you turn to page 5 of your report. You  
7 start here talking about some of your previous expert work.

8 Have you been admitted as an expert before to testify?

9 A. Yes.

10 Q. Have you testified about statistical analysis when you've  
11 been admitted?

12 A. Yes.

13 Q. Have you filed other reports in cases where you haven't  
14 testified?

15 A. Yes. I've -- there have been cases where I filed a report  
16 but wasn't called.

17 Q. Did those reports involve statistical analysis of  
18 elections?

19 A. Yes.

20 MS. CONE-RODDY: Your Honor, I would like to proffer  
21 Mr. Trende as an expert in the statistical analysis of  
22 elections.

23 MS. FROST: Your Honor, we object and we have a  
24 pending Daubert motion. At this point, normally I would ask to  
25 do voir dire, but given the timing, if Your Honor prefers, I

1 can build it into the cross if you want to reserve, and we can  
2 argue the motion next week. It's entirely up to you.

3 THE COURT: That's fine. That's how I would like to  
4 proceed in that way. It will save a little bit more time, and  
5 then you can -- we can address the subject of your motion next  
6 week.

7 MS. FROST: Thank you, Your Honor.

8 THE COURT: All right. You may proceed. I will  
9 reserve the ruling.

10 But I guess I -- just to follow up, and just because  
11 it's on my mind, you last testified here that you have authored  
12 reports that were introduced in court cases, and I think you  
13 said you testified; is that correct?

14 THE WITNESS: In some cases I testified, in other  
15 cases either the case settled or they decided not to call me as  
16 an expert witness at trial.

17 THE COURT: And do you recall when the last case you  
18 testified in was, or what it was, if you recall?

19 THE WITNESS: It would have either been the political  
20 gerrymandering case in North Carolina, the Rucho case, or the  
21 Feldman case here in Arizona.

22 THE COURT: Remind me of the year of the Rucho case.

23 THE WITNESS: It was recently decided at the Supreme  
24 Court, but I don't -- I, honestly, don't remember the year that  
25 I testified.



1 THE COURT: Okay. All right. That's fine. Thank  
2 you.

3 And the Feldman case here?

4 THE WITNESS: Yes, Your Honor.

5 THE COURT: And that was early 2000, wasn't it, or am  
6 I thinking of a different case?

7 THE WITNESS: I think the Feldman case was -- the  
8 trial was 2017 or 2018, 2017.

9 THE COURT: Okay. All right. I was thinking of a  
10 different case. All right. Thank you.

11 BY MS. CONE-RODDY:

12 Q. Mr. Trende, in the interest of time, I don't want to walk  
13 through your entire report, I just want to focus on a few  
14 things.

15 Could you turn to page 13 of your report. And you  
16 start paragraph 41 by saying, this leads to the second problem  
17 with the Rodden report. What is the problem you're talking  
18 about here?

19 A. So here we're talking about the second, kind of, cluster,  
20 so to speak, of problems that I identified with the Rodden  
21 report, which is the failure to take account of the clustering  
22 or lack of independence of the observations.

23 Q. What does it mean for an observation to be independent?

24 A. So you can think of it in terms of coin tosses. This can  
25 illustrate temporal independence and spatial independence. If

1 I flip a coin once and it comes up heads, it tells you  
2 absolutely nothing about whether the next coin toss is going to  
3 come up heads or tails. Those are independent. And that's a  
4 temporal independence that I'm describing.

5 If I toss a coin and it comes up heads and at the same  
6 time you toss a coin and it comes up -- if I toss the coin and  
7 it comes up heads, it tells me nothing about whether the next  
8 coin toss is going to come up heads or tails, and that's  
9 spatial independence.

10 And, ideally, when you're doing OLS regression  
11 analysis, you want all of your observations to be independent  
12 of each other. Knowing the value in one observation shouldn't  
13 tell you anything about the outcome in your other observations.

14 Q. Why do you want that?

15 A. Because it's an assumption of OLS regression for  
16 mathematical reasons.

17 Q. What happens if that assumption isn't met?

18 A. If your assumption isn't met, and this is mentioned in some  
19 of the articles that I cite, it causes you to find things are  
20 significant when they are not significant.

21 Q. What are the observations we're talking about when we talk  
22 about Dr. Rodden's analysis?

23 A. So in Dr. Rodden's analysis, the observations are the  
24 elections observed at the county level for the variety of  
25 offices and years that he explores.

1 Q. And are election results in his analysis independent of  
2 each other?

3 A. I don't believe so. I think if you go to -- well, I don't  
4 believe so.

5 Q. Why not?

6 MS. CONE-RODDY: And could we just put up page 10 of  
7 Exhibit 3, which is Dr. Rodden's report.

8 I'm sorry, page 11.

9 THE WITNESS: Okay.

10 BY MS. CONE-RODDY:

11 Q. Can you identify this table for me?

12 A. Yes. This is figure 1 of Dr. Rodden's first report.

13 Q. Does this figure -- what does this figure make you think  
14 about? Does this figure make you think about anything about  
15 independence?

16 A. No. So if the elections and the application of the  
17 treatment were independent of each other, you would expect to  
18 see kind of a patchwork of blue and red here. But as  
19 Dr. Rodden suggests on the next page, in -- in a lot of these  
20 counties there is little or no variation in how -- in how these  
21 counties present.

22 So you can see in Apache County, the treatment is  
23 always Democrats going first, because the Democrat has always  
24 carried the gubernatorial race in the previous election. And  
25 so these aren't independent. You can see other clusters, like

1 Coconino only voted for the Republican in one instance, same  
2 with Santa Cruz. And there are some counties that the opposite  
3 is true, they almost always vote for the Republican.

4 MS. CONE-RODDY: Could we go to page 15 of  
5 Dr. Rodden's report. There is a table 3 there, so one page  
6 back, or map 1. I'm sorry.

7 BY MS. CONE-RODDY:

8 Q. Does this -- what does this -- does this map lead you to  
9 draw any conclusions about the independence of election  
10 results?

11 A. So, again, if you had spatial independence of the  
12 elections, you would expect to have a patchwork of blue, red,  
13 and purple, but you can see a cluster of very red counties in  
14 the northwestern and the western portion of the state. You see  
15 the strip of purple counties running down the center. So it's  
16 reasonable to try to account for that spatial correlation,  
17 especially in neighboring counties.

18 Q. Are election results independent within a county?

19 A. No. So if I tell you what the -- if I -- even by telling  
20 you that you're in Apache County, you probably reasonably  
21 narrowed the possible outcomes for Republicans to being below  
22 50 percent, because it's extremely unusual for a Republican  
23 candidate to carry Apache County. And there are counties where  
24 the opposite, at least in recent years, are true.

25 Q. Are there ways in statistical analysis you can account for

1 observations not being independent?

2 A. There is a variety of ways to try to account for those.

3 Q. Did Dr. Rodden do anything to account for the relationship  
4 between election counties in a single election -- elections in  
5 a single county in a single election?

6 A. He did not.

7 Q. Did Dr. Rodden do anything to account for the relationships  
8 between county election results over time?

9 A. He did not.

10 Q. Did Dr. Rodden do anything to account for the relationship  
11 between election results between two counties?

12 A. He did not.

13 Q. In your opinion, by not doing anything to account for these  
14 relationships, what does that mean for Dr. Rodden's report?

15 A. It renders the results unreliable, because he is going to  
16 tend to produce standard errors that are too small. Put in,  
17 kind of, plain English, that means he's going to find that  
18 things are statistically significant when they are not, because  
19 his regression analysis is going to believe it has more  
20 independent observations than it actually has.

