

MEASURING ELECTION SYSTEM PERFORMANCE

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INTRODUCTION

The controversy surrounding the 2000 presidential election focused the country's attention on questions concerning the quality of American democracy. That saga, however, is remembered in popular consciousness as one preoccupied with the question of voting technology.¹ This is due in no small measure to the Supreme Court's focus on the counting and recounting of punch card ballots, with their dangling and pregnant chads open to varied interpretations.² For practitioners

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1. See, e.g., Abby Goodnough, *In Florida, Echoes of 2000 as Vote Questions Emerge*, N.Y. TIMES, Nov. 10, 2006, at A1 (describing the close 2006 congressional election in the context of the 2000 presidential race); Ken Thomas, *New Beginning for Voting*, MIAMI HERALD, Nov. 4, 2001, at B1 (predicting all Florida precincts will use optical-scan or touch-screen balloting by 2002 elections).

2. *Bush v. Gore*, 531 U.S. 98, 104 (2000) ("This case has shown that punchcard balloting machines can produce an unfortunate number of ballots which are not

and scholars of election administration, however, the 2000 election represented a watershed event that exposed problems in the electoral system as a whole.³ Although we have made great strides as a nation in addressing the technological problems endemic to the 2000 election, we have made very little effort to evaluate the administration of elections in a systematic way. This article attempts to lay out what a system-based evaluation would entail.

A system-based approach helps to facilitate careful analysis of election administration at its various stages of operation. The election system consists of several different components that operate roughly sequentially.⁴ First, people decide to participate and to become part of the election administration system by registering to vote. Registration data are used by the local election office to plan the administration of the election and to communicate with voters about how to participate.⁵ Second, the conduct of the election system consists of three connected parts: (1) voter authentication, (2) vote preparation, and (3) vote management. Voter authentication consists of verifying the identity of the voter and ensuring that he or she is voting in the proper election district. For voters who participate at polling places, the poll worker checks the name of the individual against the roll of voters registered to vote at that location, perhaps requiring various forms of identification as specified by state law.⁶ For absentee voters or others who vote by mail, this entails verification of identity and location.⁷ Vote preparation consists of filling out a ballot or operating a voting machine; it also requires that the voter receive the correct ballot (containing the correct set of offices and appropriate language), understand how to vote, and be capable of filling out the ballot. Vote management consists of collection and securing of all votes cast, tabulation of votes for each office, and certification of the count and, possibly, recount. Each

punched in a clean, complete way by the voter. After the current counting, it is likely legislative bodies nationwide will examine ways to improve the mechanisms and machinery for voting.”)

3. See, e.g., CALTECH/MIT VOTING TECHNOLOGY PROJECT, VOTING: WHAT IS, WHAT COULD BE 12–13 (2001) [hereinafter CALTECH/MIT, VOTING], http://vote.caltech.edu/drupal/files/report/voting_what_is_what_could_be.pdf (presenting overview of voting systems).

4. See *id.*; see also David Leahy, *Running an Election and the Work of the Elections Office*, in COUNTING VOTES: LESSONS FROM THE 2000 PRESIDENTIAL ELECTION IN FLORIDA 63–67 (Robert P. Watson ed., 2004) (describing planning and execution of election at county level).

5. See CALTECH/MIT, VOTING, *supra* note 3.

6. See LORI MINNITE & DAVID CALLAHAN, DEMOS, SECURING THE VOTE: AN ANALYSIS OF ELECTION FRAUD 29–30 (2003) (listing steps states take to prevent voter fraud).

7. *Id.*

part of the process must work in order for votes to be counted properly. Failures at any stage affect the ability of people to participate in the election and the likelihood that the final count reflects the preferences of the public.

The system framework suggests how one might construct an election performance index. There are two general measures for assessing performance: the probability that the election system produces the wrong outcome (i.e., not what a majority of voters actually chose or one with sufficient problems as to lack legitimacy) and the probability that the system fails ultimately to register an individual voter's preference. Under the assumption that failures are independent (not always the correct assumption) at least within a local area, the probability of a system failure equals the product of the probabilities of failures at each stage. By using this approach, one may construct a measure of overall election performance, or non-failure, and measures for different jurisdictions and different types of voters.

The first Part of this Article discusses the difficulties in evaluating both election systems' inputs and their outputs. Inputs are the components of election administration that will vary based on state and local law and practices, such as methods of vote tabulation and voter registration. A system's output is the success with which it accurately records voters' intentions and encourages voter turnout. Part II examines some of the sources from which we derive data concerning elections, such as surveys, audits, and recounts. It discusses some problems encountered when collecting data, such as discrepancies between different sources, and identifies a need for more systematic collection of data. The third Part goes into more depth about systems of measurement used to analyze today's elections. It discusses the problems of how to calculate the size of the electorate, and how to determine "lost votes," or those votes that were not counted due to tabulation error or lack of access to the election system. Part III also reports and analyzes recent data from the Cooperative Congressional Election Study (CCES). Finally, the Article concludes by positing that while the country has seen substantial recent improvement in election administration, there still exists a need for higher quality data in order to further assess the election system.

