



**National Commission on  
Election Standards and Reform**



**Report and  
Recommendations to  
Improve America's  
Election System**



**May 2001**

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May 2001

## Improving our election system...

The election system in our country is a complex system affected by many variables. When everything runs smoothly, the system hardly gets noticed. But when a close election occurs that reveals weaknesses in the system—as it did last November—the results can be quite dramatic.

The National Association of Counties (NACo) and the National Association of County Recorders, Election Officials and Clerks (NACRC) responded quickly when the problems surfaced last fall because county governments are primarily responsible for the administration of elections. We formed the National Commission on Election Standards & Reform (NCESR) to examine the nation's election system and make recommendations for improvement.

The Commission's approach was to study the problems, identify probable causes, enumerate possible remedies and then develop recommendations. After five months of serious work, the result is this thorough, comprehensive report that provides recommendations for all three levels of government.

We believe that the recommendations in this report provide an excellent framework to improve America's election system and restore public confidence in the system. We are committed to working toward having the entire set of recommendations implemented.



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# NATIONAL COMMISSION ON ELECTION STANDARDS & REFORM

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# INTRODUCTION

The Presidential election of November 2000 revealed weaknesses in the U.S. electoral system that have caused some citizens to experience a loss of confidence. Further, the U.S. Supreme Court's ruling in *Bush v. Gore* raised the issue of equal protection, specifically equal probability of having a vote counted. And Election 2000 called attention to the strains brought on by the increased number and mobility of voters and by federal and state laws that add complexity to the administration of elections and voter registration, all without a commensurate increase in resources.

Clearly, the weaknesses in the system need to be addressed. The time has come for a serious, dispassionate review of problems, causes, and solutions.

Because county governments are primarily responsible for the administration of elections in most states, they are well suited to conduct that review. For that reason, the National Association of Counties (NACo) and the National Association of County Recorders, Election Officials and Clerks (NACRC) created the National Commission on Election Standards and Reform in January 2001.

The 21-member commission includes county commissioners and election officials from across the United States, a state election director, the director of a state association of counties, experts in election administration, and representatives of the League of Women Voters, an Hispanic group, and the NAACP. The Commission heard from a number of speakers, reviewed a great deal of information, and engaged in lengthy debates and discussions.

In examining Election 2000, the Commission focused on problems in voter access, voting systems, recount procedures, and the perception of partisanship in the operation of the system. To solve these problems all levels of government will have to devote more attention and

resources to the administration of elections and voter registration. This is not simply a matter of equipment replacement. Much can be accomplished through changes in policy and procedure. Education is critically important at all levels – from the rights and responsibilities of voters to professional development for administrators. The collection and comparison of performance data through time and across jurisdictions is necessary for evaluation. All of these activities require funding.

The Commission recommends that reform should be undertaken within the present system rather than by creating new systems or imposing nationwide procedures on states and local governments. In addition to having constitutional concerns, the Commission believes that attempts at nationwide uniformity, such as a uniform national ballot or standard voting equipment, would be impractical, stifle innovation for the future, and greatly magnify the effects of unintended consequences. The beauty of federalism is that it allows experimentation.

The election system of the United States is large and complex with many interdependent parts, including political parties and campaigns, the media, voters, and numerous government agencies, which are not under the authority of election officials. Coordination is difficult and changes in one part often produce unintended consequences in another. The conclusion the Commission reached is that our nation should not look for a single dramatic solution but for a sustained effort to make improvements and eliminate sources of error.

Improvements can and should be made within the present system. Believing that a strong effort over time will be more productive and less likely to introduce new problems than an attempted quick fix, the Commission offers the following recommendations for federal, state, and county governments. The final section of this report discusses a number of the issues involved in election reform.

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# NATIONAL COMMISSION ON ELECTION STANDARDS & REFORM

## Summary of Recommendations for Improving the Election System

The Commission was charged with reviewing the nation's election system and making recommendations for improvement. It focused on problems in voter access, voting systems, recount procedures, and the perception of partisanship in the operation of the system. Here is a summary of the Commission's recommendations for all three levels of government: federal, state and county.

### **Federal Government**

The Commission recommends that the federal government provide funding for equipment, administration and research.

The funding should come through three programs:

- A grant program to help state and local governments cover the one-time costs for upgrading voter registration and voting systems (hardware, software and related services and supplies).
- An on-going formula-based funding program to share the cost of the administration of federal elections.
- Assistance in mailing election related materials through the creation of an "Elections Class" of postage.

The funding for research should go to the federal Office of Election Administration to gather information on running elections and to disseminate that information.

There are two other areas of recommendations for the federal government:

- Administration and awarding of grants should be separate from any agency that has enforcement responsibilities for compliance with voting and elections laws.
- The FCC should require broadcast media to run prime-time public service announcements educating voters how to correctly participate in the elections process.

