

American Elections and HAVA

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Three Big Problems: Where Votes are Lost and Problems Occur

In the first paragraph of its final report of August 2001, the Carter Ford Commission on Federal Election Reform proposed that the American people should expect a democratic process that:

- Maintains an accurate list of citizens who are qualified to vote;
- Encourages every eligible voter to participate effectively
- Uses equipment that reliably clarifies and registers the voter's choices
- Handles a close election in a foreseeable and fair way;
- Operates with equal effectiveness for every citizen and every community;
- Reflects limited but responsible federal participation.

This report followed upon the closely contested 2000 Presidential election in which, in the words of the Commission, "The ordinary institutions of election administration in the United States, and specifically Florida, just could not readily cope with an extremely close election." In fact, the 2001 CalTech-MIT Voting Technology Project report concluded that the problem went deeper than inadequate procedures for dealing with a close election because "4 to 6 million votes were lost in the 2000 election." The report estimated that votes were lost for three reasons:

- 1.5 to 3 million from failings of the registration process
- 1.5 million from poor vote recording and counting systems
- .5 to 1.2 million votes from poor polling place operations

The notion of "lost votes" has provoked controversy as some have questioned these numbers, and others have asked whether it is election officials or voters who are to blame for these problems. Yet these concerns are ultimately beside the point because we know, based upon the robust experimentation that we get in a federal system, that there are better and worse registration, voting, and polling place operations and that we can do much better than we did in 2000. Let me review the problems with each of these systems that were evident in 2000.

Registration Systems – The goals of a registration system should be to record and authenticate a voter's eligibility, to place the voter in the proper voting jurisdiction, and to keep the voter informed about his or her eligibility. The passage of the National Voter Registration Act (NVRA) in 1993 was intended to improve all three features of the nation's voting registration systems. NVRA did lead to substantial experimentation, but the net result fell short of what many had hoped for. With over 10,000 local election

jurisdictions in the United States, a major problem was that too many registration systems did not talk to one another, thus making it hard to cross-check for duplicate registrations. Another problem was that the large number of election jurisdictions meant that many lacked the expertise or resources to thoroughly authenticate voter eligibility, to accurately locate voters in the right jurisdiction, and to expeditiously inform voters about their status.

The obvious solution to these problems is modern computers with access to motor vehicle, change of address, vital statistics and other records for authenticating eligibility, with geo-coding systems for locating voters properly, and with the capabilities of automatically producing communications to voters in a timely fashion. Better authentication and communication are especially important because they reduce the possibility of keeping people on the roles who do not belong or purging people from the roles who do belong. It is important to perform these tasks in ways that are simple, straightforward, and easy for people because we know that people's commitment to voting, while real and durable, can be disrupted by the reality, or even the perception, of bureaucratic obstacles which can, in turn, produce feelings of frustration. It is not surprising, therefore, that "According to the U.S. Census, Current Population Survey, 7.4 percent of the forty million registered voters who did not vote [in 2000] stated that they did not vote because of registration problems." (Cal-Tech/MIT Report)

To address the problems of inadequate registration systems, the Carter-Ford commission recommended that:

- Every state should adopt a system of statewide voter registration
- Every state should permit provisional voting by any voter who claims to be qualified to vote in that state

Voting Systems – The goals of a voting system are to accurately record people's voting intentions and to ensure the security of that vote. The 2000 election clearly demonstrated that some voting systems such as Votomatic style punchcards did a very poor job of recording voters' intentions because hanging, pregnant, and indented chads did not provide a clearcut indication of whether the voter meant to vote or not vote for a candidate. Subsequent research by the Cal-Tech/MIT Voter Technology project, by me at Berkeley, and by many others confirmed that Votomatic style punchcards had much worse performance than any other voting system as measured by residual votes for the presidential race.¹ In my report, *Counting All the Votes*, punchcards had residual vote rates that were about one percentage point higher than the average for other systems.