I.

MEASURING THE RELEVANT INPUTS AND OUTPUTS

The greatest obstacle to gathering data to evaluate the inputs and outputs of the election administration system comes from the system's

extreme decentralization.⁸ State and federal laws place some constraints on election practice,⁹ and state laws define procedures, such as for voter authentication and management of registration systems.¹⁰ Most of the responsibility for managing elections, however, falls on local election offices and poll workers.¹¹ County and town election offices manage voter registration systems, vote tabulation systems, absentee ballots, vote reports, and the precincts, polling stations, and legions of poll workers necessary to carry out an election.¹² These offices often manage several elections each year, including elections

8. See U.S. ELECTION ASSISTANCE COMMISSION, 2008 ELECTION ADMINISTRATION AND VOTING SURVEY 5 (2009) [hereinafter EAC SURVEY], <http://www.eac.gov/assets/1/Documents/2008%20Election%20Administration%20and%20Voting%20Survey%20EAVS%20Report.pdf> (“Election data collection varied significantly in the fifty-five states and territories that responded to the 2008 survey.”); Paul Gronke & Charles Stewart III, *Basic Principles of Data Collection*, in PEW CENTER ON THE STATES, DATA FOR DEMOCRACY: IMPROVING ELECTIONS THROUGH METRICS AND MEASUREMENTS 8 (Paul Gronke & Michael Caudell-Feagan eds., 2008), <http://www.pewcenteronthestates.org/uploadedFiles/Final%20DfD.pdf> (“The biggest barrier to using data to improve elections in America is that states, counties and cities adopt different definitions for the most basic concepts in election administration To improve American elections, election jurisdictions must adopt a common set of definitions and metrics for elections data.”); R. Michael Alvarez, Stephen Ansolabehere, & Charles Stewart III, *Studying Elections: Data Quality and Pitfalls in Measuring the Effects of Voting Technologies*, 33 POL’Y STUD. J. 15, 16–18 (2005) (describing challenges resulting from unreported or misreported election data from states).

9. See CALTECH/MIT, VOTING, *supra* note 3, at 13 (“The four components of the voting system are supported by an extensive, decentralized administrative operation. Elections are conducted by the states. Almost all states have given the authority for administering the elections to local governments.”). Federal reforms like the Help America Vote Act established federal standards and procedures, including an increased role for provisional ballots and improved voting machines, but have not supplanted state and local discretion in other areas. See CENTURY FOUNDATION WORKING GROUP ON STATE IMPLEMENTATION OF ELECTION REFORM, BALANCING ACCESS AND INTEGRITY 1 (2005), <http://www.tcf.org/Publications/ElectionReform/baicomplete.pdf> (“[The Help America Vote Act] left some areas of implementation vague and, in an effort not to overly federalize the election system, left many decisions to the discretion of the states.”).

10. For state-specific voter registration and ballot security laws, see *Election Law Maps*, ELECTION LAW @ MORITZ, <http://moritzlaw.osu.edu/electionlaw/maps/maps.php> (last visited Apr. 14, 2010).

11. See R. Michael Alvarez & Thad E. Hall, *Controlling Democracy: The Principle-Agent Problems in Election Administration*, 34 POL’Y STUD. J. 491, 496–97 (2006) (describing the discretionary authority poll workers are able to exercise and the reliance election officials must place in poll workers’ judgment).

12. See Leahy, *supra* note 4, at 61–62 (detailing responsibilities of county election officials); R. Michael Alvarez, *Measuring Election Performance* 2 (Caltech/MIT Voting Technology Project, Working Paper No. 94, 2009), http://vote.caltech.edu/drupal/files/working_paper/wp_94_pdf_4b676033ef.pdf (“The primary responsibility for administering elections in the United States falls to state governments. In practice in most states, counties and sometimes municipalities have responsibility for conducting elections.”).

for local offices and special districts, state and federal elections, general and primary elections, and special elections. Counties bear nearly all of the cost of conducting elections.¹³

A. Inputs

The first step in evaluating an election administration system, then, is to identify the specific components of that system. This proves very difficult when one must account for the great diversity of locally based processes, which vary both within and among states.¹⁴ Gauging the effectiveness of the election system requires comprehensive data on the relevant features defined in state and federal laws and measurement of county-level and precinct-level management of elections. This information includes systematic classification of state laws, measures of the activities and resources of local election offices (including staffing, budgets, and technology), and information about the political orientation of election officials.¹⁵ There has been very little documentation of such activities.¹⁶ For example, there exists no census of election administration to collect reliable and comprehensive data, including (1) the number of elections run each year, (2) the resources of election offices (staffing and budgets), (3) the backgrounds and political orientations of election officers, and (4) the number of poll workers.

