

A criticism of the CalTech/MIT Voting Technology Project's “Voting machines and the underestimate of the Bush vote”

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Abstract I critique the arguments employed by the CalTech/MIT Voting Technology Project's “Voting machines and the underestimate of the Bush vote” and conclude that the conclusions drawn by the Project are much too strong based on the analysis done. Finally, I call for a multistate audit of the vote, to determine whether the exit polls went awry or whether the new and unproven voting technologies miscounted the vote.

1 The Critique

Hereafter I shall refer to the article “Voting machines and the underestimate of the Bush vote” issued under the name of the CalTech/MIT Voting Technology Project as the report. The report purports to debunk the notion that one should be suspicious based on exit polls of the 2004 presidential election results. It considers several arguments put forth on the Internet and concludes that “[t]here is no evidence that electronic voting machines were used used to steal the election for George Bush”. The report says that the facts being circulated on the Internet “appear to be selectively chosen to make the point”. This will turn out to be a valid self critique of the report.

In the first place, the theories being put forth on the Internet are not sequential arguments, therefore it is not enough to merely undermine one argument. Sequential arguments form a chain, therefore undermining their weakest link undermines the argument. However, the arguments put forth on the Internet are many and varied and do not depend on one another. The report is particularly fond of picking on the Blue Lemur website [1], but even disproving everything claimed on the Blue Lemur website would not allow the report to draw the kind of sweeping conclusions that it draws.

Secondly, the report uses data based on CNN's “final exit polls” [2]. However, CNN continued to modify their exit polls until at least 1:30 a.m. on the morning of Wednesday November 3, 2004. This is understandable in Ohio, where voters didn't finish voting until 2 a.m. Wednesday morning [3], but it becomes less understandable that they modified their exit polls in Iowa and Florida between 12 a.m. and 1:30 a.m. (See Appendix B for a verification of this modification in Iowa.) Are we to believe that voters were still voting in Iowa at 11 p.m. local time? The fact that the report uses modified exit polls draws the credibility of its claim that “there is not any apparent systematic bias when we take this [exit poll] analysis to the state level” into question.

Even though it may have made sense to modify the Ohio exit polls until 2 a.m. Wednesday morning, a closer analysis of these polls suggests that the modification was not legitimate. Appendix A taken from [4] and [5] shows more detail on the Ohio exit polls as reported by CNN at 12:21 a.m. and at 1:41 a.m. As pointed out

in [6], at 12:21 a.m. based on 1963 respondents, 47% of whom were men, of which 51% said they voted for Kerry, CNN essentially reported that 470 men responded that they voted for Kerry. Whereas, at 1:41 a.m. based on 2020 respondents, 47% of whom were men, of which 47% said they voted for Kerry, CNN essentially reported that 446 men responded that they voted for Kerry. How did the number of male respondents who said they voted for Kerry decrease?

Furthermore the report says that “all of the charges of election rigging using electronic voting machines pertain to states, since elections are run as state and local affairs.” However this is not true in light of the fact that there are only four corporations that make all of the electronic voting equipment (as defined in the report not to include optical scan machines) nationwide [7]. (This may be true even if optical scan machines are included.) County officials usually hire consultants from these four companies or other tabulation companies, which may exist solely to help with the tabulation of the vote totals on election night. Often the employees of the tabulation companies are also employees of the companies which manufacture the electronic voting equipment.

Perhaps most importantly, a great deal of the statistical analysis is aimed at looking for patterns where none need exist. The report states “[i]f nefarious vote stealers had commandeered electronic voting machines on George Bush’s behalf, we would expect for the greatest discrepancies between the exit polls and the official counts to have been in the states that used electronic machines the most”. Two points are in order. First, this statement assumes that the vote needed to be stolen evenly and that it needed to be on the machine level. Neither of these is true. The vote can be manipulated through the centralized tabulation software, such as the GEMS software which is used for Diebold systems. This software is notoriously insecure and vulnerable to hackers with easily obtainable information [8]. Manipulating this software, potential riggers could add votes at the county level on a precinct by precinct basis in one or more counties chosen to balance their goals of giving Bush a plurality of the popular vote, giving Bush a majority of the electoral college, and not getting caught. Therefore any statistical analysis based on this unwarranted assumption is pointless. Second, the report misdefines electronic for these purposes. The definition should include optical scan voting machines since the results are tabulated by the same software that is used to tabulate results for direct-recording electronic machines. I would expect members of the Voting Technology Project to be aware of this.

The conclusion of the report finding “no evidence, based on exit polls that electronic voting machines were used to steal the 2004 election for President Bush” is far too strong a conclusion based on the limitations of the study done in the report as discussed above.