¹ Residual votes are the sum of overvotes (ballots with more than one mark for a race) and undervotes (ballots with no mark for a race). Residual votes are not necessarily "lost votes" because some people may intentionally choose not to vote in a race (to undervote) and others might even choose to spoil their ballot for that race by overvoting. But extensive research suggests that residual vote rates vary significantly from one voting system to another and that when a voting system is changed in a jurisdiction, say from a Votomatic style punchcard, to another better system such as a precinct count optical scan, the residual vote rate invariably drops significantly. Most research suggests that the intentional residual vote for the presidential race is around one-half to three-quarters of a percentage point so that residual vote figures above level indicate poor voting system performance.

Furthermore, residual vote rates for Votomatic style punchcards were especially high in minority communities, and these residual votes dropped dramatically when other systems such as precinct-count optical scan systems were installed. Moreover, the other systems that performed better than punchcards still seemed to have very high residual vote rates compared to best practice. The Cal-Tech/MIT report suggested that in 2000, 1.5 million votes were lost because of poor voting systems.

Based upon this work, the Carter-Ford Commission suggested a benchmark for evaluating voting systems based upon residual votes. They suggested that residual vote rates of zero to one percent were “good,” one to two percent were “adequate,” two to three percent were “worrying,” and above three percent were “unacceptable.” Many large counties had residual vote rates this large. The Commission went on to recommend that:

- The federal government should develop a comprehensive set of voting equipment system standards for the benefit of state and local election administration.
- Each state should set a benchmark for voting system performance... The benchmark should be expressed as a percentage of residual vote (the combination of overvotes, spoiled votes, and undervotes) in the contest at the top of the ballot, and should take account of deliberate decisions of voters not to make a choice.

Poll workers and Overall Administration— Anyone who has observed elections knows that poll workers are an essential part of voting administration in the United States. Poll workers must know how to operate equipment, how to follow procedures, how to deal with many (anxious and pressed-for-time) people at the same time, and how to deal with the problems and exceptions that can arise. In my own observations, I’ve seen many competent and dedicated poll workers, but I’ve also seen poll workers who had trouble operating equipment, who handed voters the wrong ballot, who failed to tell people that they could revote if they had spoiled their ballot (or if they had made the wrong mark), and who generally seemed unaware of the overall procedures. With 200,000 precincts, each serving an average of 500 voters during a day that begins in the early morning and that can end late at night, it is not surprising to find great variations in the quality of the close to 2,000,000 poll workers who are needed to run a national election.

Getting good poll workers is clearly a major task for election officials. Another task for the elections system is developing better overall administration that does a better job of designing and locating precincts, allocating voting machines to precincts, and notifying people of their polling place location. In my own research, I have found that simply relocating a precinct can reduce turnout at the polling place by over three percent.² Increasing distance to a polling place also reduces voting by about one-quarter of a

² About one to one and one-half percent of this reduction in polling place voting is made-up by people who decide to use absentee ballots. But the net reduction in turnout can still range from one to one and one-half percent. (See Henry E. Brady and John McNulty, “The Costs of Voting: Evidence from a Natural Experiment,” Paper Presented at the 2005 Annual Meeting of the Midwest Political Science Association.)

percent per tenth of a mile. Other research has found that pre-election mailings informing registrants of their polling place and keeping the polls open longer hours can increase voting, especially among young adults.³ It is not surprising, then that the Cal-Tech/MIT report found that based upon U.S. Census data, “We lost between 500,000 and 1.2 million votes [in 2000] because of polling place operations.”⁴

Based upon these concerns, the Carter-Ford Commission recommended that

- Congress should enact legislation to hold presidential and congressional elections on a national holiday ... [to] increase availability of poll workers and suitable polling places.

What HAVA Has Tried to Do.

The Help America Vote Act of 2002 was the nation’s response to the problems in Florida and to the recommendations of the Carter-Ford Commission. Among many other things, the bill did the following:

Registration systems – HAVA requires that “each State, acting through the chief State election official, shall implement, in a uniform and nondiscriminatory manner, a single, uniform, official, centralized, interactive, computerized statewide voter registration list defined, maintained, and administered at the State level” (Section 303.a.1.A of HAVA). HAVA also contains requirements for provisional voting and for voting information (Section 302).