### **State Governments**

The Commission recommends that the states should:

- Provide funding to assist counties with the cost of elections.
- Determine what constitutes a vote for each type of equipment.
- Establish clear recount procedures.
- Require all new equipment to provide ways to minimize voting errors.
- Adopt laws providing for provisional ballots.
- Gather data to evaluate systems.
- Take actions to minimize the need for poll workers and also help expand the pool of workers.
- Streamline laws and procedures for restoration of voting rights.
- Assist counties with voter education programs.
- Adopt laws that promote interagency cooperation regarding voter registration information.
- Consider alternatives to voting in polling places.
- Work to limit the effects of partisanship by election officials.
- Adopt provisions to certify or de-certify equipment.
- Set ballot certification deadlines 60 days prior to an election.
- Address the problem of military/overseas voting by providing timely delivery of ballots and requiring that the voted ballot be received at the election office by a date certain eliminating the need for postmarks.
- Provide adequate time to complete a canvas of an election prior to any recount or contest.

### **County Governments**

The Commission recommends that counties should:

- Use federal and state aid to enhance election administration, not supplant existing funds.
- Recognize elections as a priority service in their budgets.
- Provide adequate staff for election functions.
- Ensure that election staff have the qualifications to match the needs of the county.
- Support professional development of the staff.
- Insist that election officials are knowledgeable of best management practices and use them.
- Track error rates to evaluate and improve equipment and practices.
- Keep voters informed at key points in the registration and voting process.
- Ensure that all polling places are accessible or allow voters with disabilities to choose a voting place that is accessible.
- Review laws, procedures and poll worker training on assistance in voting so that people who need interpreters can be assisted without difficulty.

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# RECOMMENDATIONS FOR THREE LEVELS OF GOVERNMENT

## Federal Responsibilities

**Financial assistance to states and counties (or townships where they are the primary unit of election administration).** A number of our recommendations require increased funding. These include the needs to upgrade equipment; to educate voters, poll workers, election officials, etc.; and to enhance the administrative capacity of election offices.

The argument for federal funding is twofold. First, if voting is a fundamental right, then the probability of having one's vote count accurately should not be solely a function of local resources. Federal and state governments should help local governments upgrade equipment to meet standards of reliability. Second, federal statutes and rules for the conduct of all elections, including those for federal offices, impose costs that have heretofore been borne entirely by state and local governments. The federal government should share in the general administrative costs of the election system.

**Consequently, we recommend three programs:**

- 1. A grant program to help state and local governments cover the costs for upgrading voter registration and voting systems (hardware, software, and related services and supplies).**
- 2. An on-going formula-based funding program to share the cost of the administration of federal elections.**
- 3. Assistance in mailing election related materials as outlined below.**

The funding for voting systems (program 1) should be based on application as local jurisdictions seek to replace equipment over time. They should apply to their state governments, which would consolidate requests to the federal government. Equipment purchased under this program must meet all applicable Federal Voting System Standards.

Funding for administration (program 2) should be distributed to local election jurisdictions based upon measures of election activity and financial need.<sup>i</sup> This money would be provided every year without application.

We recommend that eligibility for either program be contingent upon a state having on file with its chief election officer a plan for providing equal opportunity to its citizens to vote and have their votes counted.

For assistance with mailing (program 3) the Commission has adopted recommendations of the National Association of Secretaries of State for a new "Elections Class" of postage which would be rated at 50 percent of the rate of first class mail and include all entitlements and services of the first class mail designation.<sup>ii</sup> If the Postal Service changes the name or designation of first class mail, the Elections Class would automatically be tied to any successors of what is now termed first class mail.

**Research and dissemination of information.** The Federal Election Commission's (FEC) Office of Election Administration already has the responsibilities to conduct or sponsor research on the administration of elections and to disseminate information. We recommend increased funding for these functions. We also recommend that the Office undertake the following projects:

- An immediate completion of the update and continuing maintenance of Federal Voting Systems Standards.
- Research on vote residuals<sup>iii</sup> (overvotes and undervotes) associated with different voting systems.
- Research on the ways in which voting equipment does or does not accommodate various disabilities.
- Research on best operational practices for election and voter registration offices.
- Creation of a central repository of information on voting equipment problems and solutions reported by election officials.
- Evaluation of the practicality of demonstrating the use of voting equipment in the polling place by such devices as continuous loop video.
- Collection and dissemination for use by state and local offices of educational materials for key audiences, e.g. voters, the press, poll workers, election officials.

**Administration.** Administration and awarding of grants should be separate from any agency that has enforcement responsibilities for compliance with voting and elections laws. Responsibility for these programs should lie with the Office of Elections Administration whether it remains with the FEC or is made a separate agency.

**Media information.** We strongly encourage the Federal Communication Commission to require broadcast media to run prime-time public service announcements to educate voters on how to participate in the elections process.

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## State Responsibilities

**Provisional ballots.** In order to address the problem of voter access, states should ensure that they have clear statutes regarding how a person is to be treated at the polling place if her or his name is not on the list of registered voters. We recommend that states adopt provisional ballots to be counted after voter eligibility is confirmed. Any person who casts a provisional ballot should receive notification if the ballot is not counted and the reason why. Anyone whose ballot is not counted should be automatically registered for the next election if he or she is eligible.

**Restoration of voting rights.** States should review their laws and procedures on the disqualification of voters to ensure that there is a method for restoration, if applicable, that it is streamlined to ensure fair access and timely decisions, and that restoration of voting rights is automatically communicated in writing to the restored voter.

**Interagency cooperation.** In some states, agencies mandated to provide voter registration intake are not processing applications properly or in a timely manner. Improvements in this area would decrease registration failures. The problem of coordination is compounded by the fact that federal, state, and local agencies plus private organizations are all involved. We urge that the states adopt legislation to ensure interagency compliance in this area.

