

# **HOW TO STUFF THE ELECTRONIC BALLOT BOX: “HACKING AND STACKING” IN PIMA COUNTY, ARIZONA**



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On November 2, 2004, John R. Brakey was the Democratic Cluster Captain for four precincts in Arizona Legislative District (LD) 27, part of the predominately-Hispanic, 80 percent non-Republican Congressional District 7. LD 27 encompasses a part of Pima Country southwest of the city of Tucson. John was new to the job, and part of his duties was to pick up carbon copies of the hand-printed list of voters who had already cast their ballots, a form called the Consecutive Number Register (CNR). In three of John's four precincts, poll workers greeted him with hostility, and in one case they attempted to conceal the existence of several completed CNR pages for which he was requesting copies.

About two hours after the official closing time, he returned to his home polling place, a school located in Precinct 324, to see if he could pick up the final copy of the CNR. To his shock, he walked in on poll workers apparently in the act of altering the document, which should have been completed at the time of the arrival of the last voter. John also observed that the vault to the Diebold optical-scan voting machine was open, instead of being locked shut as it should have been. When he approached

to see what they were doing, the poll workers rose to their feet in unison, cursing him and telling him to get out.<sup>1</sup>

The next morning, John caught Greg Palast on *Democracy Now*, urging election sleuths to go to their polling places and pick through the trash for possible evidence of fraud. John did just that. After finding nothing in the trash outside, he walked into the school library where the voting had taken place, where he noticed several boxes. One was unsealed and held 924 “Advice to Voter” slips, which he had seen the poll workers working with the night before. He stuffed these slips into his jacket and left. These slips turned out to be the key to proving what the poll workers had been up to.

From that moment on, figuring out exactly what had just transpired became John’s all-consuming passion. He abandoned his job and began working 18-hour days gathering and entering into Excel spreadsheets all the available public records bearing on the voting at Tucson Precinct 324 on Election Day 2004. I soon joined him in the forensic analysis of these records. Eventually it became clear to us that the poll workers at Precinct 324 were making, and causing voters to make, large numbers of errors in the “poll books,” which are the public records of Election Day, including the Signature Rosters where the voters are supposed to sign in.

It turned out that the two head poll workers at Precinct 324, the Reverend Benjamin Khan and his wife, had made seven different kinds of errors *exactly eleven times each*. If those errors had been truly random (for example, if they were due to incompetence) then the odds of all seven having happened exactly eleven times each was less than one in 20 million. Therefore, the only possible conclusion was that the Khan team had made those errors deliberately. The only reason we could think of as to why they would do this was to steal votes by stuffing the ballot box according to a well-practiced system involving (1) creation of one of each kind of poll-book “error” about once every hour, and (2)

performance of one illegal ballot manipulation corresponding to each of these “errors.” Such a system would have had the advantages of spreading out the ballot manipulations throughout the twelve-hour Election Day, as well as leaving behind a record in the poll books that was so confusing that even the likes of Sherlock Holmes would have had great difficulty reverse-engineering their scheme. John filed a complaint with the Pima County Attorney’s office, but the complaint was eventually dismissed after the Pima County Elections Director reportedly fired the Khans for “incompetence.”

How many votes might the Khans have stolen? My most conservative estimate, based on the November 2, 2004 Precinct 324 poll books, is a 6.9 percent net vote shift based on the assumption that the poll workers utilized no more blank ballots than those officially issued to them. However, extra ballots would have been easy enough to obtain, because at that time anyone in Pima Country could request up to two replacement mail-in ballots before the election without returning a spoiled one. (John Brakey’s wife had actually ruined hers and was sent another, no questions asked.) At a presentation I made to the American Association for the Advancement of Science in 2007, I inferred a larger shift of 12.8 percent, which I recently corrected to 11.5 percent.<sup>2</sup> This number derives from documentary evidence implying that the poll workers at Precinct 324 handed out twenty-two illicitly obtained blank ballots to voters who signed a roster on Election Day, but whose names do not appear on the CNR; destroyed these ballots (which were presumably for Kerry) after voters had marked them; and then cast nineteen illicit ballots (presumably for Bush) in the names of voters who appeared on the CNR, but who had not signed any roster. Furthermore, the poll workers admitted on the Official Ballot Report and Certificate of Performance that “[It] appears 3 extra ballots—not sure why!”