21 Q. Are you aware of any academic literature that discusses  
22 this problem in the elections context?

23 A. There -- there is a pretty robust discussion of this in a  
24 variety of contexts, but, in particular, the discussion about  
25 clustering your robust standard errors.

1 Q. Can you name any of those articles for me?

2 A. So one article that I actually appended as an exhibit to my  
3 report, because I think it's fairly -- a fairly important  
4 statement, is the Robert Erikson and Lorraine Minnite article  
5 from 2009 modeling problems in the voter identification, voter  
6 turnout debate.

7 Q. What did that article have to say about clustering?

8 A. So that article is written in the context of the debate  
9 over the effect of voter identification laws. And there are  
10 political scientists who are taking current population survey  
11 data of individuals, running their regression analyses and  
12 saying they had 60,000 observations.

13 And what Erikson and Minnite say is that that isn't  
14 true. You really only have 50 observations since the treatment  
15 isn't applied at the individual level. It's not like each  
16 individual person randomly gets subjected to a photographic ID  
17 law or not. And they say in that situation, since the  
18 treatment is applied at a higher level at the states, you have  
19 to cluster your standard error by states or your findings will  
20 be incorrect.

21 Q. Just for me, can you just explain what a treatment is?

22 A. Yes. So treatment is a way of thinking -- a way of -- it's  
23 a term of art for just the thing we're interested in.

24 Q. What is the treatment effect here in Dr. Rodden's analysis?

25 A. So the treatment here would be whether Republicans go first

1 on the ballot or whether Democrats go first on the ballot.

2 Q. And where is that applied?

3 A. It is applied at the county level.

4 Q. Mr. Trende, are you familiar with an article entitled, When  
5 You Adjust Standard Errors for Clustering, by Alberto Abadie,  
6 et al.?

7 A. Yes, I am.

8 Q. Did you cite that article in your report?

9 A. I do.

10 Q. What is this article about?

11 A. So this article is a recent article kind of weighing in on  
12 the debate about when it is you're supposed to cluster standard  
13 errors and when you're not supposed to cluster standard errors.

14 Q. What does this article conclude?

15 A. So this article concludes that when you -- there is a  
16 couple of conclusions. And a lot of it is written in the  
17 context of survey sampling, such as exit polls. But for  
18 experiments it says, if you do not have fixed effects applied,  
19 if there is clustering in the assignment of the treatment, you  
20 must cluster your standard errors.

21 Q. What is a fixed effect, just so I'm clear?

22 A. So the fixed effects, for example, here in this -- in  
23 Dr. Rodden's approach --

24 MS. FROST: Your Honor, I'm going to object to his  
25 testimony about fixed effects. That appeared for the first

1 time in the expert report that Your Honor actually already  
2 excluded his surrebuttal or reply, or whatever it was that it  
3 was called exactly.

4 MS. CONE-RODDY: Your Honor, Mr. --

5 THE COURT: Wait. One moment.

6 Well, I guess, counsel, tell me, did he address this  
7 fixed effect in his report that he provided here that's marked  
8 as an exhibit?

9 MS. CONE-RODDY: He did not specifically address the  
10 fixed effects per county conclusion Abadie, in those words, but  
11 he did cite Mr. Abadie's conclusion. And Dr. Rodden has cited  
12 fixed effects throughout both his reports in various ways.

13 THE COURT: Well, to the extent that he reviewed the  
14 article, why don't you --

15 MS. CONE-RODDY: Okay.

16 THE COURT: -- lay a little bit more foundation.

17 MS. CONE-RODDY: Okay.

18 THE COURT: I'll overrule your objection at this time.

19 MS. FROST: Thank you, Your Honor.

20 THE COURT: Thank you.

21 BY MS. CONE-RODDY:

22 Q. Mr. Trende, you have read the Abadie article?

23 A. Yes. It's cited at paragraph 54 of my expert report.

24 MS. CONE-RODDY: Can you go to page 17 of that  
25 article?



1           Go to -- or, sorry, two pages further on the screen.

2           If you go to -- no, the first -- first full para --  
3 second full paragraph on the page.

4           Not this.

5 BY MS. CONE-RODDY:

6 Q. Mr. Trende, have you read this second sentence here?

7 A. Yes.

8 Q. Can you explain what this means in English?

9 A. I will try. It says, so without fixed effects, that is,  
10 without applying controls at a -- at a certain level, you  
11 should cluster your standard errors if there is clustering in  
12 the sampling -- which this isn't a sampling problem -- and  
13 heterogeneity of treatment effects -- again, not a sampling  
14 problem, what we're more interested is that last thing -- or if  
15 there is clustering in the assignment. So if you don't use  
16 fixed effects for county here, and the treatment is applied at  
17 the county level and there is clustering in the assignment, you  
18 have to cluster your standard errors.

19 Q. Did Dr. Rodden use fixed effects in the county level in his  
20 original report?

21 A. He does not.

22 Q. Is this test that Abadie, et al., set out met here?

23 A. I'm sorry?

24 Q. Is the test that Abadie, et al., set out met here?

25 A. Yes.

1 Q. Mr. Trende, I wanted to go to -- I want to go to page 28 of  
2 your report.

3 What are you discussing here at the section D?

4 A. So section D has to do with some of the problems in  
5 Dr. Rodden's matching and regression discontinuity designs.

6 Q. What is a matching design?

7 A. So there is a variety of matching designs. What Dr. Rodden  
8 is utilizing is propensity score matching where you will try to  
9 figure out which variables can predict whether the county gets  
10 the treatment or does not. And you run a regression analysis  
11 that way, and you try to match counties that are similarly  
12 likely to get the treatment, where one gets it and one does  
13 not.

14 Q. In your opinion, is this an appropriate statistical method  
15 here?

16 A. No.

17 Q. Why not?

18 A. So you can see the citation on paragraph 78, the Kosuke  
19 Imai, et al., article, or working paper. There is also a  
20 subsequent published article, again, by Abadie, that says when  
21 you have time series cross sectional data, which is exactly  
22 what we have here, we have a cross section of observations  
23 observed multiple times, that it's very difficult to do  
24 matching because so much of it is interdependent.

25 The other problem is that Dr. Rodden's matching

1 analysis is sensitive to covariate choice. And if you use a  
2 different set of variables, you don't get the significant  
3 result.

4 Q. Have you continued to review Dr. Rodden's analysis since  
5 you submitted your first report -- your report?

6 A. I have --

7 MS. FROST: Objection, Your Honor. If they're going  
8 to go into stuff that is not in that report, I think we have a  
9 very strong objection to that.

10 THE COURT: Yes, I would agree.

11 MS. CONE-RODDY: Your Honor, we just wanted to talk  
12 about some of the things we discussed yesterday with  
13 Dr. Rodden's testimony, but --

14 THE COURT: Was Dr. Trende present for the testimony?

15 MS. CONE-RODDY: He was not.

16 THE COURT: All right. So I don't know how it is that  
17 you're intending to proceed. I don't necessarily think that,  
18 unless you have provided some written report or some other  
19 document to plaintiffs that will opine on his opinions, that  
20 I'm going to permit it.