**Consolidated voter registration system.** States should provide for the accumulation of statewide voter registration records that are updated on a regular basis and make such records readily accessible to local election officials.

**Voter education.** Two critical steps in the election process that rely upon voter input are the submitting of a registration application and the act of voting. We recommend that state governments, acting in concert with local election officials, develop, or acquire, and implement three types of voter education programs:

- Programs to inform citizens of registration requirements and voting rights.
- Demonstration and written materials for use in general education programs on the correct use of voting equipment.
- Hands-on training on the correct usage of voting equipment for use in polling places.

States should require vendors selling equipment in the state to develop and supply instructional materials and programs on the correct use of voting equipment.

**Voting Systems.** The choice of which systems to replace should be made at the state and local levels based upon an historical analysis of voting accuracy in each jurisdiction and an assessment of the public's confidence in the current system. Only a statewide analysis will tell if some areas have significantly higher vote residuals than others and if this pattern has persisted over time.

**Voting procedures.** States should adopt uniform procedures for each type of voting system used in the state. States also should develop uniform procedures for pretesting and for public testing of ballot counting equipment.

**Equipment certification.** All states should have provisions to certify and de-certify equipment for sale and use in the state in order to enforce standards of quality statewide and to meet Federal Voting System Standards.

**Minimizing errors.** To minimize voting errors states should require that all new equipment used in polling places (as opposed to absentee voting or mail elections) either prevent overvotes or give the voter a warning and a chance to correct overvotes, a process known as "second chance voting". Such equipment should also warn voters and give them a chance to correct undervotes, at least when ballots are read as completely blank. In addition, states should remove any prohibitions on the use of second chance voting on existing equipment.

In the interim we encourage states to adopt procedures for handling review of blank and over-voted ballots in central count systems.

**What constitutes a vote.** States should determine what constitutes a vote for each type of equipment before the equipment is used in an election. (This recommendation applies to absentee votes as well as votes cast in polling places.) Because of continued changes in equipment, we recommend that this determination be made through administrative rules having the force of law, rather than by statute. Too often legislative changes are not timely enough to keep up with technical advances and they sometimes result in conflicting mandates. However, the requirement for the determination and the procedure to be followed should be adopted in statute. The goal of this recommendation is to eliminate or drastically reduce the number of cases in which voter intent has to be interpreted after an election.

**Evaluation.** In order to evaluate and improve system performance, local jurisdictions and states should report the total number of electors admitted, number of ballots cast and the number of overvotes and undervotes encountered in each election. Local jurisdictions should report such election data, as well as voting equipment problems and solutions, to the state's chief election official.

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**Ballot certification deadlines.** States should make ballot certification deadlines to be a minimum of 60 days prior to the election in order to allow adequate time for ballot layout and design and timely delivery to military and overseas personnel.

**Postmarks for military/overseas ballots.** Fourteen states count military/overseas ballots received after the election as long as they are postmarked on or before election day. The problem is that some ballots arrive without postmarks or with illegible postmarks. The Commission recommends that states address this problem by providing timely delivery of ballots and requiring that the voted ballot be received at the election office by a date certain, thereby eliminating the need for postmarks.

**Poll workers.** States should take steps to minimize the need for poll workers and to expand the pool of available poll workers by such actions as:

- Expanding the time frame for voting prior to election day.
- Allowing poll workers to work in precincts other than where they vote.
- Permitting and encouraging high school students to serve as poll workers under supervision.
- Eliminating any requirements for appointing authorities to rely exclusively on political parties for the recruitment and selection of poll workers. (This would not eliminate requirements for party balance but would empower election officials to recruit more widely.)
- Encouraging private and public employers to allow employees to serve as poll workers with full pay or with the difference between their regular pay and poll working pay.
- Providing incentives that would encourage the public to serve as poll workers.

**Alternatives to voting in polling places.** States might consider avoiding the many problems associated with voting in polling places by adopting alternatives such as voting by mail, one-time absentee ballots, on-going absentee ballots, overseas/military/out-of-state ballots, and early voting.<sup>iv</sup> Individual states will have to determine how well such arrangements fit their electoral traditions and cultures.

**Post election procedures.** States should provide for adequate time to complete the canvass of the election prior to any recount or contest.

**Recounts.** States should review and change, as necessary, all recount procedures to:

- Eliminate ambiguous and conflicting mandates.
- Provide that multi-jurisdictional recounts (e.g. of a Congressional district involving more than one jurisdiction) be supervised by the state's chief election authority to ensure uniform standards throughout the area in question.
- Provide adequate time for the completion of a recount as prescribed by state and federal law, which establishes Electoral College requirements.

**Partisanship.** While it is impossible to eliminate partisanship from the electoral process, public confidence requires that we minimize the chances that it will influence election outcomes. The greatest concern seems to come from decisions made on or after election day (when the partisan outcome is apparent) by elected or appointed officials with clear partisan identification. To this end we recommend that states:

- Review election laws to eliminate ambiguity and conflict, especially in post-election procedures.
- Support professional development and membership in professional associations and adoption of a code of ethics for all election officials as a counterweight to partisan influences.

