Addendum to Voting Machines and the Underestimate of the Bush Vote
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Charles Stewart III
Department of Political Science, MIT

Summary

This paper reexamines and fills out analysis in "Voting Machines and the Underestimate of the Bush Vote," in light of the release of "uncorrected" exit poll numbers from the 2004 presidential election. This analysis reveals the following:

1. There is no statistically significant correlation between the use of voting methods in states and the size of the exit poll discrepancies.
2. Early polls released were "corrected" to more closely correspond with officially reported election results, and therefore did not accurately represent the large inaccuracies in exit poll data. New data expose misestimates made by exit polls throughout.
3. The attention paid to the size and cause of exit poll discrepancies reveals a desire to use exit polls as a check on the honesty of election officials and the performance of voting systems. The design of the NEP exit polls makes it a blunt instrument for this sort of oversight. Therefore, much of the attention on these polls, seeking evidence of fraud, has been misplaced. More direct methods of election system auditing will be more effective.

Introduction

This paper follows up on "Voting Machines and the Underestimate of the Bush Vote," which was posted on the Caltech/MIT Voting Technology Project web site on November 11, 2004.[1] It can be considered an addendum to the previous report. The purposes of this paper are (1) to clarify the purpose of the previous report and (2) to revisit the previous report's findings, in light of new data that have emerged.

The remainder of this paper is divided into three parts. First, we review the motivation for the analysis of exit polls and their predictions relative to various technologies used throughout the country. Second, we examine and report on the data sources that can be used to examine the role that voting machines may have played in producing the pro-Kerry bias in the exit poll results. Third, we re-examine the relationship between exit poll discrepancies and voting technologies, using more complete, new sources of data.

The results of the data analysis underscore a previous finding that there is no clear relationship between the biases in the National Election Pool (NEP) exit poll and the voting technologies used by the various states. If there was systematic, nationwide voting system fraud working against John Kerry in this past general election, the NEP exit poll discrepancies are not evidence of it. Explanations for the biases in the poll, which appear to be real, most likely will rest on factors other than voting machines.

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[1] http://www.vote.caltech.edu/Reports/VotingMachines3.pdf

Motivation for original report

The original report was motivated by a need for data analysis in light of extensive speculations that Election Night exit poll discrepancies were evidence of widespread voting system fraud. The questions addressed to the Voting Technology Project (VTP) on Election Night specifically concerned whether the introduction of electronic voting machines could explain these discrepancies. Because the VTP is charged with examining voting technologies, the core of the report addressed the correlation between the use of different voting machines around the country and the size of the discrepancies.

As a device for beginning the analysis of the exit polls data, the report asked the question, "How badly did the exit polls predict the outcome of the election?" At the time, the efforts of sharp-eyed data surfers had not led to the wide availability of "raw" exit poll results, which eventually showed how badly the exit polls *did* predict the election outcome. Because that conclusion was secondary to the more important point --- that any discrepancies that did exist seem unrelated to voting technologies --- the question and its answer detracted from the purpose that motivated the production of the original report in the first place.

Data sources

This current report relies on three general classes of data --- exit polls, election returns, and voting technologies. The original report relied on data sources that were widely available on Election Day and the next morning. Over the following several weeks, the data sources pertaining to exit polls and election returns changed. Over the past month, nearly all the ballots available for this report have been counted and election return discrepancies resolved. Alert observers of the cnn.com web site have filled in some of the holes in the raw exit poll numbers. In this section of the report, we describe those data sources.

Exit polls

The exit poll data for the original report were culled from the cnn.com web site, beginning in the evening as polling places were closing, continuing into the next day. We now know that these poll results were re-weighted, to bring them more closely into line with the actual reported election returns.[2] (We will call these the "Early CNN data.") On November 11, Jonathan Simon posted an article that contained early exit poll results for 47 states.[3] (We will call these the "Simon I data.") Steve Freeman has made available the same data, with the addition of information about the four states that Simon was unable to acquire originally.[4] (We will call

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[2] Previous election night exit polls also adopted this practice. For instance, see the methodology section in the codebook for the 1996 VNS exit poll, available through the Inter-University Consortium on Political and Social Research (ICPSR) as study number 6989.

[3] http://www.scoop.co.nz/mason/stories/HL0411/S00142.htm, accessed November 27, 2004.

[4] http://www.appliedresearch.us/sf/epdiscrep.htm, accessed November 27, 2004.

these the "Simon/Freeman data") Finally, Simon published a new set of 4pm exit poll figures on November 17, expressed in terms of two-party vote shares.[5] (We will call these the "Simon II data.")

All four data sets are attached to the end of this paper. In preparing this report, a few typographical errors were discovered in the Early CNN data. Correcting these typos made New York, Oklahoma, and Rhode Island data look like other states.

Because media mapmakers have adopted a convention that colors Republican states red and Democratic states blue, some have called the overall set of exit poll discrepancies the "Red Shift," since they describe a shift toward the Republicans from the exit polls to the announced official election results. That phrase is adopted as convenient shorthand in this report. In particular, "Red Shift" is the term used to denote the difference between the official election result for Bush in a state and the corresponding exit poll estimates. A positive Red Shift indicates Bush doing better in the official results than in the polls; a negative Red Shift indicates Bush doing worse in the official results.

Figure 1 displays the degree of Red Shift of each of the four data sets employed in this report.

Election returns

The election returns were taken from David Leip's web site, uselectionatlas.org.[6] The data used here were accessed on November 27, 2004.

Voting technologies

We have purchased from Election Data Services (EDS) a data set that reports the broad category of voting machines used by each county in the United States in the 2004 general election. This data set was merged with a data set we purchased from uselectionatlas.org, which reports total votes cast in 2004 in each county, to construct a measure of the percentage of voters in each state who used each of the major categories of voting machines – punch cards, lever machines, optical scanners, paper, and electronics (DREs).[7]

To evaluate exit poll results relative to voting machine required focusing on even smaller granularity than the EDS county reporting allows in some regions. The EDS data set reports voting machine usage at the county level. However, in several states – mostly New England and the upper Midwest – towns administer elections. It is common for counties in these states

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[5] http://www.scoop.co.nz/mason/stories/HL0411/S00227.htm, accessed November 27, 2004.
[6] The data can be accessed by going to the "election results" tab, choosing "2004" under the "general by year" pull-down menu, and then selecting the "Popular Vote State-Level Data (Table)" link. More detailed data is also available for purchase from the site.
[7] The EDS data reports separate use of Votomatic (pre-scored) punch cards and Datavote (non-pre-scored) punch cards. We have combined the two categories in this analysis.

therefore to possess different types of voting machines.[8] EDS reports these counties as having "mixed" systems. It was desirable to be more specific about the use of voting technologies in these states, lest 90% of their voters be relegated to the obscure "mixed" category.