Early on, John Brakey had realized that election insiders had

the motive, means, and opportunity to hack the 1.94w memory cards of the Diebold optical scanners and/or the GEMS central tabulators. He thus reasoned that the Khan team must have been stuffing the ballot box against the possibility of an audit being required, in which case crooked elections officials would have been standing by to “randomly” select precincts like 324 as the only ones to audit. Such a ploy would have created the illusion that the election was honest. John termed this two-pronged attack the “Hack and Stack.”<sup>3</sup>

**MAIL-IN BALLOTS: AN INVITATION TO THE PERFECT CRIME**

Table 1 shows the official results of Election Day 2004 voting for Legislative District 27. Note that the ever-vulnerable mail-in vote exhibits 2.4 percent *fewer* Bush votes than he received in the at-the-precinct voting, while Kerry got 2.7 percent *more*. Thus, at first glance it might seem that the mail-ins had actually been stolen on Kerry’s behalf. But things are not always as they seem.

| Averages of 63 Precincts of AZ LD 27 | Kerry/Dem | Bush/Repub | Other |
|--------------------------------------|-----------|------------|-------|
| E2004 At-Precinct Voting             | 61.9%     | 37.0%      | 1.0%  |
| E2004 Early/Mail-In Voting           | 64.6%     | 34.6%      | 0.9%  |
| Party Registration                   | 48.8%     | 20.6%      | 30.6% |

After nearly two years of assuming I had done all I could by way of exposing election fraud in Pima County, I was inspired to return to the Excel spreadsheets of the 2004 election data compiled by John Brakey for all sixty-three precincts of Arizona LD 27. My idea was to take a deeper look at the relative presidential vote shares in the three permissible forms of voting on Election Day 2004: (a) Provisional, (b) At-the-Precinct, and (c) Mail-In. My operating hypothesis was that the presidential voting patterns may vary from precinct to precinct, but *within*

*the same precinct* the Kerry (and Bush) vote shares (expressed as percentages of the total) should be virtually identical in each of these three voting forms. Stated in another way, the ratios of Kerry's (and Bush's) percentage vote share of form (a) to that of form (b) to that of form (c) should be very close to 1.0 to 1.0 to 1.0 for large enough voting units, provided the election was not hacked in one or two of these three forms. Here is how I went about it.

First, it seemed safe to assume that those provisional ballots actually accepted by the County Registrar of Voters were virtually 100 percent honest, since each was sealed in an envelope with a voter signature and printed name and address on an affidavit affixed to the outside. For such a ballot to be accepted, the recorder must recognize that the signer of the affidavit is registered to vote in that precinct, that he/she appeared at the correct polling place on Election Day to fill out his/her provisional ballot, and that he/she did not vote early (or elsewhere).

I hoped it might be possible to use the provisional ballots as a benchmark for the way people truly voted.<sup>4</sup> The first thing I did was to take the ratios of the presidential vote shares of provisional ballots to the corresponding same-precinct mail-in shares. Figure 1 displays the individual-precinct provisional-ballot-to-mail-in ratios of the Bush shares, while Figure 2 shows the corresponding ratios for the Kerry shares.