21 MS. CONE-RODDY: Okay. That's fine.

22 THE COURT: Thank you.

23 BY MS. CONE-RODDY:

24 Q. Mr. Trende, can you go to page 26 of your report.

25 Can you identify this chart for me?

1 A. Oh, yes. I'm sorry.

2 Yes. This is a summary of regression analyses that  
3 were run in my report and Dr. Rodden's.

4 Q. I want you to look at the columns that say R first  
5 statewide and D first statewide.

6 A. Yeah. The rows, yes.

7 Q. Sorry, rows.

8 What is that first column after the labels?

9 A. So the first column is what I produced using the code that  
10 Dr. Rodden provided.

11 Q. What coefficient did Dr. Rodden find for D first statewide?

12 A. .025.

13 Q. Can you turn to page, I believe it's 24, of Dr. Rodden's  
14 report.

15 And can you look at the last sentence of the first  
16 paragraph?

17 A. Is it the actual page 24 or the page 24 at the top? I want  
18 to make sure we're on the same page.

19 I think it's page 24 at the top.

20 Q. I believe it's page 24 at the top.

21 A. Okay.

22 Q. There is a sentence that says, when I do this, the  
23 estimated effect --

24 A. When I do this, the estimated effect of being listed first  
25 on the ballot for both Democrats and Republican --

1 THE COURT: I'm sorry. Is there a question? You  
2 asked him to look at the page.

3 BY MS. CONE-RODDY:

4 Q. What coefficient did Dr. Rodden find here?

5 A. Dr. Rodden includes in his report an estimate of 2.5  
6 percentage points, or a .025.

7 Q. And what is this for?

8 A. This is for his regression analysis when he does not use  
9 the -- the districted variables.

10 Q. Could you go to page 55 of his report.

11 Is Table A 11 -- does Table A 11 match what's in that  
12 paragraph of Dr. Rodden's report?

13 A. It does not. The coefficient is .038, whereas, on page 24,  
14 he reports an effect of .025.

15 Q. In your opinion, does this table go with that regression?

16 A. I have a hard time seeing how that could be the case.

17 THE COURT: Again, counsel, I'm going try to keep up  
18 with you. You're extremely familiar with these tables. You're  
19 looking at Democratic first coefficient on Table A 11 on  
20 page 55; is that correct?

21 MS. CONE-RODDY: Yes, Your Honor.

22 THE COURT: And you're comparing that to what?

23 MS. CONE-RODDY: It's on paragraph -- in the paragraph  
24 on page 24 of his report.

25 THE COURT: The first full paragraph on page 24 of the

1 Rodden report?

2 MS. CONE-RODDY: Yes, Your Honor.

3 THE COURT: Okay. And then earlier you had the graph  
4 in --

5 MS. CONE-RODDY: Mr. Trende's report.

6 THE COURT: -- Mr. Trende's report. Now, again, I'm  
7 trying to keep up with you, and I want to understand this, so  
8 tell me then how you're bringing this together.

9 MS. CONE-RODDY: Page 26.

10 THE COURT: Yes. And what --

11 BY MS. CONE-RODDY:

12 Q. Mr. Trende, does the result you report from your table on  
13 page 26 match what Dr. Rodden wrote in his written report?

14 A. Yes. Using the code that Dr. Rodden provided, I produced a  
15 result that was identical to what Dr. Rodden put in the body of  
16 his report, so I assume we were using the same code at least  
17 for when Dr. Rodden wrote his report.

18 Q. In light of your conclusion about the necessity to cluster  
19 here, what is your overall opinion of the reliability of  
20 Dr. Rodden's report for finding a ballot order effect in  
21 Arizona general partisan elections?

22 A. I think it's unreliable, because his models are assuming  
23 that all these elections are independent, that there is no  
24 clustering in the assignment of the treatment, and that's just  
25 not true from what Dr. Rodden has written and testified. I

1 think we both agree on at least the clustering issue.

2 MS. CONE-RODDY: I have no further questions, Your  
3 Honor.

4 THE COURT: All right. Thank you.

5 Who is examining Mr. Trende?

6 MS. FROST: Your Honor, I will be. My name is  
7 Elisabeth Frost.

8 CROSS-EXAMINATION

9 BY MS. FROST:

10 Q. Good morning, Mr. Trende. How are you?

11 A. Good. How are you?

12 Q. I'm well. Thank you.

13 My name is Elisabeth Frost and I am an attorney for  
14 the plaintiffs in this matter.

15 We've never met, have we?

16 A. I am not sure if our paths have crossed in these Perkins  
17 Coie cases. I don't think you've ever examined me though.

18 Q. But you've met a lot of my colleagues at Perkins Coie over  
19 the years?

20 A. I certainly have.

21 Q. I think we've established, you don't have a Ph.D., correct?

22 A. That is correct.

23 Q. You're currently a Ph.D. student at the Ohio State  
24 University?

25 A. There is a difference between being a Ph.D. student and a

1 candidate, so for accuracy, I will say I'm a candidate.

2 Q. Fair enough.

3 You received your master's in applied statistics just  
4 this past year, correct?

5 A. In December -- or I passed exams in December, I would have  
6 -- no, no, no. I passed exams in the summer. I received it in  
7 December of 2019.

8 Q. Okay. So that was going to be my next question because  
9 your CV didn't say. So you received your master's in applied  
10 statistics just a few months ago?

11 A. Yes.

12 Q. You've never written for a publication that's been  
13 peer-reviewed, have you?

14 A. That's correct.

15 Q. Not on any topic?

16 A. That's correct.

17 Q. Okay. The expert report that you prepared for this case,  
18 that's the document that has been marked as Defense Exhibit  
19 101; is that correct?

20 A. That's my understanding.

21 Q. Okay. And do you have that before you?

22 A. Yes.

23 Q. Can you please turn to page 2 of that document. I'm  
24 looking at paragraph 2.

25 Can you just tell me when you're there.



1 A. Yes. I'm here.

2 Q. Okay. Great. And I'm looking at this paragraph that says,  
3 my areas of expertise include political history, voting laws  
4 and the procedures in the United States, redistricting, and the  
5 study of campaigns and elections.

6 Did I read that correctly?

7 A. Yes.

8 Q. Okay. Let's unpack that a little.

9 In this case, you don't provide any expert opinion on  
10 political history, do you?

11 A. I think an understanding of how Arizona has evolved over  
12 the last 40 years is important for analyzing this data.

13 Q. Do you offer any expert opinion in this case on how Arizona  
14 has evolved over the last 40 years?

15 A. Like I said, I think it's important for understanding the  
16 data, but my opinions are more statistical in nature.

17 Q. So the answer is no?

18 A. No. My answer is I think it's important for understanding  
19 the data. You can't really just aggregate that from the  
20 opinions being offered, but the specific opinions are critiques  
21 of statistical analysis.

22 Q. Okay. Let's turn to the next area of expertise that you  
23 list in your report.

24 Voting laws and procedures in the United States. The  
25 voting law or procedure issue in this case is Arizona's ballot

1 order statute; is that correct?

2 A. Yes.

3 Q. You don't hold yourself out as an expert on ballot order  
4 laws, do you?

5 A. I -- I -- I hold myself out as an expert on voting laws and  
6 procedures. I don't think I have ever stated that specifically  
7 on ballot laws I'm an expert.

8 Q. Okay. But in some other cases where you've been qualified  
9 as an expert on voting laws, you have actually -- that was the  
10 content of your testimony, right? You actually provided, like,  
11 surveys of those types of election laws across the United  
12 States, correct?

13 A. You will have to refresh my memory on that.

14 Q. You don't remember any case in which you provided testimony  
15 about a survey of, say, voter identification laws in the United  
16 States?

17 A. Okay. So back in the McCrory case, I think we're talking  
18 about then, when I looked at the way that different law --  
19 different early voting, same day registration, out of precinct  
20 voting, voter ID laws, and preregistration laws had been  
21 enacted in different county -- or different states in America.