**Financial assistance to counties (or townships where they are the primary unit of election administration).** States, like the federal government, have a responsibility to ensure equal access to the electoral process and to pay their share of election costs. We recommend that states:

- Provide an on-going, formula-based funding program to share the cost of state elections.
- Provide additional support for the training and professional development of local election officials.
- Use any federal aid designated for elections to enhance programs rather than to supplant existing efforts.
- Pass enabling legislation, if necessary, to allow municipalities and other jurisdictions to contract with counties for the provision of election services with full cost reimbursement.

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## **County Responsibilities**

**Administration.** The administration of elections is and must continue to be a local responsibility. In many cases, the responsibility is shared by the county governing body and one or more independently elected officials. Counties and their election officials must ensure that the laws governing elections are properly implemented, work with legislators to identify and change any laws that interfere with the goal of fair, accurate, and timely elections, and provide open and equal access to all eligible voters.

**Funding.** With regard to funding we recommend that counties:

- Use federal and state aid to enhance election administration, including but not limited to the purchase of new election systems, without supplanting existing funds.
- Recognize elections as a priority service in their own budgets.
- Adopt agreements for providing election services to states, municipalities and other jurisdictions on a shared cost-recovery basis (including indirect and overhead costs).

**Personnel.** Election officials register voters, design ballots, recruit and train poll workers, tabulate returns and perform myriad other necessary functions in the electoral process. As the job of election administration has become more complex, the need for qualified personnel with specialized training has increased dramatically. We recommend that counties:

- Review job requirements, pay grades, and hiring practices for elections specialists to ensure that they reflect the level of expertise required.
- Support through adequate resources professional development of election staff, including education and certification opportunities offered by professional associations.
- Provide adequate numbers of professional staff and temporary personnel to ensure timely and accurate completion of required election functions.
- Support efforts to recruit and train qualified poll workers and other election day personnel.

**Management practices.** Counties should provide opportunities for election officials to be knowledgeable of best management practices and innovations and adopt those that are best suited to the local jurisdiction.

**Data collection.** Election offices should track statistics related to key functions in order to evaluate and improve current equipment and processes.

**Voter information.** Local election administrators should take every opportunity, such as the use of web sites, to inform voters at key points in the registration/voting process, including:

- A receipt on the voter registration form that informs the voter when to expect confirmation of registration and who to contact if notification is not received.
- Sample ballots and other appropriate information provided to registrants before each election.
- Providing media releases and encouraging prime-time public service announcements by the local media telling registrants that sample ballots and other appropriate information are available and how to obtain them.
- Special notices and education to inform voters of changes in voting equipment or ballot design.
- Counties should review and revise, if necessary, voter registration forms to minimize errors and incomplete applications. Election staff also should review application forms before applicants leave the premises to ensure accuracy.

**Poll workers.** The services provided by poll workers could be improved by having a larger pool from which to draw, better pay, and improved training. On election day they must be able to obtain both technical and administrative assistance through the central office. This seems to be a matter of resources, mainly communications equipment and enough knowledgeable personnel to handle multiple problems simultaneously. (Private companies might be asked to donate use of cell phones for polling places that do not have them, as has been done in Sacramento County, CA.) Poll workers should particularly be instructed in how to deal with voters whose names do not appear on the rolls.

**Equipment.** While the purchase of new equipment will be very helpful in many cases, it will not be possible in all jurisdictions. Counties must ensure proper storage, maintenance, and setup of equipment and the availability of technicians to solve any equipment problems that arise on election day. Voter education in the proper use of equipment is critical.

**Ballot design.** Ballots must be designed in such a way as to minimize the possibility that voters will find them confusing. Local election officials should take full advantage of information on ballot design and usability to improve ballot design where needed.

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**Absentee ballots.** Instructions for absentee ballots should be clearly stated and rudimentary so that voters clearly understand voting directions and how they can correct their errors.

**Voters with disabilities.** County officials must ensure that all polling places are accessible or, in unique cases where no accessible polling place can be found, allow voters with disabilities to choose a voting place that is accessible. Local elections officials should work with disabled voters to identify the best affordable means by which they can cast their votes in polling places.

**Language difficulties.** In addition to implementing multi-lingual ballot requirements under the Voting Rights Act, state and local governments should review laws, procedures, and poll worker training on assistance in voting so that people who need interpreters will be able to use them without difficulty.

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# DISCUSSIONS OF ISSUES

The experience of this past fall reveals no single overarching problem, but a number of problems, any one of which could be critical in a close election. These include problems of voter access, voting systems, recount procedures, and the perception of partisanship in the operation of the system. The implication is that we should not look for a single dramatic solution but for a sustained effort to eliminate sources of error.

The Commission's approach was to begin with problems reported in the press or in Commission meetings, identify probable causes of each problem, lay out possible remedies for each cause, and then craft recommendations for each level of government that seemed most likely to provide long-term solutions. A summary of the problem analysis follows.

## Voter Access

Access problems include reports that eligible voters did not have the opportunity to vote because of applications or changes of address not reaching registrars in time, lack of staff or expertise within the registration office, the inability to resolve registration discrepancies on election day, unknown or difficult procedures for the restoration of voting rights, intimidation (intended or not) of would-be voters, and inaccessibility of the voting place for persons with disabilities.