Alaska, Massachusetts, and Michigan had municipality voting machine data readily available for the 2004 election. Most other states with many "mixed" counties had made similar municipality data available to the VTP in 2003. With the exception of Texas, it was possible to use officially available state data to gain greater specificity about the voting machines used in states that had many "mixed" counties.

Results revisited

"Voting Machines and the Underestimate of the Bush Vote" addressed the claim that the discrepancies between the exit polls and actual election returns were due to voting technologies in two ways. One prominent exponent of this view had relied on a partial data set that mischaracterized the use of voting technologies in several states.[9] None of the new data sets that have emerged since Election Day week has changed the criticism of that claim.

The original report also examined the correlation between the use of different voting technologies in the states and the size of the exit poll discrepancies. This is the analysis that must be re-done in light of the appearance of the Simon and Simon/Freeman data sets.[10]

Figures 2 though 5 show graphs that plot the Red Shift differences in each state against the proportion of voters who used the various categories of voting machines. Table 1 reports the correlation coefficients that describe the relationship between the Red Shift and voting equipment use.[11]

The discussion here focuses on the newer data in Figures 3 to 5. Two general patterns stand out in all these figures. First, the figures illustrate how three older voting methods --- punch cards, lever machines, and hand-counted paper --- were rarely used by most states, but heavily used by a few states. For each of these older voting methods, the state that was the most frequent user of that method also had an unusually high over-statement of support for Kerry in the exit polls. The exit poll in New York, which used only lever machines, over-stated Kerry's support by 4.8%

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[8] Even counties themselves sometimes use more than one type of machine. As absentee and early voting become more common, it is also becoming more common for different technologies to be used for different types of voting – for instance, DREs for in-precinct voting and optical scanners for absentee.

[9] Some correspondents objected to characterizing optically scanned ballots as "paper" voting systems, because they use electronic machines to scan the ballots. While these systems rely on computers to count the ballots, they do leave a paper record that can be double-checked by a human being. Therefore, we continue to consider optically scanned ballots to be paper ballots.

[10] Of course, it would have been best to compare exit poll discrepancies with election returns at the precinct level. We received several e-mail messages from correspondents who claimed to have seen precinct-level analyses. We asked all these correspondents if they could provide us with these analyses. No one could. One correspondent responded that she was mistaken, and was actually thinking of the "Blue Lemur" analysis we addressed in the original report.

[11] The correlations weight each state by the square root of the number of observations in the NEP exit poll, to account for the fact that larger polls will have less random error, in proportion to the square root of the sample size.

(using the Simon/Freeman data set). In Utah, 99% of voters used punch cards; the exit poll over-stated Kerry's support there by 3.1%. In Vermont, the outlier for hand-counted paper ballots (39%), the over-statement of Kerry's vote was 4.8%. (The average over-statement of the Kerry vote in the Simon/Freeman data set was 1.4%.)

The consequence of this pattern is that there is a statistically insignificant correlation between the use of these voting methods and the over-statement of the Kerry vote by the exit polls.

The second general pattern is that there are two voting methods --- optically scanned paper and electronics (DREs) --- that were used in a wide variety of proportions by states. The Red Shift varied widely in the states that used these newer voting technologies. The signs of the correlations associated with all of these figures are negative. That is, states that used more optical scanners or more DREs had slightly smaller Red Shifts than those that used other methods. However, these correlation coefficients are also so small that they are not statistically significant.[12]

Conclusions

In the weeks following the 2004 presidential election, the large discrepancies between the NEP exit polls and the election returns have continued to puzzle observers. Exit polls regularly puzzle observers, whether it is the flubbed call in Florida in 2000 or the inaccurate call of the Virginia governor's race in 1989.[13] This report is not intended to probe into the larger issue of the discrepancies between exit polls and voter selections, but to focus on the narrower issue of whether the discrepancies could have been related to the voting methods used in the various states.[14]

An analysis of all available early exit poll data still reveals no striking relationship between the voting methods used. The tiny inklings of a relationship appear to be due to outlying states that use hand-counted paper, punch cards, and lever machines. The (statistically insignificant) relationship involving DRE use and the exit poll discrepancies is of the wrong sign to sustain a speculation that pro-Bush fraud emanated from new voting technologies.

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[12] The most common level of statistical significance used in the social sciences is $p < .05$. This means that the observed correlation between the variables would appear less than 5% of the time if the true correlation were precisely zero. The strongest correlations in Table 1, which involve punch cards in the Simon/Freeman data and lever machines in the Simon I data set, would only be significant at the $p < .24$ level.

[13] Howard Kurtz, "Exit Wounds: Polls Led Networks Astray," *Washington Post* Nov. 9, 2000, p. A31, accessed through Lexis/Nexis; Andrew Rosenthal, "The 1989 Elections: Predicting the Outcome; Broad Disparities in Votes and Polls Raising Questions," *New York Times* Nov. 9, 1989, sec. A, p. 1, accessed through Lexis/Nexis.

[14] On the broader issue of the discrepancy see Steve Freeman, "The Unexplained Exit Poll Discrepancy" (available at http://www.appliedresearch.us/sf/Documents/ExitPoll.pdf) and Richard Morin, "Surveying the Damage: Exit Polls Can't Always Predict Winners, So Don't Expect Them To" (available at http://www.washingtonpost.com/wp-dyn/articles/A64906-2004Nov20.html [registration required]).

Much of the attention to the exit poll Red Shift derives from a desire to find ways to independently audit voting technologies that do not use a paper-based verification system. Unfortunately, the design of the polls is not suited to the task. It is widely assumed that if anyone were to design a scheme to use electronic voting machines fraudulently, the scheme would be based on a subtle strategy of misallocating a small fraction of votes --- perhaps fewer than 1%. Even if exit poll sampling procedures were flawless, the sample sizes needed to catch such schemes are much larger than the current exit polls use. At the precinct level, the situation is even worse. The standard is to interview between 40 and 50 voters at each precinct. With such sample sizes, the margins of error are too large to capture anything but the most obvious fraud schemes --- schemes that probably do not need exit polls to catch.