22 Q. Okay. You don't do anything like that here with ballot  
23 order laws, do you?

24 A. No.

25 THE COURT: And you said it was the, what case,

1 McCrory?

2 THE WITNESS: Yes. I believe that's right.

3 BY MS. FROST:

4 Q. And you understand that the plaintiff's claim in this case  
5 is that a phenomenon known as position bias causes the first  
6 listed candidate to gain an electoral advantage solely due to  
7 being listed first, correct?

8 A. That's my understanding.

9 Q. Okay. You don't claim to be an expert in the phenomenon  
10 known as position bias, do you?

11 A. Not at that level of specificity.

12 Q. Okay. None of the articles, the books, the chapters of  
13 books that you've written, deal with position bias or ballot  
14 order effects, correct?

15 A. That's correct.

16 Q. And none of the cases that you have testified in, you have  
17 never been offered as an expert on position bias or ballot  
18 order, correct?

19 A. That's correct.

20 Q. Now, you say you have expertise in redistricting, but this  
21 isn't a redistricting case either, is it?

22 A. That's correct.

23 Q. And you don't claim to be an expert in psychology?

24 A. No.

25 Q. Your report doesn't say you're an expert in statistics or

1 statistical analysis either, does it?

2 A. No.

3 Q. Yet in the expert report that you prepared here, you  
4 critique the statistical analyses used by plaintiff's experts  
5 to measure ballot order effect, correct?

6 A. That's correct.

7 Q. And you actually go ahead and do a few statistical analyses  
8 of your own that the plaintiff's experts didn't do, correct?

9 A. Correct.

10 Q. Now, statistical methods, they can be complicated, right?

11 A. That's right.

12 Q. That's why we -- we call experts to talk about them?

13 A. I suspect, yes.

14 Q. You were a lawyer, right?

15 A. Yes.

16 Q. And, in fact, it's your position that sometimes people who  
17 are very experienced working with statistical models can make  
18 mistakes in using them, correct?

19 A. That's right.

20 Q. Okay. That's in -- the entire point of your expert report  
21 here, isn't it?

22 A. I don't know about that extreme of a statement, but I  
23 certainly think that there is errors being made here.

24 Q. Okay. You agree that all statistical techniques have pros,  
25 cons, and limitations?

1 A. Yes.

2 Q. And it's important to have experience using a technique in  
3 order to be able to accurately recognize those pros, cons, and  
4 limitations. Would you agree with that?

5 A. The more you've used them, the more adept you become at  
6 recognizing them, yes.

7 Q. Okay. And you agree that even experts with a lot of  
8 expertise in using a particular kind of model may disagree  
9 about the appropriate techniques to utilize when examining  
10 election data?

11 A. Yes.

12 Q. But it's your view, I understand from your report, that  
13 some techniques are better than others?

14 A. In certain circumstances, yes.

15 Q. Okay. So let's talk about your experience using the  
16 specific statistical methodologies that you do use in your  
17 report.

18 Your report discusses what's known as a regression  
19 analysis, correct?

20 A. Correct.

21 Q. Dr. Rodden conducted a regression analysis in this case?

22 A. Yes, multiple regression analyses.

23 Q. And you critique various choices that Dr. Rodden made in  
24 running his regression analyses?

25 A. Correct.

1 Q. You currently work as a senior elections analyst at a Web  
2 site called Real Clear Politics?

3 A. It's a company that runs a Web site, yes.

4 Q. You work for the Web site, correct?

5 A. I work for the company running the Web site, yes.

6 Q. The bread and butter -- but your claimed expertise here is  
7 at least in part for the articles that you post on the Web  
8 site, correct?

9 A. That I author for the Web site, yes.

10 Q. The bread and butter of what Real Clear Politics does is  
11 aggregate data that's otherwise available and try to make sense  
12 of it for its readers, correct?

13 A. We aggregate data and we aggregate stories. We also  
14 produce original content, but I think what we're probably most  
15 famous for is the averages of polls.

16 Q. Correct. So, for example, when you say that, Real Clear  
17 Politics polls together a lot of polling data in one place,  
18 correct? That was one of the innovations of the Web site?

19 A. Yes.

20 Q. Any analyses that are published on Real Clear Politics,  
21 they're not subject to peer review, correct?

22 A. That's correct.

23 Q. And the things you publish on Real Clear Politics, they're  
24 directed toward the lay audience?

25 A. Yes.

1 Q. You assume your audience does not have a consistently deep,  
2 sophisticated understanding of statistics?

3 A. So there I'll -- I'll demur a little bit. I anticipate  
4 that some of my readers are going to be political scientists  
5 and experts, but the whole point is to try to write these  
6 things up in a way that most people can understand, that a lay  
7 audience can understand.

8 Q. Okay. In aggregating polling data, you don't use  
9 regression analyses, do you?

10 A. No.

11 Q. And one of your jobs at Real Clear Politics is to raise the  
12 competitiveness of political districts, correct?

13 A. Correct.

14 Q. And you've previously testified you don't do regression  
15 models for the elections ratings you do at Real Clear Politics,  
16 correct?

17 A. Correct.

18 Q. You've never published even one article in a peer-reviewed  
19 publication where you ran a regression analysis?

20 A. No peer-reviewed articles.

21 Q. And your report says you've served as an expert in about  
22 ten cases now?

23 A. I think that's right.

24 Q. Half of those are redirecting cases, right?

25 A. I -- I -- I will take your word for it, yes.

1 Q. You don't have any reason to disagree with me?

2 A. I don't have a reason to disagree with you.

3 Q. Okay. And my math isn't great, but five of ten, that's  
4 half, right?

5 A. Five of ten is half.

6 Q. This isn't a redirecting case, is it?

7 A. No.

8 Q. And in most of the cases you have testified as an expert,  
9 you have not engaged in any regression analyses; is that  
10 correct?

11 A. I don't know if that's right.

12 Q. Okay. Well, why don't we talk about them.

13 A. Yeah.

14 Q. Let's turn to page 6 of Exhibit 101, paragraph 22.

15 Okay. So at the beginning of paragraph 22, you say  
16 that you served as an expert in Dickson v. Rucho, correct?

17 A. Correct.

18 Q. Okay. You did not testify in that case?

19 A. That's right.

20 Q. That was one of these redistricting cases?

21 A. Yeah. I think it was a Shaw case.

22 Q. The Court didn't rely on your analysis in its opinion, did  
23 it?

24 A. I've never read the opinion.

25 Q. Okay. You can't say either way, sitting here today,



1 whether the Court relied on your opinion in that case?

2 A. Yeah. I'm not trying to be difficult --

3 Q. I understand.

4 A. -- I just genuinely don't know.

5 Q. I understand, but your --

6 THE COURT: Please don't --

7 MS. FROST: I apologize, Your Honor.

8 THE COURT: Don't speak over one another, please.

9 MS. FROST: I apologize, Your Honor.

10 THE COURT: And slow down just a little bit, counsel.

11 MS. FROST: I will. I have the clock running in the  
12 back of my mind, but I will slow down, I promise.

13 THE COURT: Thank you.

14 BY MS. FROST:

15 Q. You were an attorney, correct, Mr. Trende?

16 A. I'm sorry?

17 Q. You were an attorney?

18 A. Yes.

19 Q. And so you would agree that anyone -- it's a matter of  
20 public record whether or not the Court relied on your analysis  
21 in its opinion, correct?

22 A. Yes.

23 Q. So the next case that you issue here is Covington -- or  
24 that you, sorry, write here on paragraph 22 of your report, you  
25 say you also authored an expert report in Covington v. North

1 Carolina, correct?

2 A. Yes.

3 Q. Now, again, you did not testify in that case?

4 A. That's right.

5 Q. And if I told you the Court did not rely on your analysis  
6 in that opinion, would you have any reason to disagree with me?