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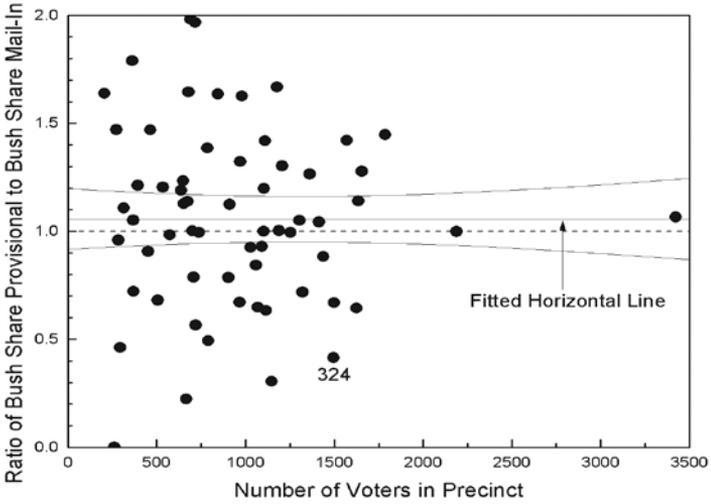


Figure 1. Election-2004 data for 63 precincts of Arizona Legislative District 27: Ratio of Bush's share of the (accepted) Provisional ballots to Bush's official share of the Mail-In ballots for each precinct.

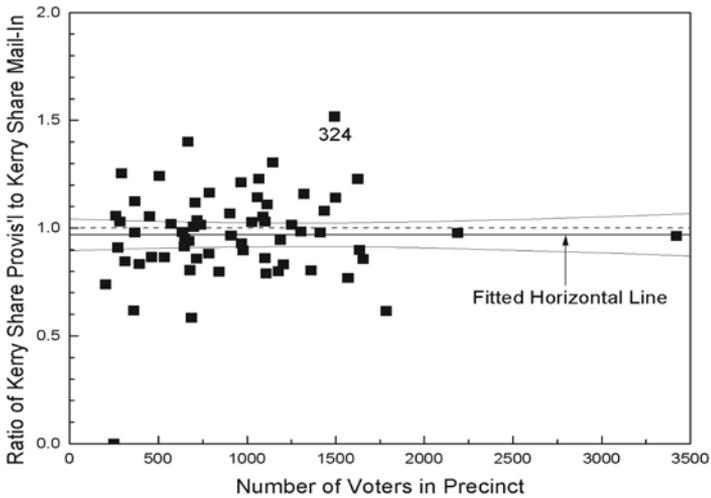


Figure 2. Election-2004 data for 63 precincts of Arizona Legislative District 27: Ratio of Kerry's share of the (accepted) Provisional ballots to Kerry's official share of the Mail-In ballots for each precinct.

Next, I used the mathematical curve-fitting software that came with my graphing program to obtain the continuous horizontal lines in Figures 1 and 2 as the best fits of these data. Lo, each of these fits agreed with my “null hypothesis” that in an honest election these ratios should equal 1.0 (represented by the horizontal dashed line) within the 95 percent confidence limits concomitantly generated by my software (the pair of curved lines above and below the fitted line). Thus, to my surprise, I was forced to conclude that the vast majority of the mail-in ballots were probably not hacked.

But I still wanted to look at the ratios of the at-the-precinct data in comparison to the statistically significant (and now shown to be mostly honest) mail-in data. We see in Figure 3 that Bush’s ratio of at-the-precinct vote shares to his (mostly honest) mail-in shares were shifted on average 11.5 percent in his favor, a shift well outside of the 95 percent confidence limits pertaining to the fitted horizontal line.