2 Call for an audit

It is not the purpose of this article to find original exit poll data and see whether deviations from reported ballot totals are statistically significant. Such an analysis is more complicated than just analyzing a sample of, say, 2,000 voters drawn from Ohio at large. Exit polls target particular precincts and then adjust the results. In any case, there are many, including those with much experience with exit polls, and including those with “conservative” leanings, who think that the exit poll numbers from the 2004 Presidential race at the state level are indications of something being amiss. Dick Morris, for example, says in [9] that “[e]xit polls are almost never wrong...This was no mere mistake. Exit polls cannot be as wrong across the board as they were on election night. I suspect foul play.”

It has not been proven that the vote was counted incorrectly on a systematic basis which would alter the outcome of this Presidential election. (Although, it has been shown that electronic voting errors have swung other smaller elections [10]). Neither has it been proven that the votes have been counted correctly. Elections belong to the public and must be open, transparent and auditable. The burden of proof lies on those who claim the votes were counted correctly. Voter confidence is essential to the functioning of our democracy and voters have a right to know whether the votes are being counted accurately. An inordinate amount of trust, either in elected officials or in corporations hired by these elected officials, should not be expected of

Americans.

Furthermore, an audit of the vote is possible since paper trails exist in Nevada [11], wherever optical scan machines are used, and elsewhere where punchcards etc. are used. Statistical methods can then be used to look for anomalies where no voter verifiable paper trail exists.

Finally, the failure to verify that any votes were counted incorrectly should not be interpreted as proof that they were counted correctly. The burden of proof lies on our election officials to demonstrate that they have chosen systems which count the votes accurately. Such a demonstration, should not rely on the word of consulting companies, but be verifiable by ordinary citizens without extremely specialized knowledge.

Let's have a nationwide audit with the goal of finding out not only what happened in the 2004 Presidential election and other races, but also if our votes are being counted correctly!

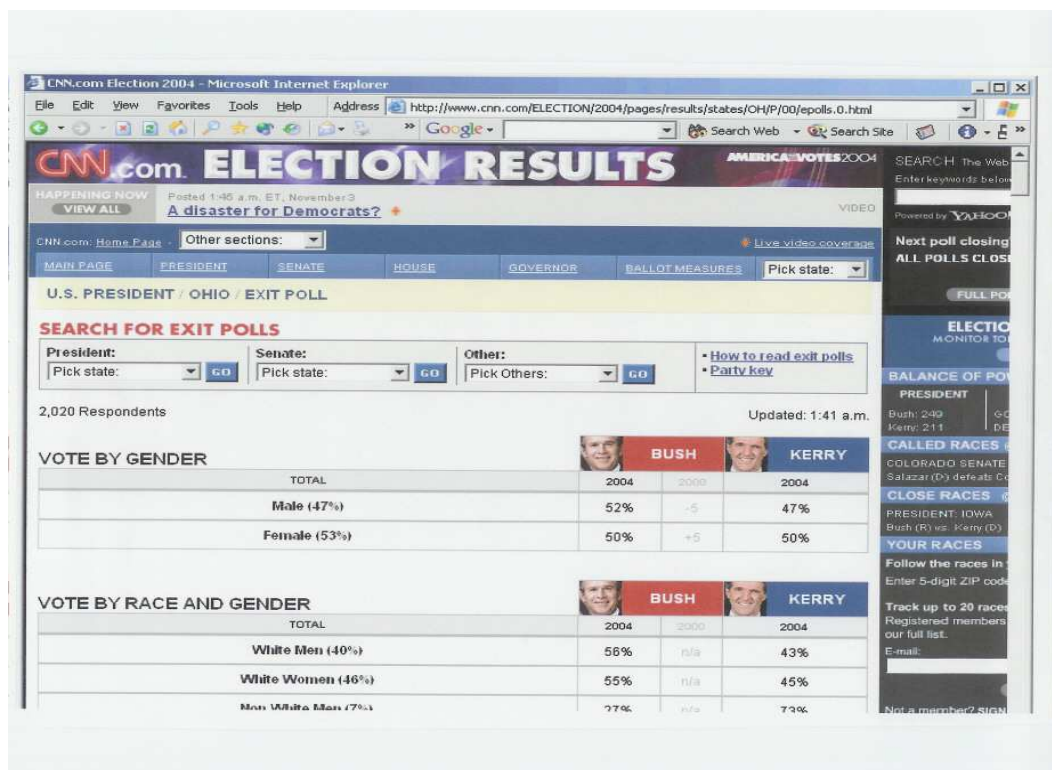
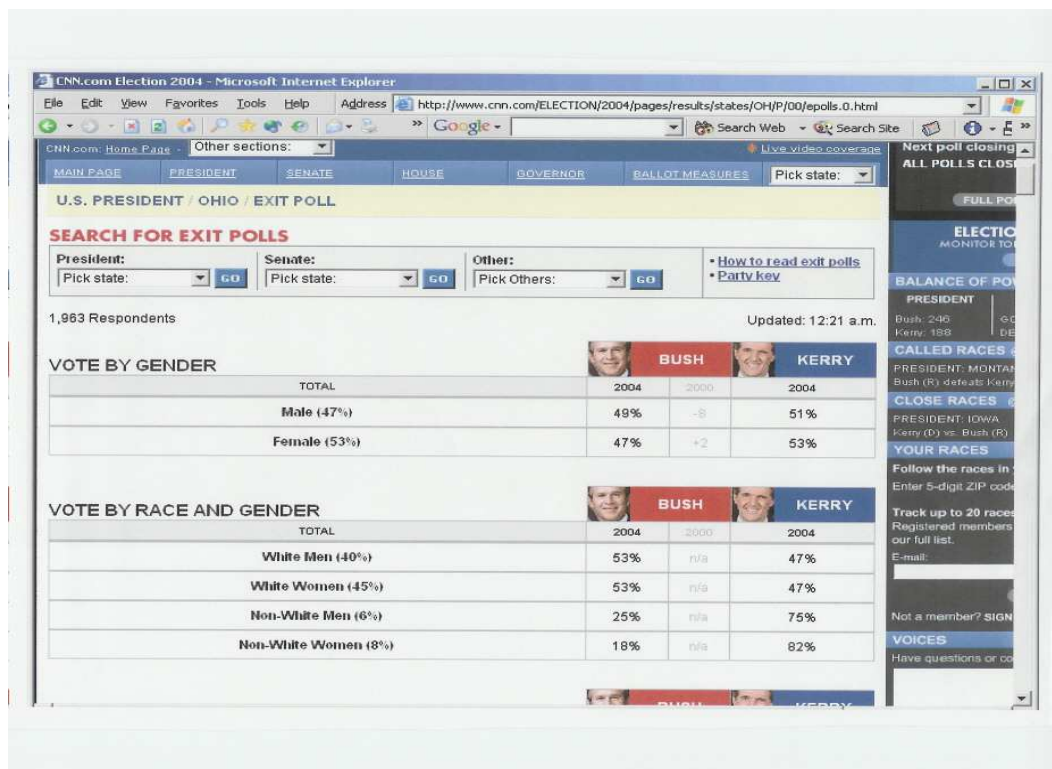
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References