Voting Systems – HAVA provides payments to states to replace punch card or lever voting machines (Section 102). It provides for the certification and testing of voting systems (Section 231). It provides for voting system standards (Section 301).

Poll Workers and Election Administration – HAVA includes provisions for payments to states for “Improving the administration of elections for Federal office”, “Educating voters concerning voting procedures, voting rights, and voting technology”, and “Training election officials, poll workers, and election volunteers.” (Section 101).

What Has Been Accomplished

Because of delays in the appropriations process, HAVA did not really get going until 2004. As a result, we are not as far along as we would like.

³ See Raymond E. Wolfinger, Benjamin Highton, and Megan Mullin, “Between Registration and Voting: How State Laws Affect the Turnout of Young Registrants,” paper presented at the 2002 Annual Meeting of the American Political Science Association.

⁴ “According to the U.S. Census, Current Population Survey, 2.8 percent of the forty million registered voters who did not vote in 2000 stated that they did not vote because of problems with polling place operations such as lines, hours, or locations. The figure was 1.2 percent in 1996.” (see page 9 of Cal-Tech/MIT, *Voting: What is, What Could Be*, 2001.

Registration Systems – Based upon the best data available (from <http://electionline.org>), about seventeen states appear to be HAVA compliant with new registration systems,⁵ one is exempt because it has no registration (North Dakota), ten are working on new systems in-house with some consulting help,⁶ nineteen have contracts with vendors--most of them recently awarded,⁷ three have RFP's out,⁸ and one (California) is lagging far behind. All of these systems appear to have the ability to truly integrate voting systems across counties (although some of them still allow counties to work "off-line" with batch processing instead of directly on-line). All of them have various capabilities to authenticate voter identifications by cross-checking with other databases, but only some of them (e.g., Michigan) are strongly integrated into motor vehicle and other databases. At least some of these systems appear to have the ability to automatically locate an address (through geo-coding) in the proper election areas and to notify voters about their status in a timely fashion. Most of them appear to be assuming that precincts will continue to rely upon printed registration lists on the day of the election instead of on on-line computer terminals in the precincts that can check registration status.

Two concerns seem paramount with regard to these systems. The first is simply the likelihood that many states will not make the January 1, 2006 deadline (originally January 1, 2004). Since most contracts with vendors are recently awarded and since some states have not even awarded them yet, it seems unlikely that the deadline will be met. Moreover, the history of statewide information systems of this type is generally not good. States have a hard time developing systems which perform as they had hoped, if they perform at all.

The second is more profound. Even after these systems are finished, most of them will probably not be able to do the following:

- Communicate easily with other, neighboring states, to check for duplicate registrations
- Allow for in-precinct checking of voter-registration information.

In addition, many of them may not have strong capabilities for notifying voters of their status and allowing voters to check on their registration status over the Internet or by phone. These limitations are worrisome, and they probably represent a lost opportunity.

Perhaps the biggest loss is the possibility that even the new statewide registration systems will have to be supplemented by a provisional ballot procedure that might have been almost entirely superseded by an on-line in-precinct registration system. Such a system would allow precinct workers to check immediately if someone was registered somewhere in the system. It would not overcome all problems because some

⁵ These are: Alaska, Arizona, Connecticut, Delaware, District of Columbia, Georgia, Hawaii, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, New Mexico, Oklahoma, South Carolina, South Dakota, and West Virginia.

⁶ Florida, Illinois, Montana, New York, North Carolina, Ohio, Tennessee, Utah, Vermont, and Washington.

⁷ Arkansas, Colorado, Idaho, Indiana, Iowa, Kansas, Maine, Mississippi, Missouri, Nebraska, Nevada, New Jersey, Oregon, Pennsylvania, Rhode Island, Texas, Virginia, Wisconsin, and Wyoming.