The current election controversy in the Ukraine also points out the possibilities and limitations of using exit polls to ferret out fraud. On the surface, the American and Ukrainian cases appear similar. Both are divided even politically and both had elections in which the exit polls were at variance with the officially announced results. The similarities end there, however.

First, the Ukrainian exit polls were significantly more out of line with the official results than in the United States. An exit poll conducted by the Democratic Initiatives Foundation and sponsored by several western governments reported that the opposition candidate Viktor Yushchenko was leading 54 percent to 43 percent.[15] A competing poll, by the Socis and Social Monitoring agencies, placed the Yushchenko lead at a narrower 49.4 percent to 45.9 percent.[16] In contrast, the American exit polls showed less than a two percent discrepancy from the official national results.

Second, the Ukranian exit polls were also consistent with a pre-election poll by the Razumkov Center, which placed Yushenko's lead at 44 percent to 37 percent, with twelve percent undecided.[17] In contrast, pre-election national surveys in the United States generally showed Bush ahead, and thus were consistent with the final official outcome. According to pollingreport.com, the average final pollster vote projection gave Bush a 3.1 percent margin over John Kerry, which was within half a percent of the actual 2.5 percent margin.[18]

Furthermore, the American state-level pre-election polls displayed a pro-Bush bias. If we take the last week's worth of state polls and average them from each state, we see that there was a Red Shift in only two states, Rhode Island (2.4%) and Tennessee (1.2%).[19] Among the

[15] Peter Finn, "Partial Vote Results Show a Tight Race in Ukraine Runoff," *Washington Post* Nov. 22, 2004, p. A15; Aleksandar Vasovic, "Ukrainian electoral commission gives Yanukovych narrow lead," *Associated Press Wire Service,* Nov. 21, 2004, accessed through Lexis/Nexis.

[16] "Ukraine Exit Polls: Yushchenko Leads Presidential Race," *PR Newswire Europe* Nov. 21, 2004, accessed through Lexis/Nexis; "Pro-West opposition leader wins Ukraine presidential vote: exit poll," *Agence France Presse* English wire service, accessed through Lexis/Nexis.

[17] "Ukrainians will vote for Yushchenko in second round – pollsters," *ITAR-TASS News Agency* wire service, accessed through Lexis/Nexis.

[18] http://www.pollingreport.com/2004.htm#Pollster.

[19] http://www.electoral-vote.com/pastpolls.html collects the pre-election state polls.

remaining 35 states with at least one poll during the last week of the campaign, there were "Blue Shifts." [20] The overall Blue Shift among the final week state level polls was 2.3%.

Third, the pre-election and exit poll anomalies in the Ukraine appeared along with reports from independent observers of massive and widespread voting irregularities. The preliminary conclusions of the International Election Observer Mission (IEOM) stated that the second round of the presidential election "did not meet a considerable number of OSCE commitments and Council of Europe and other European standards for democratic elections."[21] The IEOM report then proceeded with an extensive laundry list of significant fraud allegations, including some witnessed by the observer mission itself.

The IEOM report of the American election was qualitatively different from the Ukraine's. Its introduction stated that "[t]he 2 November elections in the United States mostly met the commitments agreed to by the 55 OSCE participating States in the Copenhagen Document of 1990 . . . . They were conducted in an environment that reflects a long democratic tradition, including institutions governed by rule of law, free and professional media and civil society involved in all aspects of the election process."[22] The concerns that are raised in the report --- about long lines, uneven handling of provisional ballots, etc. --- are precisely the issues that arise in serious discussions of election reform in the United States.

Many (though certainly not all) of the IEOM concerns arise because of the different political cultures of the United States and Europe and cannot be considered concerns about fraud, even if they are matters that may need reform (such as allowing states great latitude in running their own elections). Unlike the Ukraine report, the United States report by the IEOM does not raise doubts about whether the election was stolen by the brutal actions of the incumbent government.

Finally, Ukranian opposition leaders doubted the honesty of the election process, calling their supporters to the streets to guarantee an honest result. In contrast, after having thousands of election workers on the ground on Election Day, the Kerry campaign embraced the final results as legitimate. It has joined in recount efforts, such as in Ohio, to ensure that all votes are counted, not because it suspects that a recount will reveal fraud of sufficient magnitude to sway the outcome of the election.

Seekers after an explanation for why the exit poll discrepancies in the United States were so large in many states will have to look somewhere other than the voting equipment. More importantly for the long run, those seeking ways to guard against the fraudulent uses of voting technologies should look somewhere other than commercial exit polls. Better strategies to audit election outcomes already exist, or are in development, that are more controlled and more direct

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[20] The size of the Blue Shift was as follows: Alabama (7.4%), West Virginia (5.0%), New Jersey (4.3%), Florida (4.0%), North Carolina (3.8%), Georgia (3.4%), South Carolina (3.4%), Virginia (3.4%), Arkansas (3.3%), Missouri (3.3%), Colorado (3.1%), Utah (3.0%), Iowa (2.9%), Ohio (2.8%) Wisconsin (2.6%), Illinois (2.6%), Kansas (2.6%), Texas (2.5%), Indiana (2.4%), Pennsylvania (2.4%), New Hampshire (2.4%), Oregon (2.0%), Connecticut (1.9%), Arizona (1.8%), Minnesota (1.7%), California (1.7%), Michigan (1.7%), Oklahoma (1.5%), New Mexico (1.2%), Maine (1.0%), Maryland (0.9%), New York (0.8%), Washington (0.6%), Kentucky (0.5%), and Nevada (0.1%).

[21] http://www.osce.org/documents/odihr/2004/11/3811_en.pdf, accessed Dec. 3, 2004.

[22] http://www.osce.org/documents/odihr/2004/11/3779_en.pdf, accessed Dec. 3, 2004.

tests of the accuracy of vote counts. A few states have laws requiring the careful auditing of a sample of voting machines after an election. Such laws should be extended nationwide. The movement to require "voter verifiable audit trails" for all machines will eventually provide an independent path to verify the results produced through computer counts. Coupled with stringent requirements for audits of election results regardless of how close the election is, these audit trails could provide significantly greater assurance of Election Day integrity than exit polls.