B. Outputs

If the features of election laws and election administration are the inputs to the system, the quality of elections is the output. Which indicators are useful for assessing the effectiveness of election administration will depend on desired objectives or the questions of interest. Two distinct questions are central in this area of inquiry: how well does the official tally of votes reflect the voters' intentions, and how does the election system affect turnout?

13. See CALTECH/MIT, VOTING, *supra* note 3, at 50 ("Based on annual budgets from various states, we estimate that the counties spent approximately \$1 billion on election administration . . . in 2000.").

14. See HEATHER K. GERKEN, THE DEMOCRACY INDEX: WHY OUR ELECTION SYSTEM IS FAILING AND HOW TO FIX IT 16–18 (2009).

15. See EAC SURVEY, *supra* note 8.

16. See Alvarez, Ansolabehere & Stewart, *supra* note 8, at 23 (suggesting data that should be collected by local officials).

1. *How Well Does the Official Tally of Votes Reflect Voters' Intentions?*

The election recount controversy in Florida catapulted questions about the validity of election results to the top of the agenda for scholarly research and election reform for the better part of a decade.¹⁷ The 2000 election sparked nationwide discussion of how equipment failures, fraudulent votes, intimidation at the polls, and discriminatory application of election laws could create a disjuncture between voters' expressed preferences and election results.¹⁸ Subsequent controversies in prominent races in Florida,¹⁹ Minnesota,²⁰ and Washington²¹ have sustained interest in this problem.

There are two important variants on the question of how well the official count reflects voters' intentions, each of which points to different standards for evaluation. First, do the aggregate election results get the outcome right? Second, is the record of the vote sufficiently accurate to enable state election officials to resolve election disputes without resorting to courts? In the first case, administrative problems might not be of great concern if there is no systematic bias. Errors will simply average out and the aggregate election returns will reflect the true winner with probability approaching one. However, even if errors are random, it may still be exceedingly difficult to resolve close elections in recounts if the number of errors and disputed ballots is large.

17. See, e.g., GERKEN, *supra* note 14; Help America Vote Act of 2002, 42 U.S.C. §§ 15301–15545 (2006).

18. See generally THE NATIONAL COMMISSION ON FEDERAL ELECTION REFORM, TO ASSURE PRIDE AND CONFIDENCE IN THE ELECTORAL PROCESS (2001), http://www.tcf.org/Publications/ElectionReform/99_full_report.pdf.

19. In the 2006 race for Florida's 13th congressional district, Republican candidate Vern Buchanan led Democratic candidate Christine Jennings by less than 400 votes after an initial count, with a large undervote in Sarasota county, which used electronic voting machines. Debra Milberg, *FL-13 Undervotes & Potential Recount*, ELECTION LAW @ MORITZ (Nov. 9, 2006), <http://moritzlaw.osu.edu/electionlaw/news/articles.php?ID=42>.

20. Initial results in the 2008 Minnesota Senate race showed Democratic challenger Al Franken narrowly trailing Republican incumbent Norm Coleman. Mark Brunswick, *Tension Escalates as Recount Fluctuates*, STAR TRIBUNE, (Nov. 7, 2008, 9:59 PM), http://www.startribune.com/politics/state/34024274.html?elr=KArks7PYDiaK7DU2EkP7K_V_GD7EaPc:iLP8iUiD3aPc:_Yyc:aUU. After eight months of recounts and legal challenges, the Minnesota Supreme Court dismissed Coleman's equal protection challenge, leading the Republican to concede the election. See Edward B. Foley, *Impressive Unanimity: The Historical Significance of Coleman v. Franken*, ELECTION LAW @ MORITZ (June 30, 2009), <http://moritzlaw.osu.edu/electionlaw/comments/index.php?ID=6535>.

21. The Washington state gubernatorial race, decided after two recounts, was won by 129 votes out of 2.9 million cast. Timothy Egan, *Washington Candidate Wages Endless Campaign*, N.Y. TIMES, May 23, 2005, at A13.

More problematic still, the validity of aggregate returns comes into question when counting is biased by fraud or unfair administration. The policy objective in addressing this question is to minimize fraud, errors, and administrative bias so that, broadly speaking, the election results reflect and accurately represent voters' intent.