7 A. I don't believe the Court looked at my regression analyses  
8 in that opinion.

9 Q. So that Court did not rely on your regression analyses in  
10 that opinion?

11 A. I think that's correct.

12 Q. Okay. So let's move down to the next paragraph where you  
13 say -- it's paragraph 23 -- I authored two expert reports in  
14 NAACP v. McCrory. And I believe we've already mentioned this  
15 case. You recall that you wrote two expert reports in NAACP v.  
16 McCrory?

17 A. Yeah. I think one for the PI phase and then one for the  
18 trial.

19 Q. And you did testify in this case, correct?

20 A. I did.

21 Q. At issue in that case were several restrictive voting laws,  
22 including a voter identification law, cutbacks on early voting,  
23 the end of preregistration, things like that, correct?

24 A. I think the voter identification law was in a separate  
25 trial that I didn't testify at, but the other ones you mention,

1 yes.

2 Q. And the plaintiffs alleged that these laws were intended to  
3 and would negatively impact the African American electorate in  
4 North Carolina, correct?

5 A. Correct.

6 Q. So the question in that case was specifically how or if  
7 those laws would impact the African American electorate,  
8 correct?

9 A. I think there was -- yes.

10 Q. Do the plaintiffs allege here that ballot order effect has  
11 a greater impact on any particular racial group?

12 A. No.

13 Q. Now, you actually offered -- you offered two reports in  
14 McCrory, but embedded in those reports was actually two  
15 opinions, correct?

16 A. That's my recollection, yes.

17 Q. Okay. And in the testimony in that case, you tended to  
18 refer to them as opinion one and opinion two.

19 Does that sound familiar?

20 A. It's a long time ago, but that sounds familiar.

21 Q. First, you did a survey of similar laws in other states,  
22 correct?

23 A. Yeah, that's what we were discussing earlier.

24 Q. And that opinion did not involve a regression analysis?

25 A. It did not.

1 Q. It, essentially, just aggregated statutes around the United  
2 States?

3 A. Yes.

4 Q. Your second opinion in that case was that the data did not  
5 consistently support plaintiff's assessment that voting would  
6 decrease African American participation, correct?

7 A. That the voting laws would not, yes.

8 Q. Sorry. I misspoke.

9 But you agree with that, with that change, correct?

10 A. Yes.

11 Q. Now, that was the opinion that involved a regression  
12 analysis, correct?

13 A. Yes.

14 Q. Yet after it became clear that you were not familiar with  
15 basic statistical concepts when you testified, you actually  
16 denied you were being tendered as an expert in statistical  
17 methods in that case; isn't that true?

18 A. I won't agree with your premise, but I did say, which was  
19 true, that I was not being tendered as an expert in statistics.

20 Q. Okay. You don't agree that you -- in your testimony it  
21 became clear you were not familiar with basic statistical  
22 concepts?

23 A. No.

24 Q. Okay.

25 MS. FROST: Your Honor, at this point, I would ask

1 that we pull up impeachment Exhibit C.

2 THE COURT: For what purpose?

3 MS. FROST: I think it's going to become clear that  
4 he, in fact, did testify he wasn't familiar with basic  
5 statistical methods.

6 THE COURT: Well, I think the question you asked was  
7 somewhat different. You said you don't agree that in your  
8 testimony it became clear you were not familiar with the basics  
9 in statistical concepts, and he said no.

10 So your impeachment goes to what?

11 MS. FROST: It goes specifically to that. I think in  
12 his testimony it did -- it did become clear he wasn't familiar  
13 with basic statistical concepts.

14 THE COURT: And so what do you intend to elicit from  
15 him? Are you going to read back some of his testimony, is that  
16 what you're intending to do?

17 MS. FROST: Yes, Your Honor.

18 THE COURT: All right. You may go ahead.

19 What exhibit is this?

20 MS. FROST: It's impeachment Exhibit C.

21 BY MS. FROST:

22 Q. And we're looking at -- can you see it on the screen there?

23 A. Yes.

24 Q. And do you want to take a minute just to take a quick look  
25 at this?

1 I'm going to look at page 80 and 81.

2 And tell me when you've had a chance to take a look at  
3 it.

4 A. Yeah. That's where I -- at the deposition I misstated what  
5 a P -- the interpretation of a P value.

6 Q. Well, in fact, what you said is that you were surprised to  
7 learn about something called the proportional inverse fallacy,  
8 correct?

9 Do you see that on page 80, at 15 through 17?

10 A. Yes.

11 Q. Okay. So it's not that you misspoke it, it's that at the  
12 time you were not aware of that fallacy in statistics, correct?

13 A. I stated -- so this was referring to my deposition where  
14 Mr. Call was -- Attorney General Call was crossing me. And I  
15 had stated the P value -- the interpretation of the P value  
16 correctly. After a couple tries he said, but you can interpret  
17 it this way, and I said sure. I subsequent -- I subsequently  
18 learned this term called the inverse -- or the proportional  
19 inverse fallacy that said you can't do that.

20 Q. Okay. And I think you testified earlier that after this  
21 whole back and forth -- this actually is Mr. Ho, I think, who  
22 is cross examining you at that point -- but after -- I think  
23 you testified that after this back and forth, you agreed -- you  
24 actually affirmatively stated you were not being offered as an  
25 expert on statistical methods, correct?

1 A. He asked me if I was an expert in statistical methods, and  
2 I said, no, that's not what I was offered as. That's on line  
3 17 of page 81.

4 Q. Okay. Great. We can take that down.

5 And when the Court issued its ruling in that case, it  
6 found that you were only qualified to offer an opinion on the  
7 50 state survey; is that correct?

8 A. I don't think it disqualified me on the other opinion, but  
9 it did find that I was qualified to offer it on 50 state  
10 survey.

11 Q. The Court did not rely on your regression analysis in that  
12 opinion?

13 A. I don't recall that it did.

14 Q. Okay. Let's turn back to the page 7 of your Exhibit 101,  
15 your expert report in this case.

16 I'll try and move quickly through these other cases  
17 that you were an expert in.

18 You say on paragraph 24 you authored reports in NAACP  
19 v. Husted and Ohio Democratic Party v. Husted.

20 Do you see that?

21 A. Yes.

22 Q. You did conduct a regression analysis in NAACP v. Husted,  
23 didn't you?

24 A. Correct.

25 Q. And, now, you say in your report that this case settled,

1 right? When you write, the former case settled, you're talking  
2 about NAACP v. Husted?

3 A. That's my understanding.

4 Q. Okay. But you don't say in this report that before the  
5 case settled, the district court actually ruled on a  
6 preliminary injunction motion, do you?

7 A. I was not aware of that in Husted.

8 Q. You were not aware --

9 A. Wait. I'm sorry. NAACP Husted or --

10 Q. NAACP v. Husted.

11 A. I didn't know that the district court ruled on a PI in that  
12 case.

13 Q. Okay. And so you were also unaware that when the Sixth  
14 Circuit affirmed that PI, it affirmed the district court's  
15 decision not to rely on your analysis, and it stated that you  
16 are an elections analysis for a political Web site who has not  
17 conducted a peer-review analysis similar to the one at issue  
18 here.

19 This is the first time you're hearing this?

20 A. Yes.

21 Q. You're telling me that at no other point have you been  
22 cross examined about this?

23 THE COURT: When you say this, what are you referring  
24 to?

25 MS. FROST: About the Sixth -- both about the fact



1 that the district court in the Southern District of Ohio did  
2 not rely on his analysis, and that the Sixth Circuit found that  
3 not relying on his analysis was justified given his lack of  
4 expertise.