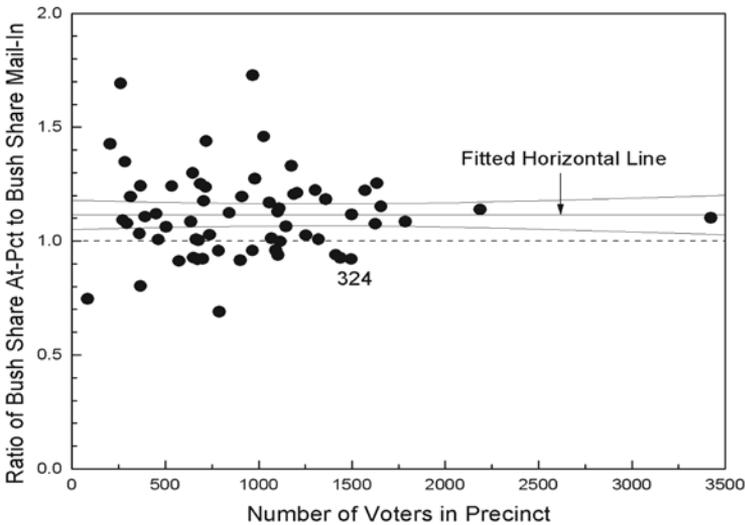


Figure 3. Election-2004 data for 63 precincts of Arizona Legislative District 27: Ratio of Bush’s official share of At-the-Precinct ballots to Bush’s official share of the Mail-In ballots for each precinct.

In Figure 4, the ratios of Kerry’s at-the-precinct vote shares to his (mostly honest) mail-in shares are seen to be shifted an average of 5 percent against him, again outside the 95 percent confidence limits.

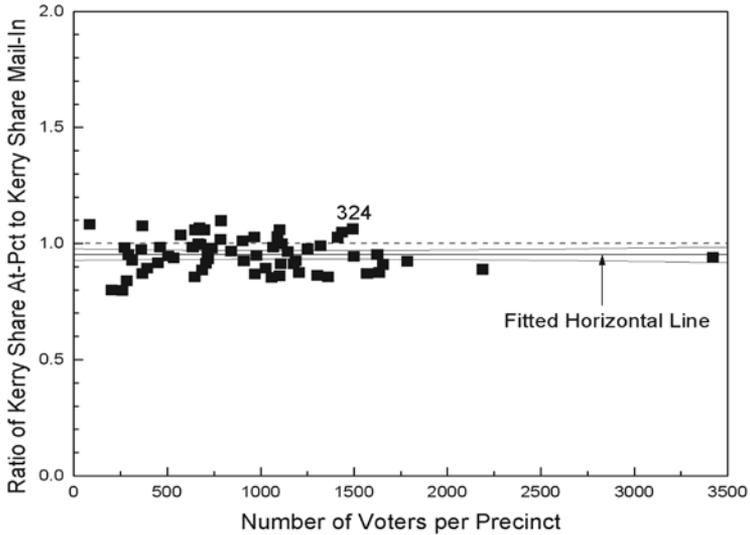


Figure 4. Election-2004 data for 63 precincts of Arizona Legislative District 27: Ratio of Kerry’s official share of At-the-Precinct ballots to Kerry’s official share of the Mail-In ballots for each precinct.

I believe that these four graphs constitute sufficient proof that the at-the-precinct vote at AZ LD 27 was stolen for Bush by insider implantation of vote-flipping codes in the 1.94w memory cards of the Diebold optical scanners and/or by alteration of the totals in the Diebold GEMS central tabulators by Pima County election officials.

**PRECINCT 324: DOING THE NUMBERS ON THE REGISTERED VOTERS WHO EXPRESSED NO PARTY PREFERENCE**

A critical reader might well ask: Couldn't the poll workers at John Brakey's Precinct 324 have been stealing votes on Kerry's behalf, given the positions of the Precinct 324 data points labeled in Figures 3 and 4? Well, let's take a closer look at the data. Table 2 breaks out the actual 2004 at-the-precinct and mail-in vote shares of Kerry and Bush in Precinct 324:

| Precinct 324 of AZ LD 27   | Kerry/Dem | Bush/Repub | Other/NOP |
|----------------------------|-----------|------------|-----------|
| E2004 At-Precinct Voting   | 56.9%     | 41.6%      | 1.6%      |
| E2004 Early/Mail-In Voting | 53.6%     | 45.1%      | 1.3%      |
| Party Registration         | 47.1%     | 21.5%      | 31.5%     |