It is beyond the scope of this Commission to investigate specific charges. As a matter of principle we vigorously support the full exercise of voting rights for all citizens and we condemn any infringements of those rights. Law enforcement agencies and civil rights commissions should do all in their power to investigate and punish violators of the law. Furthermore, there needs to be communication and mutual education among all parties as to what actions are viewed as intimidating and why.

Some problems do not involve violations of the law but nevertheless impede the full exercise of the franchise. One occurs when registration applications do not reach the appropriate registrars or do not reach them in time. Under the National Voter Registration Act many public agencies and private organizations take voter registration applications. Registrars have no control over the quality of these applications in terms of accuracy, completeness and legibility or their timely transmission

to the registration office. An individual may believe that he or she has registered when, in fact, the application has not arrived or a registrar may be trying to check up on incomplete information.

Potential solutions to this problem require the cooperation of other agencies and organizations, especially political campaigns, to improve the intake process. Some jurisdictions have had success with coding the application forms and using matching receipts so that they can at least identify the source of a problem and try to prevent its recurrence. Voter education is also important so that individuals know what their rights and responsibilities are and what to expect from the application process. All applicants should know to expect notification from the registration office within a certain period of time and how to contact the office if they do not. Inquiries can be a valuable source of information on how well the system is working.

Registration offices may, themselves, be sources of error or delay. This can be a matter of resources, training, and expectations. Certainly, there is an enormous variation in the size of offices and the professional expertise of staff. Many offices have changed little over the years in spite of more complicated processes required by law and the extra demands of a more mobile population. Counties (or other appropriate levels of government) must make elections a priority for funding and for oversight. We especially stress the need for professional development of staff so that they can learn about best practices and standards of performance.

Errors on the part of either the voter or the registration system will typically show up on election day. Here the prospective voter will typically encounter a poll worker who may or may not know what to do and may or may not appear helpful to the voter. The recruitment and training of approximately 1.4 million temporary workers to serve long hours for low pay on days when most of the workforce of the United States is already employed has long been a daunting task for elections officials. Our recommendations in this area include improved training, steps to expand the pool of available poll workers, and improved communications between the polling place and the election administrator's office.

Procedural safeguards are also important. Every state that requires registration prior to election day should have a type of provisional or affidavit ballot for use when eligibility is in doubt. This ballot should not be counted until proper registration is confirmed. The system should be straightforward and poll workers should be thoroughly trained in its use. Furthermore, voters should be notified of the disposition of their provisional ballot or affidavit ballot if the ballot is not counted, and an eligible voter should be automatically

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registered for future elections. We also recommend that states review their policies on the removal and restoration of voting rights. Procedures for restoration should be clear and easily implemented for those who are eligible.

The requirement for accessible polling places is already established in law and encourages counties to work with community leaders to find suitable sites for polling places. We note that some jurisdictions are experiencing increased difficulty obtaining suitable sites because some public schools have become wary of uncontrolled access. The Commission fully supports the letter and spirit of the law and encourages counties to work with community leaders to find suitable sites for polling places.

## **Voting Systems**

Reason and anecdotal evidence suggest that the proximate factors affecting vote accuracy include at least the following: the voting technology (voting equipment and the way in which it is maintained, tested and operated), ballot layout, voter familiarity with both the equipment and the ballot layout, and the instructions and/or assistance the voter is given.

Systematic research on the latter three factors is necessary since the importance of ballot layout has been demonstrated by cases in which unusual numbers of voting problems occurred due to voter confusion. Clearly, legislatures must address ballot language and layout limitations due to the constraints imposed by the various election systems in use. Election officials need to pay close attention to ballot design, especially in light of issue and candidate qualification time limits.

Existing knowledge on the design and usability of forms in general offers promise for improvement in ballot design and layout. Professional organizations that have expertise in form design should be able to assist election officials in learning more about this issue. There is need for future research specifically concerning ballot design and layout.

Voter familiarity is another important factor. There are numerous reports of changes in equipment or ballot design accompanied by increases in voting problems. The butterfly ballot in Palm Beach County, Florida, was a change, and the largest incidence of apparent voting errors occurred in another county that introduced a new optical scan system. The obvious recommendation is for changes to be planned carefully and accompanied by as much advance preparation of the electorate as possible.

But change is not the only source of unfamiliarity. There are always new voters moving into the county or becoming eligible for the first time or simply being drawn into the electorate by a particularly interesting contest. Voter education is important. Our recommendations include the development of materials and increased funding for this purpose. A publicly announced mailing of sample ballots to all registered voters would both help familiarize them with the ballot layout and indicate to those who did not receive a sample that they were not registered. This would not be a panacea – sample ballots were mailed out in Palm Beach County – but it would probably be helpful. In addition, we recommend efforts to develop a cost-effective means of educating voters on equipment while they are in the polling place. Perhaps a continuous-loop video for each type of equipment could be developed and made available by vendors.

Implementing these suggestions will cost money and it is reasonable to ask what the expected gain would be. Unfortunately, the necessary information has not been collected and analyzed. We strongly recommend federal support for research in this area. There has been some recent research on the effects of voting technology, and a brief review will both describe the basis for our conclusions regarding voting systems and indicate how further research on these other factors that affect vote accuracy would be helpful.

## **Voting Technologies**

The chief means of voting in polling places are paper ballots, lever machines, punch cards, optical scan equipment, and direct electronic recorders (DREs). Some studies distinguish two types of punch cards, Datavote and Votomatic. We have combined them for simplicity because we did not see a significant difference in reported performance.