Figure 1. "Red Shift" % in different exit poll data sets.
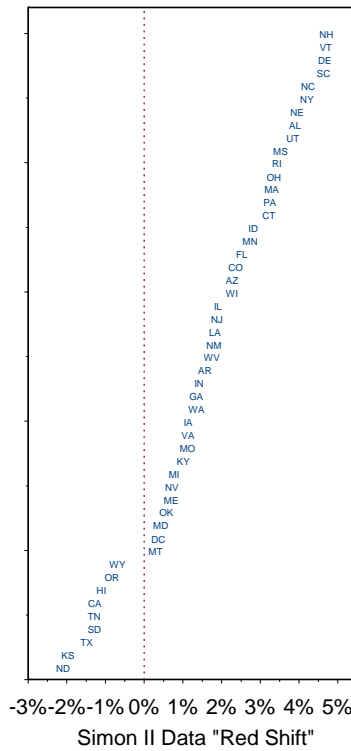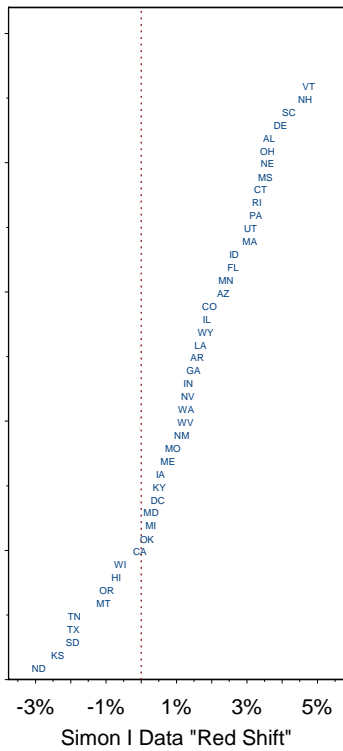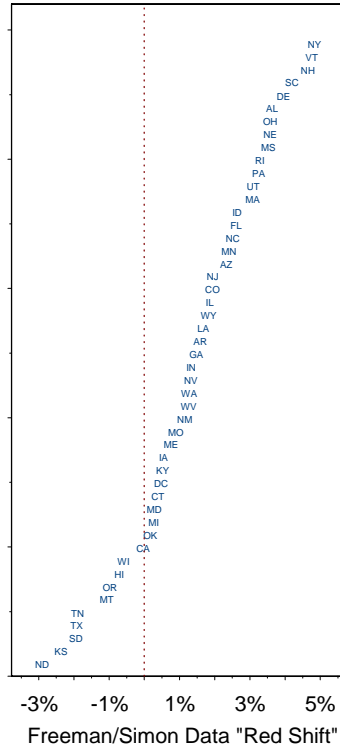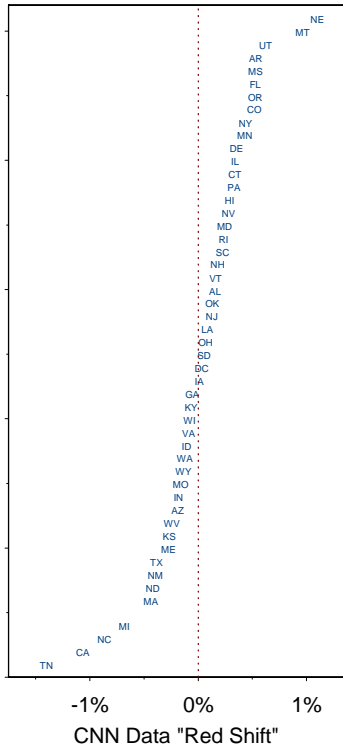
Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Figure 2. Red Shift and voting technologies used in states, Early CNN Data Set.
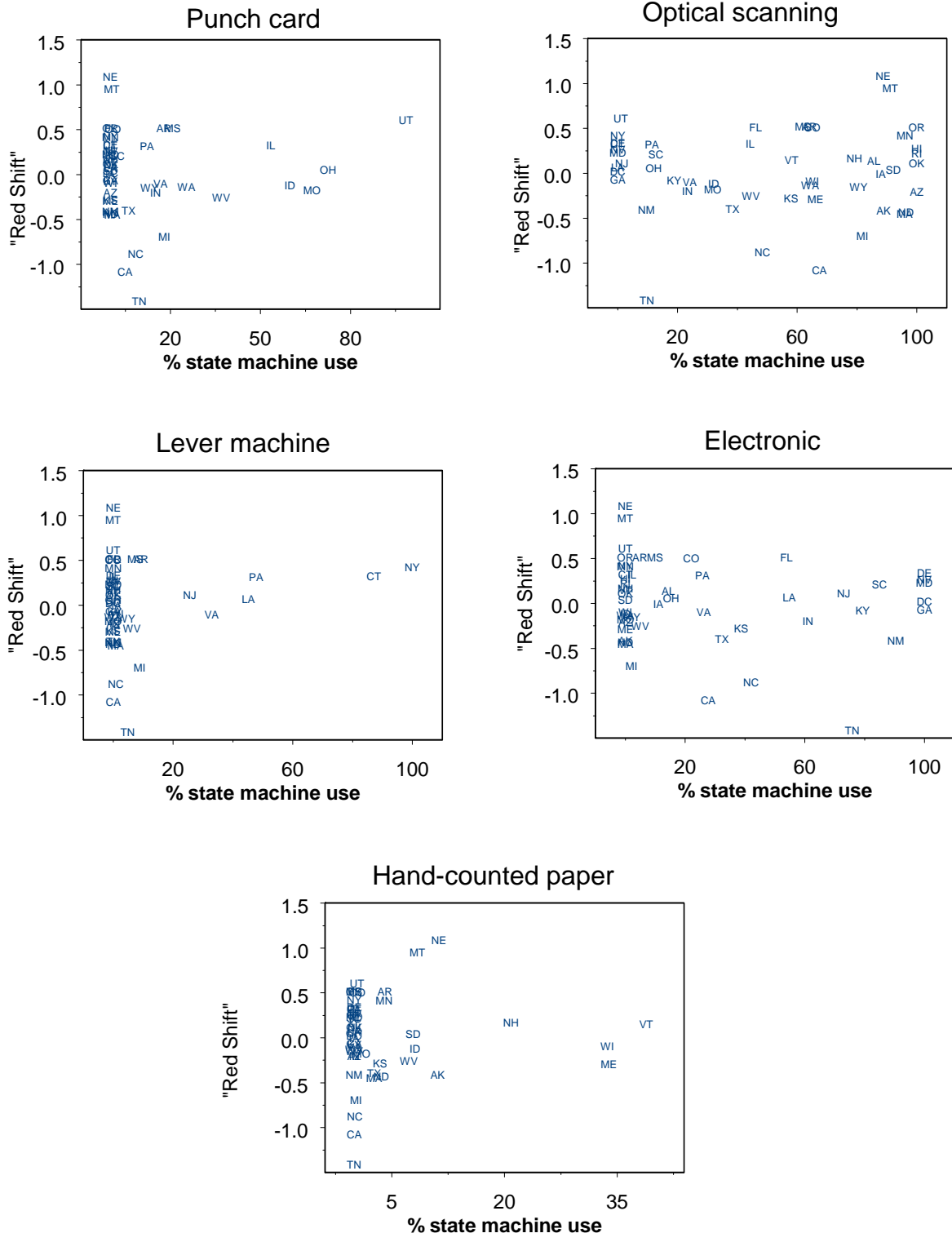
Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Figure 3. Red Shift and voting technologies used in states, Freeman Data Set .
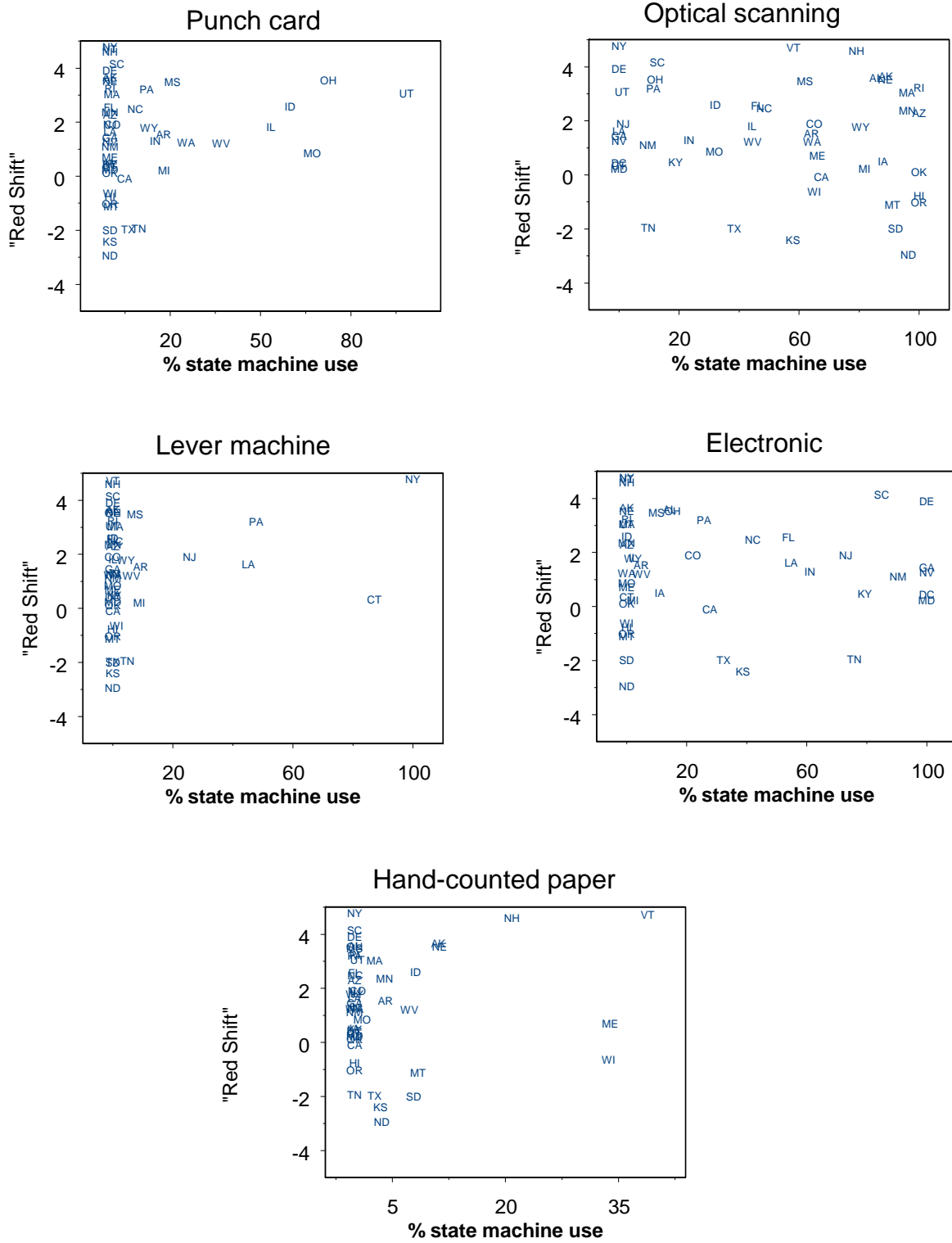
Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Figure 4. Red Shift and voting technologies used in states, Simon I Data Set .
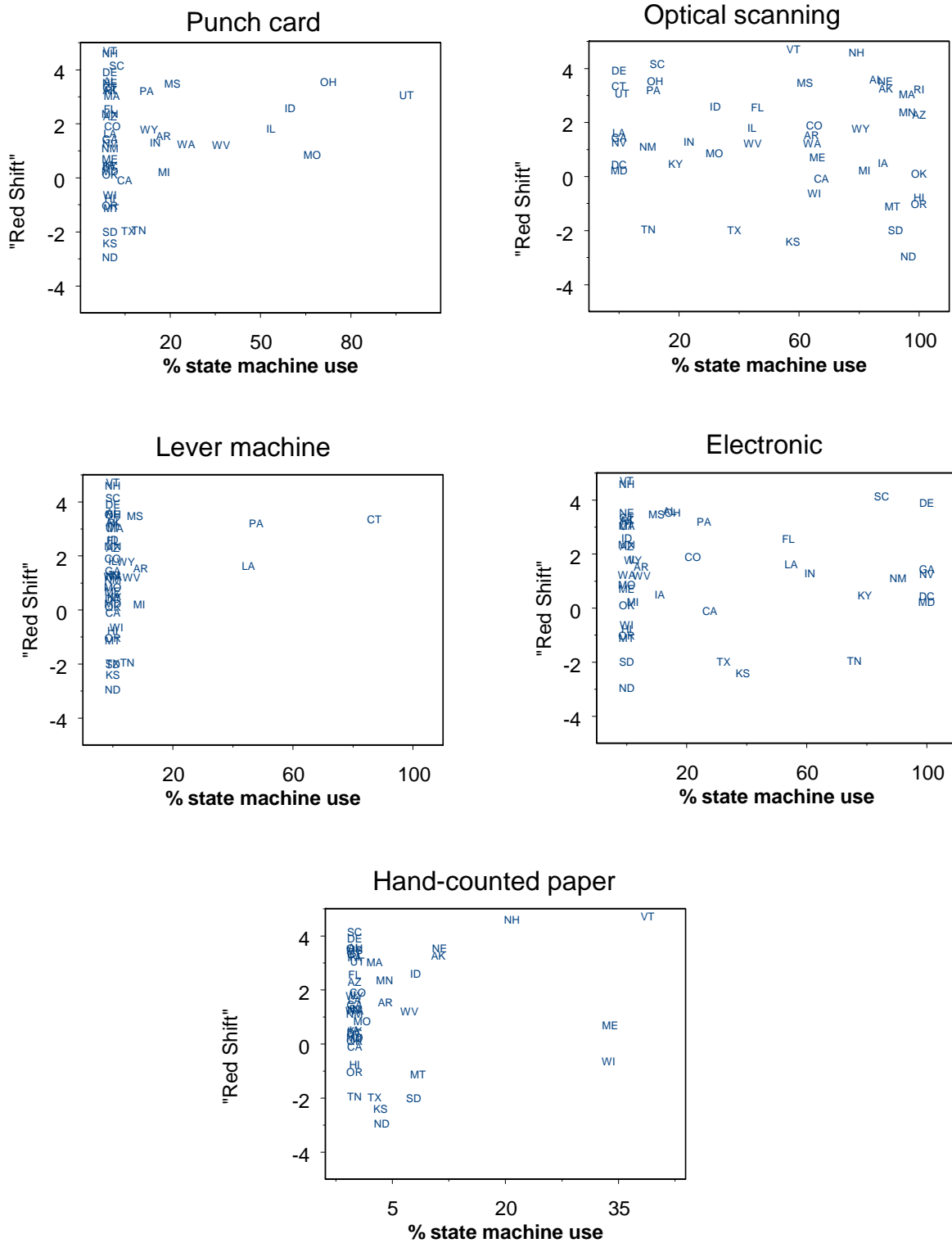
Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Figure 5. Red Shift and voting technologies used in states, Simon II Data Set .

Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Table 1. Correlation between voting technology usage and Red Shift using different data sets.

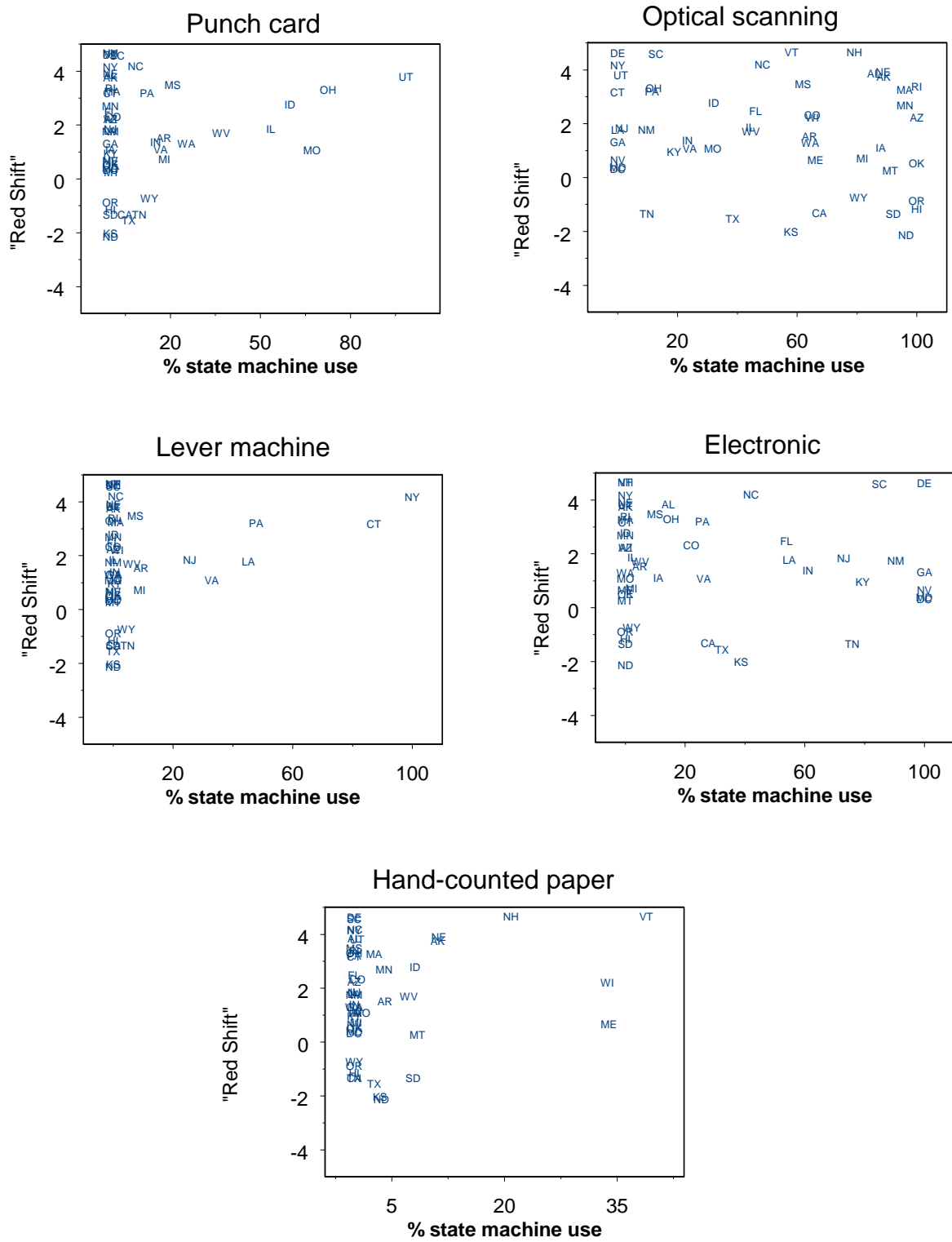| Machine type	VTP	Simon/Freeman	Simon I	Simon II
		Data set		
Punch card	.01	.18	.16	.15
Lever	.16	.03	.18	.15
Paper	.01	.06	.04	.18
Optical scan	.01	-.10	-.14	-.12
DRE	-.13	-.02	-.04	-.07