Now let's look at what happens when we subtract the LD-wide-average data shown in Table 1 from the corresponding data in Table 2. In Table 3, we see that Kerry did stunningly *worse* (and Bush correspondingly much better) at Precinct 324 than the average for the entire Legislative District 27. In particular, there was a net mail-in shift of 19.0 percent in Bush's favor (after correction for the lower-than-average Democratic Party registration.)

| Difference (Pct 324) - (LD-27 Average) | Kerry/Dem | Bush/Repub | Other/NOP |
|--|-----------|------------|-----------|
| E2004 At-Precinct Voting               | -5.0%     | 4.5%       | 0.5%      |
| E2004 Early/Mail-In Voting             | -11.0%    | 10.6%      | 0.4%      |
| Party Registration                     | -1.7%     | 0.8%       | 2.4%      |

Let me explain this kind of "vote shift" calculation by using the Precinct 324 at-the-precinct vote shares as the next example. In the first row of Table 3, we see that Kerry had a 5.0 percent *smaller* (negative) at-the-precinct vote share than his LD-27-wide aver-

age. We also see that Bush had a 4.5 percent *larger* at-the-precinct share than his LD-27-wide average. To get the “gross shift” of votes from Kerry to Bush, we subtract the number in the Kerry column from the number on the same row in the Bush column. This yields a gross at-the-precinct shift of 9.5 percent in Bush’s favor. (Remember, in Table 3 we are measuring all shifts relative to the LD-27-wide average.)

However, if we wish to improve our accuracy, we really ought to correct for the fact that there were 1.7% fewer registered Democrats at Precinct 324 and 0.8% more registered Republicans than was the case for the average LD-27 precinct (third row of Table 3). But for purposes of making any “correction” based on party registration, we have no choice but to first make a “modest assumption,” namely, that all registered Democrats voted for Kerry and all registered Republicans voted for Bush (or the numbers of cross-over voters were exactly equal). Then, to make the proposed correction under this assumption, we take the shift of party registration (in this case in Bush’s favor) at Precinct 324 relative to the LD-wide average ( $1.7+0.8 = 2.5\%$ ) and subtract it from the gross at-the-precinct Kerry-to-Bush shift relative to the LD-27-wide average (9.5%) to get the net at-the-precinct shift that might be the result of fraud (7.0%).

In the discussion below, I will begin using the terms “red shift” and “blue shift,” as well as the acronym “NOP.” By a “red shift” I mean a shift favoring Bush (a Kerry loss plus a Bush gain adding to a positive number), and by a “blue shift” I mean one that favors Kerry (a Kerry gain plus a Bush loss adding to a positive number). I will use “NOP” to denote not only the voters who registered as “No Party Preference,” but also those very few registered as third-party voters.

Subject to our “modest assumption,” one may calculate the percentages of NOP’s who cast their votes for each candidate. Consider Bush’s Precinct 324 at-the-precinct share of 41.6% in Table 2. If we subtract from this the Republican Party registra-

tion of 21.5%, we get 20.1%, which, under our assumption, is the percentage of all voters at Precinct 324 on Election Day 2004 who voted for Bush but were neither Republicans nor Democrats. Therefore, this percentage must have been drawn from the pool of voters that I lump together as NOP. Let's take the ratio of this number to the percentage of all voters (no matter who they voted for) who were registered NOP (or third party), seen from Table 2 to be 31.5%. Expressed as a percentage, 20.1% divided by 31.5% is 64%—an unexpectedly large percentage of NOPS voting for Bush.