- [1] <http://www.bluelemur.com/>
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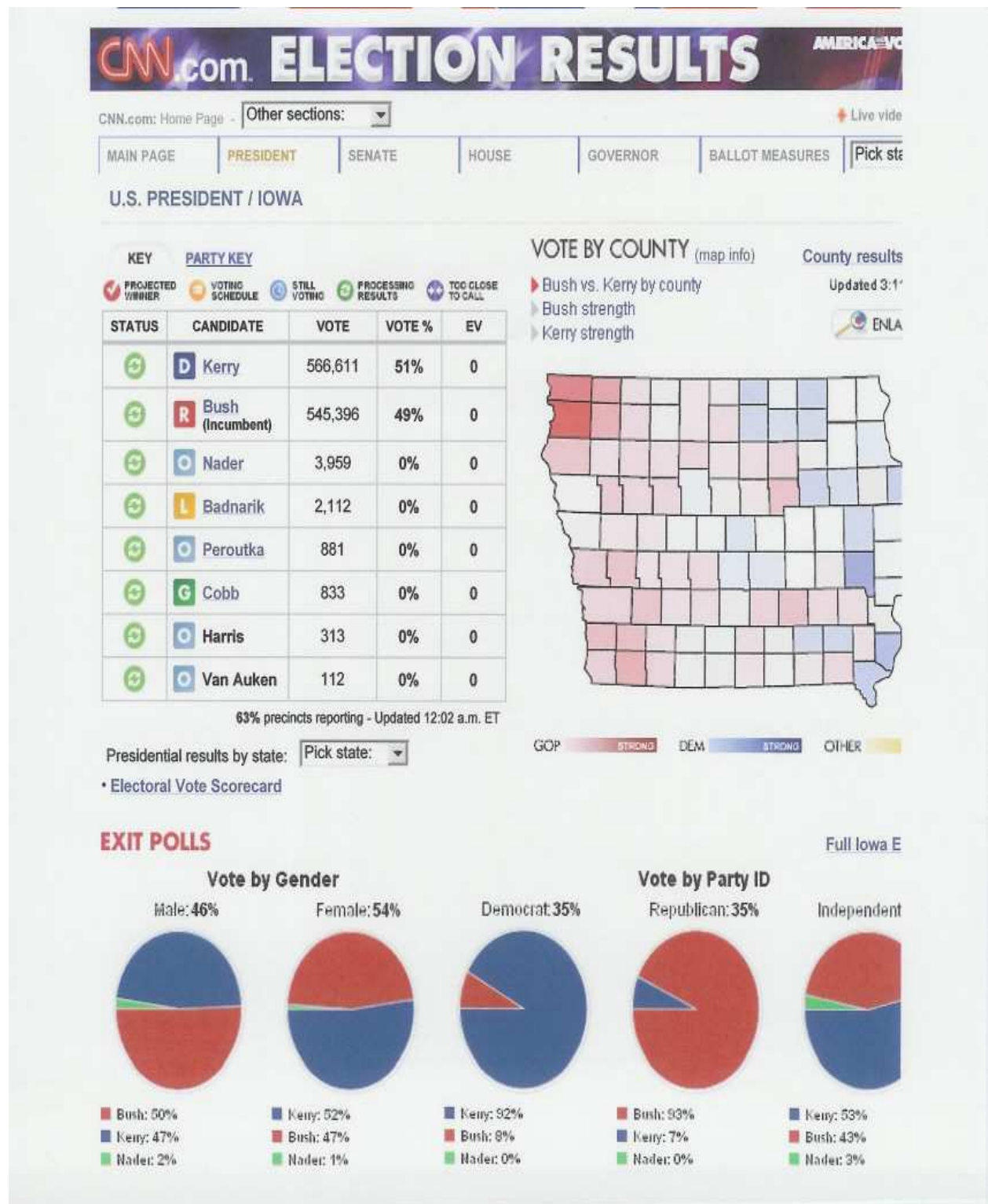
3 Appendix A: The Ohio Exit Polls