⁸ Alabama, Maryland, and New Hampshire.

people might have registered but their registration information might have been incorrectly entered (or not entered at all). But, a commitment to same-day registration (which would be a realistic one with an adequate on-line authentication system), as is done in six states already (Minnesota, Maine, New Hampshire, Idaho, Wisconsin, and Wyoming), would mean that even this problem could be overcome.

Voting Systems – In 2000, about one-half of American voters voted with punchcards (32%) or lever systems (16%). In 2004, only one-quarter of Americans voted with punch-cards (12%) or lever machines (14%). HAVA and other forces have clearly reduced the use of the most creaky and unreliable voting technologies.

At the same time, the percentage voters using electronic machines grew from 12% to almost 30% and the percentage using optical scan systems went from 29% to 35%. In the aftermath of the 2000 election, many might have thought that this substantial increase in electronic systems would have been greeted very positively. After all, many of these systems appear to have advantages in preventing overvotes, allowing voters to review their votes, providing accessibility to the disabled, and allowing multiple languages in the privacy of the voting booth. In short, they seem to have many advantages in ensuring an accurate recording of the vote. But subsequent to the 2000 election, the security issue for voting machines became just as important, indeed it may have superseded, the accuracy issue for voting systems. Many voters became concerned that electronic voting machines without a paper trail could be easily manipulated or mis-programmed to steal an election. Some computer scientists chimed in with their concerns that electronic voting systems had serious vulnerabilities. These concerns have meant that the fully electronic voting system that was seen by many as the wave of the future has been slowed down by concerns about security. In fact, the concerns raised about electronic vote recording systems are also relevant to all the electronic vote counting systems that are in use in America—and almost all votes are counted using electronic systems. As a result, voting officials are increasingly concerned about developing better auditing and security procedures.

Although efforts are being made by the National Institute of Standards and Technology (NIST), in accordance with HAVA, to develop voting standards, it remains to be seen whether the new standards will ensure better machines. Among other things, it is not clear that we have undertaken the research that is necessary to know exactly what we want in a voting system.

Poll workers – Although states are starting to get payments for activities to improve election administration, we know remarkably little about what can be done to improve poll worker quality and the overall quality of election administration. In this area, as in many others, it would be useful to try experiments where different approaches are tried in the same or different jurisdictions in ways that allow for really assessing the success or failure of the method. These ways include developing reasonable measures of performance, and using randomization or matching to ensure comparability between those areas that use one approach and those that use another. With this kind of research, we can make strong inferences about what works and what does not.

How Well Have We Succeeded? How Would We Know If We Have Succeeded?

To know whether we have succeeded, we need to have a vision of where we are going. The Carter-Ford Commission provided such a vision, although it may not have gone far enough. Given America's technological capability, it does not seem unreasonable to aim for a system that would:

- Allow for same day registration with strong authentication, thus almost entirely obviating the need for provisional ballots which have proven such a problem;
- Record votes accurately so that residual votes are almost entirely intentional decisions not to vote instead of indications of machine failure;
- Develop an auditing procedure for election systems that can ensure the integrity of the process and allow for recounts that are convincing and accurate.
- Develop a cadre of poll workers who are well-trained and competent.

As it is currently operating, it is not clear that HAVA will actually reach any of these four goals. Statewide registration systems may not be able to talk across state lines and they may not provide for in-precinct registration checks. We are not developing the kind of residual vote measures and research using those measures that can tell us what systems do the best job of recording votes. Controversy continues to swirl around auditing and security issues. Finally, we are not thinking hard-enough about how to recruit better poll workers and about how we should train them most effectively.

Part of the problem is that although academic researchers have shown a great willingness to undertake research on these issues, there has been a dearth of funding and perhaps reluctance on the part of some election officials to support such research. This is sad because there is a bi-partisan agreement that we need better systems, and (at least compared to many other areas) there are relatively straightforward ways to measure performance. Moreover, computer and social scientists have the capabilities to provide answers to many of the questions that are being asked. With proper funding, it should be possible to make the American electoral system a show-case, instead of an ongoing embarrassment.