Still, the devil's advocate would argue that all red shifts resulted from NOP voters at Precinct 324—and LD-wide—who simply decided to vote for Bush in large numbers. Were the NOPS in John Brakey's predominately-Hispanic precinct rabidly pro-Bush? Not according to the canvasses that John and I carried out a few days before the election, as we encountered very few Bush voters among those NOPS and infrequently voting "turnout" Democrats we spoke to. (Unfortunately, our canvass sheets were lost before we could total them up, so we have no objective pre-polling numbers for that part of Tucson.) Nevertheless, I did retain the results of my own canvass for MoveOn.org of several more-affluent, less-Hispanic, and more-Republican neighborhoods in Arizona Congressional District 8, in the Catalina foothills to the northeast of Precinct 324. Of the 115 individual NOPS and "turnout" Democrats I interviewed there, 95 were certain of, or leaning toward, voting for Kerry, while only six had any intention of voting for Bush.

Let me put these numbers in perspective. I conducted what might be regarded as a statistically significant poll of a predominately upper-middle-class Tucson neighborhood and found that 83% of the NOPS and turnout Democrats intended to vote for Kerry, while only 5% planned to vote for Bush. So, if you should persist in believing that 64% of the at-the-precinct and 75% of the mail-in NOP voters in predominately-Hispanic, less-affluent

Precinct 324 really voted for Bush, there is a bridge in Brooklyn I would like to sell you!

**WERE OTHER PRECINCTS AFFECTED IN THE SAME WAY AS PRECINCT 324?**

On the basis of the above evidence, I concluded that the mail-in votes for Precinct 324 were hacked. So, the next question becomes: In how many other precincts can the nail-in vote have been hacked? It cannot have been too many, given that Figures 1 and 2 show that the LD-wide average Bush and Kerry shares of the provisional ballots (presumed honest) are equal to their corresponding average shares of the mail-in ballots within 95 percent statistical confidence.

I decided that two of the prime candidates for investigation were the other two precincts (numbers 271 and 235) where John Brakey encountered poll workers behaving peculiarly and/or reacting hostilely to his legitimate presence on Election Day 2004. Tables 4 and 5 show the official results for Precincts 271 and 235, respectively, presented in terms of their differences from the LD-wide averages (exactly analogous to Table 3):

| Difference (Pct 271) - (LD-27 Average) | Kerry/Dem | Bush/Repub | Other/NOP |
|--|-----------|------------|-----------|
| E2004 At-Precinct Voting               | 1.9%      | -1.2%      | -0.7%     |
| E2004 Early/Mail-In Voting             | -2.6%     | 2.8%       | -0.2%     |
| Party Registration                     | 5.0%      | -2.7%      | -0.8%     |

We see in Table 4 a 3.1% gross blue shift in the at-the-precinct voting, and a 5.4% gross red shift in the mail-ins. But when we take into account the net 7.7% party registration advantage enjoyed by the Democrats over the Republicans in Precinct 271, we arrive at the following corrected numbers relative to the average for LD 27: a 4.6% net at-the-precinct *red* shift, and a

hefty 13.1% net red shift in the mail-ins.

Now let's look at Precinct 235. In Table 5, we see a 2.3% net red shift in the at-the-precinct voting and a whopping 13.8% net red shift in the mail-ins (both taking into account the tiny 0.2% correction for party registration):

| Difference (Pct 235) - (LD-27 Average) | Kerry/Dem | Bush/Repub | Other/NO |
|--|-----------|------------|----------|
| E2004 At-Precinct Voting               | -1.5%     | 0.6%       | 0.9%     |
| E2004 Early/Mail-In Voting             | -7.5%     | 6.1%       | 1.4%     |
| Party Registration                     | 0.0%      | -0.2%      | 1.7%     |

Clearly, Pima County officials were hacking the mail-in votes at all three of the precincts where we know (324) or suspect (271 and 235) that poll workers were stacking (stuffing) the ballot box.