Note: A state's "Red Shift" is defined as the percentage of the vote received by Bush in the official election returns minus the percentage of support received by Bush in the exit poll.

Data Used in Report

| state | EarlyCNN data | | | | Simon/Freeman Data | | | Simon I Data | | | Simon II Data | | Election Returns | | | Voting Technology | | | | | | Year of |
	Bush %	Kerry %	Nader %	Sample	Bush %	Kerry %	Sample	Bush %	Kerry %	Sample	Bush%	Kerry%	Bush%	Kerry%	Other %	Punch %	Lever %	Paper %	Op Scan %	DRE %	Mixed	data
AK	61.9	35.1	1.5	1177	57.8	38.8	910	57.8	38.8	910	59.5	40.5	61.1	35.5	3.4	0.0	0.0	11.1	88.9	0.0	0.0	2004
AL	62.5	37.0	0.5	736	58.1	40.5	730	58.1	40.5	730	59	41	62.5	36.9	0.6	0.0	0.0	0.0	85.6	14.4	0.0	2004
AR	54.0	45.0	0.4	1459	52.9	46.1	1402	52.9	46.1	1402	53.4	46.6	54.3	44.5	1.2	17.7	9.2	4.1	64.1	4.9	0.0	2004
AZ	54.8	44.2	0.0	1907	52.8	46.7	1859	52.8	46.7	1859	53	47	54.8	44.4	0.8	0.0	0.0	0.0	100.0	0.0	0.0	2004
CA	43.9	53.6	0.0	2390	46.6	54.6	1919	46.6	54.6	1919	46	54	44.2	54.6	1.2	4.9	0.0	0.0	67.5	27.7	0.0	2004
CO	51.9	46.7	0.4	2534	49.9	48.1	2515	49.9	48.1	2515	50.9	49.1	52.6	46.2	1.2	0.8	0.0	0.4	65.1	22.1	11.5	2004
CT	44.4	54.7	0.5	872	44.4	54.7	872	40.9	57.7	872	41.5	58.5	44.0	54.3	1.7	0.0	87.2	0.0	0.0	0.0	12.8	2004
DC	9.2	89.4	0.6	795	8.2	89.8	795	8.2	89.8	795	9	91	9.2	89.3	1.4	0.0	0.0	0.0	0.0	100.0	0.0	2004
DE	45.7	53.7	0.0	772	40.7	57.3	770	40.7	57.3	770	41.5	58.5	45.8	53.3	0.9	0.0	0.0	0.0	0.0	100.0	0.0	2004
FL	51.4	47.6	0.5	2862	49.8	49.7	2846	49.8	49.7	2846	49	50	52.1	47.1	0.8	0.0	0.0	0.0	46.1	53.9	0.0	2004
GA	58.6	41.4	0.0	1618	56.6	42.9	1536	56.6	42.9	1536	57	43	58.0	41.4	0.6	0.0	0.0	0.0	0.0	100.0	0.0	2004
HI	45.7	54.3	0.0	622	46.7	53.3	499	46.7	53.3	499	46.7	53.3	45.3	54.0	0.7	0.0	0.0	0.0	100.0	0.0	0.0	2004
IA	50.4	49.2	0.5	2512	48.4	49.7	2502	48.4	49.7	2502	49.4	50.7	50.0	49.1	0.8	0.0	1.1	0.0	87.9	11.0	0.0	2004
ID	68.4	30.2	0.0	801	65.7	32.9	559	65.7	32.9	559	66.5	33.5	68.4	30.3	1.3	59.8	0.0	8.1	32.1	0.0	0.0	2004
IL	44.4	55.1	0.0	1434	42.4	56.6	1392	42.4	56.6	1392	43	57	44.6	54.7	0.6	53.4	0.0	0.0	44.3	2.2	0.0	2004
IN	59.9	39.1	0.0	941	58.4	40.6	926	58.4	40.6	926	59	41	59.9	39.3	0.8	15.1	0.5	0.0	23.3	61.1	0.0	2004
KS	62.9	36.2	1.0	667	64.5	34.1	654	64.5	34.1	654	65	35	62.2	36.5	1.4	0.0	0.0	3.4	57.9	38.7	0.0	2004
KY	59.4	39.6	0.5	1050	58.4	40.2	1034	58.4	40.2	1034	59	41	59.6	39.7	0.8	0.0	0.4	0.0	18.8	79.3	1.4	2004
LA	56.7	42.3	0.5	1683	54.7	43.9	1669	54.7	43.9	1669	55.5	44.5	56.7	42.2	1.1	0.0	45.2	0.0	0.0	54.8	0.0	2004
MA	36.8	61.7	0.0	889	32.9	65.2	889	32.9	65.2	889	34	66	37.0	62.1	0.9	0.6	0.8	2.6	96.0	0.0	0.0	2004
MD	42.8	56.2	0.5	1065	42.3	56.2	1000	42.3	56.2	1000	43	57	42.9	55.9	1.2	0.0	0.0	0.0	0.0	100.0	0.0	2004
ME	45.3	52.8	1.0	1991	44.3	53.8	1968	44.3	53.8	1968	45.3	54.8	45.0	53.0	1.9	0.0	0.0	33.9	66.1	0.0	0.0	2002
MI	48.0	50.6	0.5	2555	46.5	51.5	2452	46.5	51.5	2452	47.5	52.5	47.8	51.2	1.0	18.0	8.8	0.2	81.8	2.0	0.0	2004
MN	47.0	51.5	1.0	2190	44.5	53.5	2178	44.5	53.5	2178	45.5	54.5	47.6	51.1	1.3	0.0	0.0	4.0	96.0	0.0	0.0	2002
MO	53.1	45.9	0.0	2264	52	47	2158	52	47	2158	52.5	47.5	53.3	46.1	0.6	67.2	0.0	1.0	31.8	0.0	0.0	2004
MS	59.0	40.0	0.0	799	56.5	43	798	56.5	43	798	56.8	43.3	59.8	39.5	0.8	20.7	7.4	0.0	62.0	9.9	0.0	2004
MT	57.5	39.5	1.0	650	58	37.5	640	58	37.5	640	60.3	39.8	59.1	38.6	2.4	0.4	0.0	8.4	91.2	0.0	0.0	2004
NC	56.5	42.7	0.0	2167	52.4	46.1					52	48	56.0	43.6	0.4	8.4	0.9	0.1	48.5	42.1	0.0	2004
ND	62.9	35.1	1.0	687	64.4	32.6	649	64.4	32.6	649	66	34	62.9	35.5	1.6	0.0	0.0	3.6	96.4	0.0	0.0	2004
NE	66.0	33.5	0.5	785	62.5	36	785	62.5	36	785	63.3	36.8	66.3	32.4	1.3	0.0	0.0	11.3	88.7	0.0	0.0	2004
NH	48.6	50.4	0.5	1883	44.1	54.9	1849	44.1	54.9	1849	44.6	55.4	48.9	50.2	0.9	0.0	0.0	20.9	79.1	0.0	0.0	2002
NJ	46.2	52.8	0.5	1520	42.9	54.6					45	55	46.5	52.7	0.9	0.0	25.6	0.0	1.4	73.0	0.0	2004