On the other hand, the national studies have not distinguished between precinct tabulation and central tabulation. The distinction is important because precinct tabulation creates an opportunity for voters with optical scan or the very latest punch card ballots to get feedback and an opportunity to correct errors. This is commonly called second chance voting. We will examine the effects of precinct tabulation and second chance voting where data is available.

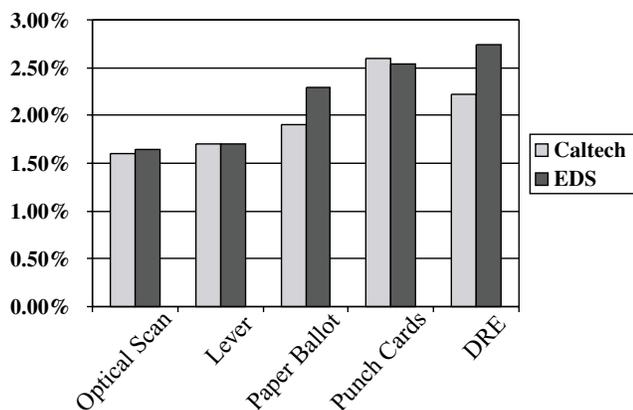
Research on the effects of voting technology has focused on the difference between the number of ballots cast and the total number of votes recorded for

President. We call this a vote residual, modifying a term introduced in a study by Caltech and MIT. In this case the vote residual results from three possible actions. One is a conscious decision not to vote for President. We term this a deliberate undervote.<sup>v</sup> Another is a failure to record a vote choice properly. Examples include an incomplete punch on punch card equipment or circling a name instead of filling in the bubble on an optical scan ballot. We call this an accidental undervote. The third category is the overvote. In this case a voter marks too many candidates for a given race and the equipment will not count that vote.

The goal is to eliminate or at least reduce the number of accidental undervotes and overvotes. Researchers want to know if one type of equipment is more likely to produce these unwanted results than another. Unfortunately, the only available data for most jurisdictions is the vote residual. Researchers use this figure, recognizing that it contains some deliberate undervotes and, perhaps, even some deliberate overvotes. But there is no reason to believe that deliberate undervotes or overvotes are affected by the type of equipment used.

Two national studies used returns from most of the nation's counties compiled by Election Data Services (EDS). EDS analyzed the residual for 1996. A Caltech/MIT study examined it for 1988, 1992, 1996, and 2000 and introduced statistical controls for some of the other factors thought to influence vote accuracy.<sup>vi</sup> The data are far from perfect for these purposes because they include absentee votes, which are often cast on voting systems different from those used in polling places, and they do not distinguish precinct versus central tabulation or second chance voting. Yet the findings are still very useful, as Figure 1 indicates.<sup>vii</sup>

**Figure 1: Vote Residual by Equipment Type**



The data belie the unfortunate characterization of the problem as simply one of antiquated equipment. Paper ballots are the oldest technology, followed by lever machines, punch cards, optical scan, and DRE equipment. The most recent technology vies with punch cards for the highest vote residuals. The pattern in Figure 1 makes sense if we think of it, not in terms of advanced technology or equipment accuracy, but in terms of user friendliness. All of the equipment records minuscule error when used as intended. (Punch card voters are supposed to check for hanging chad.) The range of approximately one percentage point becomes significant when we recall that the difference in Florida's two-party vote was less than two hundredths of a percent.

The Caltech/MIT report suggested a number of possible explanations for the high DRE residual and pointed out that it was much lower in 2000 than in the earlier years. One reason may be improved equipment in a developing technology. More importantly, the human-technology interface may be improving on both sides: people are becoming more accustomed to electronic voting equipment and the equipment may be more user friendly. Precisely because the DREs are the newest technology, there has been less experience with them than with other equipment and the data include a number of elections that were the first use of DREs.

At the other extreme are optical scan ballots and lever machines. The low residual associated with lever machines helps to make the point that the issue is not the newness of technology but the efficacy of the user-technology interface. People are accustomed to lever machines and there are probably no cases on first-time use in the data set. The equipment prevents an overvote and allows voters to make changes before finally casting a vote. Furthermore, one cannot open the curtain to get out of the machine without recording at least one vote. There may be other factors, such as ease of ballot layout and a high percentage of straight-ticket voting where lever machines are still used.

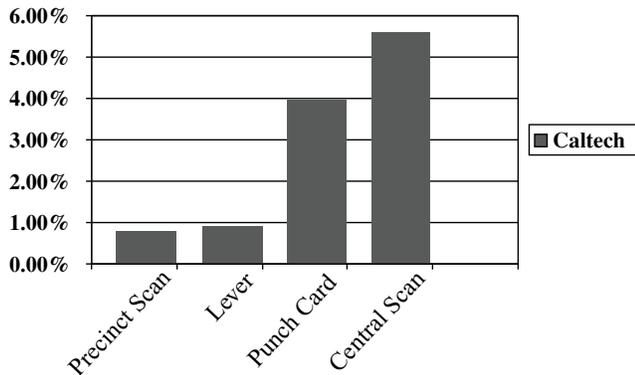
Optical scan ballots are, in many respects, like paper ballots. In fact, one might expect paper ballots to have lower residuals since a human being actually examines each ballot during the count. Improper marking, such as circling a name instead of checking a box, should be picked up at that time.