## **SUMMING UP ELECTION DAY 2004 IN ARIZONA LEGISLATIVE DISTRICT 27**

Here is my summation of what apparently went down in LD 27 on Election Day 2004. There was a conspiracy comprising insiders with digital access to the 1.94w memory cards in the Diebold AccuVote OS optical scanners and/or to the GEMS central tabulators, and a cadre of colluding poll workers, including the crew headed by Reverend Khan at Precinct 324. Their overall plan was to hack the at-the-precinct vote at all precincts except the ones manned by poll workers whose job it was to stack (stuff) the ballot boxes at those polling places.

With regard to Precinct 324, recall that the net red shift in the at-the-precinct votes was “just” 7.0%, that is, less than John Brakey’s and my maximum prediction. But bear in mind all of the red shifts discussed with respect to the LD-27-wide average, and that the LD-wide average at-the-precinct vote was itself a 5.1% red shifted with respect to the LD-wide average mail-in vote,

and the mail-in vote was shown to have been (largely) uncorrupted. So, it is logical to arithmetically add the 5.1% red shift of the LD-wide at-the-precinct vote with respect to the putatively-honest LD-wide mail-in vote to the 7.0% net red shift in the Precinct 324 at-the-precinct vote with respect to the LD-wide average at-the-precinct vote to obtain a total Precinct 324 at-the-precinct red shift. This result, 12.1%, is close to the value of 11.5% independently estimated from John's and my study of the Precinct 324 poll books as the amount of vote flipping the Khan team could have accomplished assuming they had at their disposal forty-four illicitly-obtained blank ballots, utilized forty-one of them, and then faked innocent puzzlement over the fact that they had three left over.

In other words, my totally independent “outside-in” calculation of at-the-precinct election theft at Precinct 324 gives the same answer (within standard statistical error), as does John's and my “inside-out” deduction of the maximum vote shift the Khan team could have contrived by running their system—a system that we reverse-engineered in detail by forensic analyses of their own poll books!

In the end, as I reread what I've written, I keep returning to the thought of the 60,000 Americans from various walks of life and ethnic heritages belonging to Arizona Legislative District 27 who turned out in remarkably large numbers on Election Day 2004 to exercise their constitutional right to vote. What happened to these Tucsonans that day is quite likely a microcosm of what was simultaneously happening to Americans all across our country. Not only were these good folks' wills—and their inalienable rights—subverted, but they were never given a clue by the mainstream media as to what was done to them. The words that best describe my feelings leap from the title of Alan Paton's novel: *Cry, the Beloved Country!*

**NOTES**

1. Mark Crispin Miller, "Fooled Again – The *Real* Case for Election Reform," *Basic Books*, New York, 2007, p 132.

2. David L. Griscom and John R. Brakey, "Forensic Statistical Mechanics Applied to Public Documents Prove Poll-Worker Fraud," presentation by Griscom to the 2007 Annual Meeting of the *American Association for the Advancement of Science*, 2/16/07; [http://www.drivehq.com/file/df.aspx/publish/dlgriscom/Election Fraud Research/Griscom\\_AAAS 2007 Annual Mtg.ppt](http://www.drivehq.com/file/df.aspx/publish/dlgriscom/Election%20Fraud%20Research/Griscom_AAAS%2007%20Annual%20Mtg.ppt)

3. David L. Griscom, "Sleuthing Stolen Election 2004: John Brakey and the "Hack and Stack," *OpEdNews*, 3/17/07; [http://www.opednews.com/articles/opedne\\_michael\\_\\_070313\\_the\\_long\\_road\\_to\\_dem.htm](http://www.opednews.com/articles/opedne_michael__070313_the_long_road_to_dem.htm)

4. Forensic analyses involving Provisional-Ballot data are subject to larger statistically uncertainties than the other two forms of voting, owing to the smaller sample sizes: average of only 36 Provisional ballots *officially accepted* per precinct in Arizona LD 27, compared with averages of 502 At-the-Precinct ballots and 411 Mail-Ins. Nevertheless, the results of Figures 1 and 2 acquit my use of the Provisional-Ballot data to prove that the Mail-In tallies were (mostly) uncorrupted.