5 THE WITNESS: I'm assuming you're asking me this  
6 because I have been cross examined somewhere else on this, but  
7 I don't remember it.

8 BY MS. FROST:

9 Q. I'll put a pin in that because I'll have to dig through  
10 this. I'm a little surprised to hear this.

11 Okay. Next you state you authored a report in the  
12 Ohio Democratic Party v. Husted, correct?

13 A. Yes.

14 Q. And you note in your report the district court refused to  
15 accept a part of your analysis, because, in your words, you  
16 should have done more work to check that data behind the  
17 application that you were using, correct?

18 A. That's my understanding, yes.

19 Q. Okay. You did not conduct a regression analysis in that  
20 case, did you?

21 A. I don't believe so.

22 Q. And when the Court issued its decision in that case, it  
23 also did not rely on any analysis that you did; is that  
24 correct?

25 A. I don't believe it did.

1 Q. Okay. Let's look at the next paragraph. Here you have Lee  
2 v. Virginia Board of Elections?

3 A. Correct.

4 Q. And you didn't do a report or testify in that case at all,  
5 right, you were just a consulting expert?

6 A. Yeah. I'm just disclosing this to disclose all the  
7 testimony, yes.

8 Q. So no court relied on a regression analysis of yours in  
9 that case?

10 A. That's correct.

11 Q. So Feldman v. Arizona is next on the next paragraph. And  
12 that's the same case that has sometimes been referred to as DNC  
13 v. Hobbs; is that correct?

14 A. I'll accept -- I don't know, but I'll accept -- I have no  
15 reason to doubt you on that.

16 Q. Okay. That case was before Judge Rayes here in this  
17 building; is that correct?

18 A. That's correct.

19 Q. And you did not do a regression analysis in that case  
20 either?

21 A. No, I did not.

22 Q. In fact, you testified about legislative intent, correct?

23 A. That's correct.

24 Q. And you were countering the plaintiff's expert who was a  
25 well-known historian; is that correct?

1 A. Correct.

2 Q. Judge Rayes didn't rely on your analysis in that case  
3 either, did he?

4 A. I don't believe he did.

5 Q. And you say in your report that part of your testimony in  
6 that case was also struck?

7 A. Yeah. I was asked to do some calculations on the witness  
8 stand, and it was struck as an undisclosed opinion.

9 Q. Okay. Let's move on to page 8 of your expert report. You  
10 say you authored an opinion -- a report in A. Philip Randolph  
11 Institute v. Smith?

12 A. Yes.

13 Q. You didn't testify in that case, did you?

14 A. I did not.

15 Q. And the Court's opinion makes no mention of your analysis?

16 A. It does not.

17 Q. That brings us to Whitford v. Nichol. That was another  
18 redistricting case, correct?

19 A. Yes.

20 Q. And the Court there found the methodology you used  
21 unreliable, correct?

22 A. I don't know about that.

23 Q. Okay. But you would agree it's public record and anyone  
24 could look it up?

25 A. Whatever the -- whatever the verbiage of the Court is, is

1 in the opinion, yes.

2 Q. And the Court didn't rely on any regression analysis that  
3 you did in that case?

4 A. No. I did regression analyses in the second part of the  
5 case, but the Rucho decision put an end to that.

6 Q. Okay. So the last case you list is one that we discussed,  
7 that actually Your Honor asked you about in your direct, but I  
8 want to take a moment to talk about, because it's the most  
9 recent case that you were an expert in.

10 And that is, you served as an expert in Common Cause  
11 v. Rucho, correct?

12 A. Correct.

13 Q. And this was the partisan redistricting case that the Court  
14 asked you about earlier?

15 A. Yes.

16 Q. And in this case you testified about the efficiency gap,  
17 correct?

18 A. Correct.

19 Q. The efficiency gap is not at issue in this case, is it?

20 A. That's right.

21 Q. Now, in the course of your testimony in that case, do you  
22 recall that one of the judges actually noted on the record  
23 while you were testifying that you were not a statistician?

24 A. It was before I received my degree, but yes.

25 Q. You didn't disagree with that, did you?

1 A. I certainly did not argue with the judge.

2 Q. Well, in fact, you testified you actually stayed as far  
3 away as you could from the statistical analyses conducted by  
4 the plaintiff's expert in that case, correct?

5 A. I stayed as far away as I could from Dr. Jackman's Bayesian  
6 regressions because I hadn't done the coursework on it, because  
7 he wrote a textbook on Bayesian regressions, so I certainly  
8 wasn't going to engage with him.

9 Q. Now you offer opinions on Bayesian regressions as an expert  
10 in this case?

11 A. I'm much more familiar with them today.

12 Q. You testified in that case in October of 2017?

13 A. Yes.

14 Q. So just a little over two years ago?

15 A. Yes.

16 Q. And when the Court's opinion was issued in that case, it  
17 didn't rely on your analysis either, did it?

18 A. I don't believe it did.

19 Q. So in none of the cases that you've previously been an  
20 expert in has the Court relied upon a regression analysis that  
21 you've done?

22 A. That sounds right.

23 Q. Okay. And if this Court were to rely on your statistical  
24 analyses in this case, this Court would be the very first one  
25 to do so?

1 A. Actually, I don't know that that's right, because in NAACP  
2 versus McCrory, the Court relied on my opinion one.

3 Q. Which was a 50 state survey?

4 A. Yes, but I want to answer your questions correctly and  
5 accurately.

6 Q. Okay. Let's talk about -- move on from regression  
7 analyses. And you go ahead in your report and utilize some  
8 other types of statistical analyses that Dr. Rodden did not  
9 utilize, correct?

10 A. Yes.

11 Q. And one of these techniques we were actually just talking  
12 about, it's known as Bayesian hierarchical model?

13 MS. CONE-RODDY: I'd like to object. This was outside  
14 the scope of his direct testimony.

15 MS. FROST: Your Honor, this is about his  
16 qualifications to opine in this case. He offers opinions based  
17 on Bayesian hierarchical model, and he just testified to that  
18 and it's in his report.

19 THE COURT: So if you're going to ask him about his  
20 familiarity of the model, that's permitted.

21 MS. FROST: Correct. That's what I'm going to ask,  
22 Your Honor.

23 THE COURT: All right. Overruled. Thank you.

24 BY MS. FROST:

25 Q. So you've actually previously testified --

1 THE COURT: And, again, please don't talk over me or  
2 anyone else.

3 MS. FROST: I'm sorry.

4 THE COURT: Thank you.

5 MS. FROST: I'm sorry, Your Honor. I've gotten back  
6 in the outline and I apologize.

7 THE COURT: Thank you.

8 Go forward, please.

9 BY MS. FROST:

10 Q. So you have previously testified your -- that you were not  
11 qualified to offer a critique in Bayesian hierarchical  
12 modeling, correct?

13 A. I stayed away from arguing with Dr. Jackman who wrote a  
14 textbook about it.

15 Q. You don't recall testifying in Common Cause v. Rucho: I'll  
16 admit upfront, I can't offer critique of Bayesian hierarchical  
17 modeling?

18 A. I think that was in the context of saying I wasn't going to  
19 argue with Dr. Jackman who was, like I said, wrote a textbook  
20 about it. I know my limitations.

21 THE COURT: All right. Let's move on from this area,  
22 please.

23 BY MS. FROST:

24 Q. Another statistical technique that you use that Dr. Rodden  
25 did not use is something you refer to as GEE, which stands for

1 generalizingly estimating equations; is that correct?