Yet not all optical scan voting systems are the same. Some use precinct tabulation and some of these allow second chance voting. Typically, the equipment is set to return the ballot if it detects an overvote or a completely blank ballot (possibly indicating that the voter marked it in the wrong manner). Some of the jurisdictions with precinct tabulation do not turn on this option because

state rules forbid it or because they believe it slows the voting process.

Examining the Florida vote with this distinction in mind is instructive. Figure 2 displays the residuals from the November 2000 election.<sup>viii</sup> Here we see that counties with precinct scanners and second chance voting had very low vote residuals while counties with central count scanners actually had higher residuals than those using central count punch card systems.

**Figure 2: Florida Residuals by Voting System**

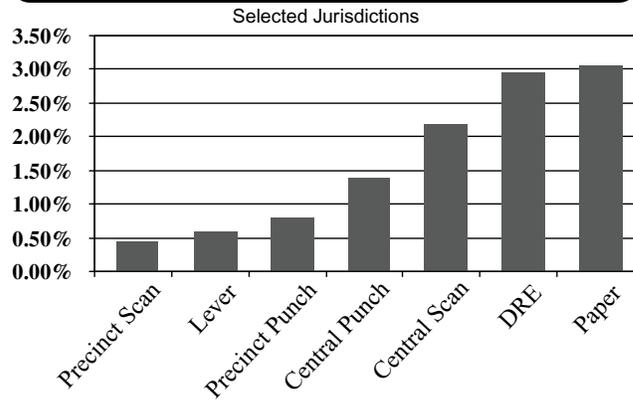


The Florida data strongly suggest that precinct tabulation with second-chance voting can have a very significant effect on the vote residual. (The available data do not allow us to isolate the effects of precinct tabulation without second chance voting.) Future research should distinguish central counters from precinct counters and should further divide precinct counters into those that use second-chance voting and those that do not.

This point has significance beyond the optical scan technology. A few jurisdictions, including Cook County, Illinois, have recently purchased new punch card systems that provide precinct tabulation and second-chance voting. The one example from the November election comes from Michigan where the Bureau of Elections in the Secretary of State's office calculated vote residuals for one representative jurisdiction of each type of voting system. Delta Township used a precinct-counting, punch card system that was set to provide feedback on over-votes, but not on undervotes. Its vote residual, displayed in Figure 3, was slightly higher than those for precinct scanners or lever machines, but much lower than central punch, central scan, DRE, or paper ballots. This data should be interpreted with caution because each system is represented by only one or two jurisdictions, but it

suggests promise for punch card systems using precinct counters and second-chance voting.

**Figure 3: Michigan Residuals by Voting System**



It appears that voting systems do make a difference. We must add the caveat that there is much variation around the average residual vote for each type of equipment. That does not mean that system type has no effect, but it does indicate that other factors are also at work. These include the factors already discussed: ballot layout, voter familiarity, and training/assistance. In addition, the vote totals for the two national studies cited include absentee, military, and overseas votes, which are often cast on different systems from those used in the polling places of the same jurisdictions. Some of the variance in vote residuals may result from votes cast outside of the polling place. We need more research with more complete data, but the available evidence suggests that the type of voting system used affects the number of uncounted votes.

This point brings us to the equal protection issue raised in *Bush v. Gore*. That opinion dealt with recount standards, but the principle can be extended to voting systems. On April 9, *USA TODAY* reported that the rate of invalid votes in Florida's majority-black precincts was four times as great as the rate in majority-white precincts and that the NAACP is suing Florida on the complaint of "non-uniform election practices." A Florida commission has already recommended the acquisition of a uniform voting system and Georgia has approved legislation to that effect. A lawsuit in Illinois overturned a state prohibition on the use of second-chance voting where that option was available, as in the case of punch cards in Cook County.

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While we do not know that a uniform system is best for every state, each state can perform a detailed analysis of its own voting records to determine if there are significant differences in voting accuracy associated with different voting systems. If there are, the state should adopt a plan to remedy the problem. Doing so would not necessarily mean replacing all systems; but it would provide a standard for deciding which, if any, systems should be replaced.

We do not yet have well developed benchmarks for voter performance in different types of voting systems. This fact should not be surprising since research has just begun in this area. To our knowledge there was virtually no research funding prior to the 2000 election. The recent research provides a starting point and can guide initial decisions, but there is much to be gained from sustained data collection and analysis.

## **Recount Procedures**

The public has a clear interest in accurate election results, and recounts should be conducted with dispatch to achieve that end. The Florida recount demonstrated the vulnerability of the process to ambiguous or conflicting statutes that invite judicial intervention and delay. Once a recount begins each side will seek to create standards that favor its cause in that particular election. To the extent possible standards must be created in advance and, to deal with situations not anticipated in law or rules, there should be a clear authority to establish uniform, expeditious procedures.

States should define in advance what constitutes a vote for each voting system. Some states have already done so (e.g. chad hanging by one corner counts but other combinations do not). Other states use an "intent of the voter" standard in which counting officials look at the totality of evidence to discern the voter's intent in each case. While reasonable people can argue the merits of these different approaches, the Florida experience and the U.S. Supreme Court decision suggest that states should abandon the broad "intent of the voter" standard. It is very difficult to maintain uniformity under these circumstances and public trust will be eroded by decisions made after the fact.