| state | EarlyCNN data | | | | Simon/Freeman Data | | | Simon I Data | | | Simon II Data | | Election Returns | | | Voting Technology | | | | | | Year of |
	Bush %	Kerry %	Nader %	Sample	Bush %	Kerry %	Sample	Bush %	Kerry %	Sample	Bush%	Kerry%	Bush%	Kerry%	Other %	Punch %	Lever %	Paper %	Op Scan %	DRE %	Mixed	data
NM	49.9	48.6	0.5	2006	47.5	50.1	1951	47.5	50.1	1951	48.7	51.3	49.9	48.9	1.1	0.0	0.0	0.0	9.6	90.4	0.0	2004
NV	50.4	48.2	0.5	2189	47.9	49.2	2116	47.9	49.2	2116	50.7	49.4	50.5	47.9	1.7	0.0	0.0	0.0	0.0	100.0	0.0	2004
NY	40.9	58.2	1.5	1452	35.4	62.6					37	63	40.5	57.8	1.7	0.0	100.0	0.0	0.0	0.0	0.0	2004
OH	50.9	48.6	0.0	2020	47.9	52.1	1963	47.9	52.1	1963	47.9	52.1	51.0	48.5	0.5	72.6	0.0	0.0	12.0	15.3	0.0	2004
OK	66.0	34.6	0.0	1577	65	34.6	1539	65	34.6	1539	65	35	65.6	34.4	0.0	0.0	0.0	0.0	100.0	0.0	0.0	2004
OR	47.8	51.8	0.0	1064	47.9	50.3	1064	47.9	50.3	1064	48.8	51.2	47.3	51.3	1.5	0.0	0.0	0.0	100.0	0.0	0.0	2004
PA	48.4	51.2	0.0	2107	45.4	54.1	1930	45.4	54.1	1930	45.7	54.4	48.6	50.8	0.6	12.2	47.7	0.0	11.4	25.8	2.8	2004
RI	38.9	59.7	1.0	809	34.9	62.7	809	34.9	62.7	809	36	64	38.7	59.4	1.9	0.0	0.0	0.0	100.0	0.0	0.0	2004
SC	58.4	41.1	0.4	1782	53.4	45.1	1735	53.4	45.1	1735	54	46	58.0	40.9	1.1	2.3	0.0	0.0	12.8	84.9	0.0	2004
SD	60.0	38.5	1.5	1550	61	36.5	1495	61	36.5	1495	62.3	37.8	59.9	38.4	1.6	0.0	0.0	7.9	92.1	0.0	0.0	2004
TN	57.9	41.1	0.5	1783	58	40.6	1774	58	40.6	1774	58.5	41.5	56.8	42.5	0.7	9.6	4.8	0.0	9.8	75.8	0.0	2004
TX	61.2	37.8	0.0	1794	62.2	36.3	1671	62.2	36.3	1671	63	37	61.1	38.2	0.7	6.1	0.0	2.7	38.5	32.4	20.4	2004
UT	71.5	26.6	1.5	816	68.1	29.1	798	68.1	29.1	798	69.5	30.5	71.5	26.0	2.5	98.6	0.0	0.4	1.0	0.0	0.0	2004
VA	54.1	45.4	0.0	1431	missing						51	47	53.7	45.5	0.8	16.7	32.9	0.0	24.1	26.3	0.0	2004
VT	38.8	59.1	2.0	698	33.3	63.7	685	33.3	63.7	685	35	65	38.8	58.9	2.3	0.0	0.0	38.9	58.1	0.0	3.0	2002
WA	45.9	52.7	0.4	2178	44	54.1	2123	44	54.1	2123	45.1	55	45.6	52.8	1.5	25.3	0.0	0.0	64.3	0.0	10.3	2004
WI	48.8	49.7	0.5	2321	48.8	49.2	2223	48.8	49.2	2223	47.5	52.5	49.3	49.8	0.9	0.0	1.2	33.7	65.1	0.0	0.0	2002
WV	55.5	43.0	0.5	1728	54	44.5	1722	54	44.5	1722	54.8	45.3	56.1	43.2	0.7	36.9	6.3	7.3	44.5	5.0	0.0	2004
WY	69.0	28.9	1.5	761	65.5	30.9	684	65.5	30.9	684	65	29	68.9	29.1	2.1	13.0	4.3	0.0	80.5	2.2	0.0	2004