2 A. Generalized estimated equation.

3 Q. Generalized estimating equations. It didn't sound right  
4 when I said it. I appreciate the correction.

5 Can you identify a single case for me in which you've  
6 previously been qualified as an expert to offer testimony in  
7 this technique?

8 A. No.

9 Q. I want to talk to you about the last statistical method you  
10 used in your expert report in this case, and this is one that  
11 you discussed with the counsel for the Secretary a little bit,  
12 spatial temporal modeling.

13 A. Yes.

14 Q. That's a technique that you used in your report, correct?

15 A. Correct.

16 Q. Now, you testified a few years ago in the case of Whitford  
17 v. Nichol that you had never heard of a summary statistic  
18 called Moran's I.

19 Do you recall that?

20 A. That was true a few years ago, yes.

21 Q. Okay. Do you now recognize this term as a basic concept in  
22 spatial statistics?

23 A. In pure spatial statistic analysis, yes.

24 Q. Okay. Since then you have never been qualified as an  
25 expert in spatial statistics of any sort, correct?



1 A. That's correct.

2 Q. Let's talk a little bit more about the spatial temporal  
3 model.

4 One of the concerns that you discussed with counsel  
5 for the Secretary is that election results of neighboring  
6 counties are correlated, correct?

7 A. Correct.

8 Q. Would you agree that's often true of election results  
9 between neighboring states as well?

10 A. Correct.

11 Q. Election results in North and South Dakota are correlated,  
12 right?

13 A. Right.

14 Q. And you see this all over the country, correct?

15 A. That's correct.

16 Q. And I assume you don't think Arizona is the only state  
17 where election results might be correlated in neighboring  
18 counties?

19 A. That's correct.

20 Q. We can typically expect to find evidence of spatial  
21 dependence in a county level or precinct level or state level  
22 dataset for U.S. elections, correct?

23 A. That's right.

24 Q. And you actually attached to your report a paper by Robert  
25 Erikson and Lorraine Minnite, correct?

1 A. Correct.

2 Q. And you testified about that report on direct?

3 A. Yes.

4 Q. And it's -- I think you testified you -- you attached it  
5 because you thought it was a good example, correct?

6 A. Of the debate over clustering standard errors, yes.

7 Q. Okay. But, actually, in this case, in this particular  
8 paper, they did not correlate election results, isn't that --  
9 or, I'm sorry, you provided this paper that -- you're correct.

10 You provided this paper as an attachment to your report because  
11 you thought it was a good example of the correct way to  
12 calculate standard --

13 THE COURT: You're tasking our court reporter.

14 MS. FROST: I apologize.

15 THE COURT: Perhaps just take a breath in between each  
16 word.

17 MS. FROST: Okay.

18 THE COURT: And I am having a difficult time trying to  
19 keep up.

20 MS. FROST: Okay. I appreciate the feedback, Your  
21 Honor. I will. I will do that.

22 THE COURT: And I have to tell you, I have never had a  
23 court reporter have that difficulty and announce it in an  
24 open hearing. It really has to stop.

25 MS. FROST: Okay. I -- I appreciate it, Your Honor.

1 I will do better.

2 THE COURT: All right.

3 BY MS. FROST:

4 Q. You provided the Erikson and Minnite paper as an attachment  
5 to your report because you thought it was a good example of the  
6 correct way to calculate standard errors in the presence of  
7 dependence in the data; is that correct?

8 A. In the presence of clustering in the assignment --

9 Q. Okay.

10 A. -- and treatment, yes.

11 Q. The Erikson Minnite paper did not estimate a spatial  
12 temporal model, did it?

13 A. No, but I don't -- I don't know how much that technology  
14 had even been developed by 2009.

15 Q. Because the technology is very new, correct?

16 A. It's relatively new, yes.

17 Q. And can you name a single peer-reviewed article that has  
18 used spatial -- a spatial temporal model in the way that you  
19 suggest Dr. Rodden should have done in this case?

20 A. I can't think of anything that would have done it the way I  
21 think he could have done it to account for the dependencies.

22 MS. FROST: I'm just consolidating, Your Honor, to try  
23 and wrap it up.

24 BY MS. FROST:

25 Q. Okay. So let's talk a little bit about your critique of

1 Dr. Rodden's regression analysis. Okay?

2 A. Yes.

3 Q. And you used each of the techniques that we've just  
4 discussed to critique Dr. Rodden, correct?

5 A. Correct.

6 Q. And one of your primary critiques of Dr. Rodden's  
7 regression analysis is that some decisions -- is some decisions  
8 that he made about specific variables about voters race; is  
9 that correct?

10 MS. CONE-RODDY: Your Honor, I'm going to object  
11 again. This was not a part of the scope of his direct  
12 testimony.

13 MS. FROST: I'm happy to move on.

14 THE COURT: Well, let me first sustain the objection,  
15 and now you can move on.

16 MS. FROST: Thank you, Your Honor.

17 BY MS. FROST:

18 Q. You also fault Dr. Rodden for not clustering his standard  
19 errors in regression, correct? That is something you talked  
20 about on direct?

21 A. Yes.

22 Q. And you testified that sometimes if you don't cluster, you  
23 see effects that aren't there; is that correct?

24 A. That's the -- the boiled down way of putting it, yes.

25 Q. Okay. But the article that you relied upon in your

1 testimony, doesn't it also warn that clustering can actually  
2 conceal effects that are there?

3 A. Which article are we talking about?

4 Q. Let's turn to Defendant's Exhibit 104, page 2, please.

5 A. Okay.

6 Q. And can we turn to the second page, please.

7 Let's go to the next page.

8 And I'm looking at the top paragraph, the last  
9 sentence. Do you see where it says, in general, clustering at  
10 too aggregate a level is not innocuous and can lead to standard  
11 errors that are unnecessarily conservative even in large  
12 samples?

13 A. Yes, that's correct.

14 Q. You agree with that statement?

15 A. It's absolutely correct.

16 Q. In layman's terms, this means you need to be thoughtful  
17 about where you cluster, correct?

18 A. That's right.

19 Q. And that sometimes clustering can actually conceal an  
20 effect when there really is one?

21 A. Right. So, in this case, there is clustering by year,  
22 certainly, but the treatment level -- the treatment isn't  
23 applied at that year, so we wouldn't want to cluster our  
24 standard errors by year or by office sought. You only want to  
25 cluster your standard errors at the level at which the

1 treatment is applied.

2 Q. Isn't it also true that the risk that they warn about here  
3 is heightened when you have a lot of variables in your model?

4 A. I don't know.

5 Q. Okay. Is it your view that having 15 clusters and 36  
6 variables is a reasonable use of clustering?

7 A. Yes.

8 Q. I'm almost done, I'm sure you'll be happy to hear.

9 I just want to talk very briefly about your critique  
10 of the report -- oh, actually, you didn't testify on direct  
11 about your critique of the report of Dr. Krosnick, correct?