Exit poll results (with number of respondents) at 12:21 a.m. and 1:41 a.m. on Wednesday Nov. 3, 2004.



4 Appendix B: The Iowa Exit Polls

Exit poll results (without number of respondents) at 12:02 a.m. and 1:30 a.m. on Wednesday Nov. 3, 2004.



CNN.com: Home Page -

Live video

U.S. PRESIDENT / IOWA

KEY [PARTY KEY](#)

PROJECTED WINNER
 VOTING SCHEDULE
 STILL VOTING
 PROCESSING RESULTS
 TOO CLOSE TO CALL

STATUS	CANDIDATE	VOTE	VOTE %	EV
	R Bush (Incumbent)	697,370	50%	0
	D Kerry	690,277	49%	0
	O Nader	5,313	1%	0
	L Badnarik	2,637	0%	0
	O Peroutka	1,179	0%	0
	G Cobb	1,042	0%	0
	O Harris	342	0%	0
	O Van Auken	146	0%	0

92% precincts reporting - Updated 1:30 a.m. ET

Presidential results by state:

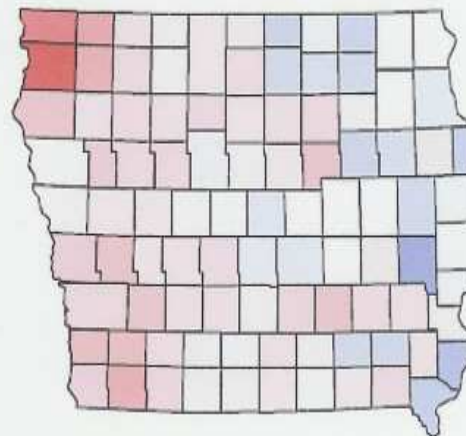
• [Electoral Vote Scorecard](#)

VOTE BY COUNTY (map info)

County results

Updated 3:1'

- Bush vs. Kerry by county
- Bush strength
- Kerry strength

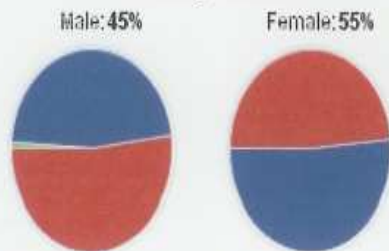


GOP STRONG
 DEM STRONG
 OTHER

EXIT POLLS

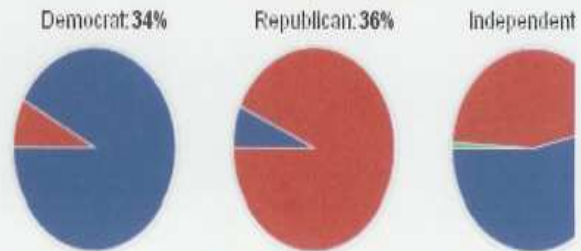
Full Iowa E

Vote by Gender



Male: 45%
 Female: 55%
 Bush: 52%
 Kerry: 47%
 Nader: 1%
 Kerry: 51%
 Bush: 48%
 Nader: 0%

Vote by Party ID



Democrat: 34%
 Republican: 36%
 Independent: 30%
 Kerry: 92%
 Bush: 8%
 Nader: 0%
 Bush: 93%
 Kerry: 7%
 Nader: 0%
 Kerry: 53%
 Bush: 45%
 Nader: 1%