States should also review their procedures to provide adequate time for completion of all authorized recount procedures before certification. Recognizing that delays will normally favor one candidate and penalize the other, states should seek to create processes that avoid delays whenever possible. Conducting manual recounts

on only the ballots that failed to register would save considerable time and should be a viable option except where there is reason to believe that the voting equipment, itself, is faulty. Since uniformity has become a critical issue as a result of *Bush v. Gore*, each state should designate an authority to oversee multi-jurisdictional recounts and resolve inter-county differences.

## **The Perception of Partisanship**

Public confidence in the electoral system requires that election administrators avoid even the appearance of partiality. This is a difficult goal since many officials are, themselves, elected and many others have been active in electoral politics. The problem is particularly acute in post-election proceedings when the partisan effects of any decision are usually apparent.

While it is impossible to eliminate politics from politics, several steps offer promise of reducing the role of partisanship. Reducing discretion in post-election proceedings through more finely crafted statutes and administrative rules is one option. Yet experience suggests that there is no way to completely eliminate discretion. Bi-partisan commissions can avoid some of the dangers of one-person decisions, but they can also be slow to act and can become stalemated unless there is a tie-breaking mechanism.

Professionalism can also be a useful counterweight to partisanship. There are professional organizations for election administrators and one of them, the Election Center, has adopted a code of ethics. Training and the exchange of ideas with elections professionals from other jurisdictions can increase officials' sense of identity with and responsibility for the democratic process.

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## ENDNOTES

i Various measures of activity are possible. Population is a gross indicator of the potential demand for election services. It is not a direct measure, however. More direct measures include: registration applications, new registrations, changes of address, cancellations, and the number of votes cast in federal elections. Collection of this data is already mandated under the National Voter Registration Act of 1993 (NVRA). These measures have the advantage of providing an incentive for activity and more directly reflecting the costs of federal mandates. Moreover, states could share in the reimbursements for activities at their NVRA-mandated sites, such as DMV offices.

ii The National Association of Secretaries of State has asked Congress to Create a new "Elections Class" of postage which will be rated as 50 percent of the rate of first class mail including all entitlements and services of the first class mail designation; and further, that this Elections Class rate will be offered at 50 percent of each level of first class service from individual stamped mail through the highest level of automated discounts;

iii The vote residual is the difference between the total number of ballots cast and the total votes recorded for a particular office, in this case President. It reflects errors in marking the ballot as well as deliberate choices on the part of some voters. The concept is discussed more fully under the heading "Voting Technologies," which begins on page 7.

iv **Mail balloting:** This is the process of conducting an election entirely by mail in any given jurisdiction. Ballots would be mailed to all registered voters. No polling places would be open. Ballot drop off sites would be designated by the election department. When the ballot is returned to the election department, the signature must be verified and the voter's record must be checked to verify that the person has voted properly.

**One-Time Absentee Ballots:** Any voter or immediate family member (upon verification), may request a one-time absentee ballot by phone, fax, email, in writing, or in person. No excuse is necessary for this request. When the voted ballot is returned to the election department, the signature must be verified and the voter's record checked to assure they have voted properly.

**Ongoing Absentee Ballots:** The process of allowing all voters the opportunity to receive an ongoing absentee ballot by mail for all elections with no excuse necessary. The request must be received in writing and the signature

must match the original on file. These ballots must be mailed in advance of the election and when the ballot is returned to the election department, the signature must be verified and the voter's record must be checked to assure that they have voted properly.

**Overseas/Military/Out of State:** Voter registration is waived for overseas/military/out-of-state voters for one election only. In order to register the voter permanently, an original signed document must be received by the election department. A postmark is not required, therefore adequate time must be allowed for the voter to receive, vote and return the ballot. The signature must be verified and the voter's record must be checked to assure that they have voted properly.

**Early Voting:** Extending the time when voters can cast their vote increases voter convenience and minimizes the impact of exit polls. The voting period can be on weekends, just one weekend day or open two to three weeks preceding the election. The challenge is to have secure locations staffed by professional staff.

v Some may question that anyone would go to the trouble of showing up at the polls and still choose not to vote in the presidential election. Yet the *USA TODAY* analysis of undervotes in most of Florida's counties showed that 55 percent of them had no marks for President, suggesting either that over half of the undervotes were deliberate or that the voter turned in a completely blank ballot.

vi The Caltech/MIT Voting Project, "Residual Votes Attributable to Technology: An Assessment of the Reliability of Existing Voting Equipment," Version 2: March 30, 2001.

vii The residual is based upon the total number of voters who used each type of equipment. The alternative procedure would be to average the residual votes of all the counties using each type of equipment. That procedure would weigh each county equally, while the procedure reported here weighs each voter equally. The basic patterns are similar in either case.

viii The source is an *Orlando Sentinel* survey of county election supervisors on November 11, 2000. It is particularly useful because it does not include part of the absentee ballots (those from overseas).

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# NOTES

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## **NACo EXECUTIVE COMMITTEE**

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Javier Gonzales  
President-elect  
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Santa Fe County, New Mexico

Ken Mayfield  
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