12 A. I don't believe so.

13 MS. FROST: Okay. All right. Then I am done.

14 Thank you, Your Honor. I apologize again.

15 I appreciate your time, Mr. Trende.

16 THE WITNESS: Thank you.

17 MS. CONE-RODDY: Very brief redirect, Your Honor.

18 THE COURT: While you're coming up, let me just follow  
19 up on that last question.

20 Why are 13 clusters and 36 models reasonable, in your  
21 opinion?

22 THE WITNESS: Stata runs perfectly properly when you  
23 do that. There are no errors produced. I did it just ten  
24 minutes ago -- or an hour ago to check. And I'm not sure why  
25 it would be, because all you're doing is allowing the -- and

1 I'm going to have to geek out for a second, I'm sorry.

2 THE COURT: And you're going to lose me if you do  
3 that, so try --

4 THE WITNESS: I know. I know.

5 THE COURT: -- try very hard to keep it in general  
6 terms.

7 THE WITNESS: Given the math involved, I can't think  
8 of why it would be an issue.

9 THE COURT: Thank you. All right.

10 You may continue. Thank you.

11 REDIRECT EXAMINATION

12 BY MS. CONE-RODDY:

13 Q. Mr. Trende, I just wanted to ask you about the NAACP v.  
14 McCrory case you were asked about on cross.

15 A. Yes.

16 Q. When did you testify in that case?

17 A. I believe it was 2014 or 2015.

18 Q. Do you remember when your deposition was in that case?

19 A. I believe it was in those same years, 2014 or 2015.

20 Q. When did you start your applied statistics degree?

21 A. 2016.

22 Q. Did your applied statistics degree include classes on  
23 regression analysis?

24 A. An entire class solely dedicated to linear regression  
25 analysis, yes.

1 Q. We talked a little bit about your comprehensive exams for  
2 your applied statistics degree. Did that involve regression  
3 analysis?

4 A. Regression analyses, interpretation of P values in  
5 regression analyses, how to read them properly. That was  
6 emphasized repeatedly in my coursework.

7 Q. I just want to clarify, did you pass your comprehensive  
8 examinations?

9 A. I did.

10 MR. RODDY: I don't have any other questions, Your  
11 Honor.

12 THE COURT: All right. Thank you.

13 And, sir, thank you for your time. And you may step  
14 down.

15 THE WITNESS: Thank you, Your Honor.

16 THE COURT: All right.

17 MS. KHANNA: Your Honor, can we ask for brief rebuttal  
18 testimony?

19 THE COURT: Yes.

20 All right. Sir, thank you.

21 MS. FRIDAY: Your Honor, we would object to the  
22 request for rebuttal. We think rebuttal is only appropriate to  
23 respond to unforeseen evidence. And here in our case in chief  
24 we did not put up anything that wasn't on Mr. Trende's initial  
25 expert report.



1 THE COURT: And I would agree with that.

2 What would the nature of the rebuttal be?

3 MS. KHANNA: It would specifically rebut the testimony  
4 that he talked about today on the stand.

5 Your Honor, it was our understanding that the parties  
6 would be talking about the actual reports. It seems to me that  
7 the defense has chosen to limit Mr. Trende's testimony, I  
8 assume that is admissible testimony, to only portions of the  
9 direct examination, and not to actually his report in general.  
10 I believe that we are entitled to question the topics he  
11 actually discussed in his examination today, just as he was  
12 offered to testify to the topics of the examination previously.

13 THE COURT: Well, I don't think he testified as to any  
14 of the witnesses that -- in terms of their testimony. Is that  
15 what I understand you to be saying?

16 MS. KHANNA: No.

17 THE COURT: Because he was not here.

18 MS. KHANNA: No, you're right, Your Honor. I just  
19 want to clarify. He testified to a specific table in his  
20 report and certain coefficients there, and I just don't believe  
21 that he -- we have not had an opportunity to test him on that.

22 THE COURT: And your able counsel could have cross  
23 examined him about that table, so unless there is some other  
24 area that you think that there is rebuttal necessary, it wasn't  
25 already covered.

1           And I guess the -- I don't understand the nature of  
2 the rebuttal if you're going to go into other areas that he  
3 didn't go into.

4           MS. KHANNA: Your Honor, and I guess all I can say is  
5 that we had planned to kind of set up the narrative of the  
6 testimony in the same way that we set up the narrative of the  
7 reports, is that the initial reports would explain their direct  
8 testimony, there would be a response and that there would be a  
9 rebuttal as reflected in their reports. And I think that our  
10 experts should have an opportunity to -- to reflect the fact  
11 that they have responded to some of the things that -- in  
12 writing to some of the things that Mr. Trende has testified  
13 about today, but if we're going to stand on the reports, we are  
14 happy to do that as well, Your Honor.

15           THE COURT: And I will tell you that you had your  
16 witnesses on the stand and you could have gone into those areas  
17 as well, and so I'm going to -- I'm going to sustain the  
18 objection. All right.

19           So how do you wish to proceed now?

20           MS. FRIDAY: Well, Your Honor, we have been  
21 discussing, perhaps, the logistics involved in the hearing that  
22 is scheduled for next Tuesday. I don't want to speak for the  
23 plaintiffs, so I will let Ms. --

24           THE COURT: And can you just position a microphone  
25 closer to you. Thank you.

1 MS. FRIDAY: My apologies, Your Honor.

2 I was saying that we had been discussing amongst the  
3 parties the logistics for the hearing scheduled on the oral  
4 argument next Tuesday, and I will defer to plaintiffs on that.

5 MS. KHANNA: And so, Your Honor, as we discussed over  
6 e-mail this week about scheduling the hearing next week, we're  
7 just not sure about our capability to travel. I'll just  
8 represent, I'm coming from Seattle, and while I can do  
9 everything in my power, and I will try to travel back to the  
10 courthouse, there is some things that I'm not sure about with  
11 respect to my own schedule and whatever is happening in the  
12 State of Washington right now. So I would just request the  
13 Court's permission to explore the opportunity to do -- to  
14 proceed electronically, over video conference or over telephone  
15 if that's possible.

16 THE COURT: That's not going to be feasible, so  
17 whoever wants to argue can argue. You have multiple lawyers in  
18 the room here, so you can flip a coin and figure out who is  
19 going to be present, but presence is necessary. It's critical  
20 to your case, obviously, and so we can't be at all places at  
21 once, so you just have to prioritize.

22 MS. KHANNA: Thank you, Your Honor.

23 THE COURT: All right. So we will proceed at nine  
24 a.m. on Tuesday.

25 And I think I gave you up through the noon hour. You

1 can equally divide that, but with the -- with respect to  
2 plaintiff's case, I'll give them a little leeway for rebuttal,  
3 and so we will then reconvene on Tuesday.

4 All right. There being nothing further, thank you.

5 Oh, one last matter. There is going to be some  
6 difficulty, because as you have identified, and as I've  
7 identified, I think it's not just plaintiff's exhibits, but  
8 defendant's exhibits -- I'm going to have my courtroom deputy  
9 examine them closer -- but I'm off a page. And by necessarily  
10 making a record, I have to rely on what you have done, so  
11 someone is going to take the responsibility of reduplicating  
12 what the admitted exhibits are and the number page references  
13 so that when I am writing this up, I am on the same page as you  
14 are.

15 And then, again, preparing that demonstrative exhibit  
16 in an appropriate manner that is color coded in the way that it  
17 was produced yesterday, so if you would work on that as well.

18 All right.

19 (Proceedings concluded at 11:54 a.m.)

20 \* \* \*

C E R T I F I C A T E

I, CHRISTINE M. COALY, do hereby certify that I am  
duly appointed and qualified to act as Official Court Reporter  
for the United States District Court for the District of  
Arizona.

I FURTHER CERTIFY that the foregoing pages constitute  
a full, true, and accurate transcript of all of that portion of  
the proceedings contained herein, had in the above-entitled  
cause on the date specified therein, and that said transcript  
was prepared under my direction and control.

DATED at Phoenix, Arizona, this 6th day of March,  
2020.

/s/ Christine M. Coaly  
Christine M. Coaly, RMR, CRR