Introduction

Having confidence in our elections is central to our faith in our government and all of the decisions that we make collectively as a nation. But are the candidates who win the ones we actually vote for?

A large and growing body of research provides convincing evidence that U.S. electronic voting equipment in many areas throughout the country is not counting the votes accurately. This could be due to malfunctions in computer equipment that in 43 states is over a decade old, and long past its natural life. However, in many cases, the evidence strongly suggests that fraud is the likely explanation. These problems have been occurring since at least 2004, and are certainly present in the current 2016 presidential primaries.

We examined the election results of the 2016 presidential primaries, and found irregularities in the overwhelming majority of the twenty-one states that we analyzed. The data indicates, in particular, that the totals reported in the Democratic race between Hillary Clinton and Bernie Sanders may not be correct. In state after state, independent examination by two separate analysts found suspect statistical patterns giving Clinton inflated percentages, that in all likelihood are not fully based on actual votes; and leaving Sanders with what appear to be artificially depressed totals.

The difference between the reported totals, and our best estimate of the actual vote totals, varies considerably from state to state. However, these differences are significant—sometimes more than 10%—and could change the outcome of the 2016 Democratic presidential primary. We found irregularities in the 2016 Republican presidential primary as well, and while concerning, we do not believe they are large enough to change the outcome of that race.

Fritz Scheuren, a member of the statistics faculty at George Washington University, and a former president of the American Statistical Association, has been a collaborator in this research. Examining the data from the study, Scheuren said, “As a statistician, I find the results of the 2016 primary voting...
unusual. In fact, I found the patterns unexpected [and possibly even] suspicious. There is a greater degree of smoothness in the outcomes than the roughness that is typical in raw/real data.”
It is important to note that the fact that a candidate benefits from irregularities does not imply that a candidate is responsible for them.

In January 2014, The Presidential Commission on Election Administration published a report stating, “Perhaps the most dire warning the Commission heard in its investigation … concerned the impending crisis in voting technology. Well-known to election administrators, if not the public at large, this impending crisis arises from the widespread wearing out of voting machines purchased a decade ago (p.62.)”

At a congressional briefing on voter suppression, held on April 21, 2016, Rep. Hank Johnson (D-Georgia) expressed grave concern about the security of the voting equipment: “There is a very insidious, treacherous and deceitful method of voter suppression, and it has to do with the integrity of the voting process itself... one possibility, and I think it's a very good one, is that someone's manipulating the counting of the votes. Someone is hacking into these computers that tabulate the votes."

**An Environment of Corruption**

The portrait of an electoral system in crisis is further supported by reports from election integrity organizations, media outlets, and individuals on social media that voting is increasingly taking place in a corrupt environment. This contextual evidence of voters purged from the rolls, registrations lost in the mail, party registrations being changed without a voters’ knowledge or intent, voters being sent incorrect ballots, a shortage of ballots, polling places being closed, discouragingly long lines in targeted precincts and states, and disturbingly large disparities between initial exit polls and official results, lends credence to the argument that if one form of fraud is already in play, another form of fraud is more plausible. This information is being aggregated by election integrity groups such as [Election Justice USA](http), through voter testimonials and lawsuits that are in progress around the country.

Figure 1 is an example of a disenfranchised voter from the 2016 presidential primaries. Stories like this have been ubiquitous in many states, including Arizona, New York and California. More of these instances are documented in [this article on Heavy.com](http).

Fig. 1 — Facebook post: Becky Dillon, a California voter forced to vote via provisional ballot, June 7, 2016
Difference Between Hand Counts and Machine Counts

If voting-machine results were inaccurate on a regular basis, there would be some evidence of it. One indicator would be that votes counted by machines would give different results than votes counted by hand. In fact, this is now being seen in elections all over the country.

In the 2016 Democratic primary in Kings County, New York (Brooklyn,) a group of affidavit ballots were hand-counted by a group of volunteers. Comparing the hand-counts with the machine-counts, there is a noticeable difference (Figure 2). In every single assembly district we examined, except one, Hillary Clinton performed better when the votes were counted by machine; Sanders performed better when the votes were counted by hand. The graph shows eight of the districts that were included in the study. This is a small sample of the overall ballots cast, but the consistency of the results makes a convincing case that something is amiss.

![2016 Kings County, N.Y. Hand-Counted vs. Machine-Counted Ballots](image)

**Fig. 2** — Hand-counted ballots show a consistently higher return for Sanders in the 2016 New York presidential primary

*Graph by Anselmo Sampietro*

Difference Between Small Precincts and Large Precincts

We will now focus on statistical irregularities, and by that we mean results that defy statistical laws. The technique we are using is called the “Cumulative Precinct Vote Tally Chart,” also known as a CVT (cumulative vote tally) graph. The CVT graph shows the precincts added together cumulatively from the smallest to the largest along the X-axis. On the Y-axis it shows the two candidates’ percentages. Columbia County, New York — a hand-counted county — shows a pattern that follows the statistical principle called The Law of Large Numbers (Figure 3). This graph illustrates the expected statistical
pattern – on the right hand side, it flattens out. That is because by the right side of the graph, so many precincts have been added together that the pattern demonstrates the candidate’s average percentage of support.

In this graph, there is a large degree of fluctuation both up and down on the left side of the graph. Then, by about 1,300 votes, the graph settles into a fairly even straight line, with small, random fluctuations. It maintains a basically flat line through all of the largest precincts. This is a very normal-looking CVT graph.
Many states in the 2016 primary did not follow this expected statistical pattern, but exhibited various irregularities instead. For example, in Illinois, the statistical pattern shows a strong correlation between candidates’ percentages and precinct size. The smooth ascension of Clinton’s percentages as the precinct sizes increase is suspect. In our report we reviewed many factors, including demographic factors, but could not find a plausible explanation for these large differences between the expected statistical pattern and the reported vote totals. In all likelihood our research indicates these patterns are a sign of manipulation.

![Fig. 4 — 2016 Illinois Democratic presidential primary](graph.png)

Candidates’ percentages in small and large precincts are very different

*Graph by Anselmo Sampietro*
Figure 5 shows a graph of the 2016 Louisiana Democratic Primary. The analysis is by Beth Clarkson and Anselmo Sampietro confirmed its accuracy.

This graph is in complete violation of the Law of Large Numbers. For a candidate to receive this level of increased support in the large precincts, each new precinct must be so heavily weighted that it defies the average of all the other precincts that have already been added together. This is a major statistical irregularity. In the small precincts, the difference between Clinton and Sanders is approximately 10% (Clinton 48%–Sanders 38%). However, in the largest precincts the difference between the candidates is 46% (Clinton 70%–Sanders 24%). That is a difference of 36% support between the smallest precincts and the largest precincts.

We found suspect statistical patterns suggesting that the reported totals are not correct in the 2016 Democratic presidential primary in Alabama, Connecticut, Delaware, Florida, Georgia, Illinois, Kentucky, Louisiana, Massachusetts, New York, North Carolina, Ohio, South Carolina, Tennessee, and West Virginia. These irregularities were significant, as we demonstrate in Louisiana, sometimes as large as 36% and could change the outcome of the election.

Read the full report at the author’s website: http://www.electoralsystemincrisis.org