The measurement challenge is to capture the intentions of all people who attempted to vote and compare them with official tabulations. *Residual votes*, the discrepancy between total voters and votes cast for an office, emerged as a key measure of election system performance following the 2000 controversy.²² This is one measure of lost votes, but one may also lose votes if people are disallowed or discouraged, as occurs when there are problems with registration systems, polling place accessibility, handling of absentee ballots, confusion in use of equipment, and the like.²³ In addition to lost votes, inaccuracies can arise if people mistakenly vote for the wrong person or if fraudulent ballots are cast.²⁴ Researchers then attempt to attribute and explain the deviations of official tabulations from voters' intentions by pointing to various features of election laws and procedures. This is one area in which considerable progress has been made since 2000.²⁵ Several critical questions remain unanswered. For example,

22. The concept of counting discrepancies using residual votes is explained further *infra* Part III.B. See also HENRY E. BRADY ET AL., SURVEY RESEARCH CTR./INST. OF GOVERNMENTAL STUDIES, COUNTING ALL THE VOTES: THE PERFORMANCE OF VOTING TECHNOLOGY IN THE UNITED STATES 8–9 (2001), <http://ucdata.berkeley.edu/pubs/countingallthevotes.pdf> (describing use of residual votes to measure election performance); Stephen Ansolabehere & Charles Stewart III, *Residual Votes Attributable to Technology*, 67 J. OF POL. 365, 366 (2005) (finding that voting equipment has “strong and substantial effects” on residual votes, with a variation between the best and worst equipment of up to 2% of votes cast); Alvarez, *supra* note 12, at 2–4 (explaining origin and utility of residual vote metric).

23. Long lines, registration problems, lack of identification, and inability to find the polling place were some of the primary reasons potential voters did not cast a ballot. R. MICHAEL ALVAREZ ET AL., 2008 SURVEY OF THE PERFORMANCE OF AMERICAN ELECTIONS 58–59 (2009) [hereinafter 2008 SURVEY], http://vote.caltech.edu/drupal/files/data/final_report20090218_pdf_4b3148ddab.pdf.

24. See JUSTIN LEVITT, BRENNAN CTR. FOR JUSTICE, THE TRUTH ABOUT VOTER FRAUD 7–11 (Nov. 9, 2007), <http://www.brennancenter.org/page/-/The%20Truth%20About%20Voter%20Fraud.pdf> (noting that while actual fraud is rare, other clerical or administrative errors are more common).

25. See, e.g., R. Michael Alvarez & Thad E. Hall, CALTECH/MIT VOTING TECHNOLOGY PROJECT, IMPROVING THE ELECTION DAY SURVEY, 1–2 (2006), http://vote.caltech.edu/drupal/files/report/improving_election_day_survey.pdf (noting that MIT/Caltech's attempts to improve data collection in accord with the recommendations of the Voting Technology Project, while admirable, leave much to be desired); CALTECH/MIT VOTING TECHNOLOGY PROJECT, INSURING THE INTEGRITY OF THE ELECTORAL PROCESS: RECOMMENDATIONS FOR CONSISTENT AND COMPLETE REPORTING OF ELEC-

- Is there bias in the administration system, and does bias depend on the partisan orientation of election administrators?
- Do uniform procedures and laws across counties within states improve voting system performance?
- Do election administration procedures have different effects across demographic groups, especially race, income, education, and residency?

There are also substantial gaps in the measurement of key phenomena, such as the incidence of fraud, the incidence of mishandled or uncounted absentee ballots, and the incidence of votes incorrectly cast.²⁶ In addition, there are important concerns about data quality, especially the accuracy of registration lists, the accuracy of reported numbers of total ballots cast in all states, and the validity of state reports of different types of ballots cast.

2. *How Does the Election System Affect Turnout?*

The second key question concerns participation: how does the election system affect turnout? A primary goal of the election system today is to facilitate voting by all who wish to participate and are eligible. Two quite distinct problems have been the focus of research on turnout in the United States. First, is election administration itself a barrier to voting? Second, do administrative procedures differentially affect participation of groups, especially racial minorities?

An unresolved puzzle among political scientists is why voter participation has declined over the past century.²⁷ All seem to agree that demographic variables account for much of the difference in turnout rates among groups. However, even though the population has become better educated²⁸ and wealthier²⁹—both of which would predict

TION DATA, 4–5 (2004), http://vote.caltech.edu/drupal/files/report/insuring_integrity_of_electoral_process.pdf.

26. See Alvarez, *supra* note 12, at 3–4 (noting residual vote “represents undervotes and overvotes, and it cannot separate intentional nonvoting on a ballot choice from an error or voting machine malfunction”).

27. This is the central puzzle driving research on voter participation in the United States. See, e.g., STEVEN J. ROSENSTONE & JOHN MARK HANSEN, MOBILIZATION, PARTICIPATION, AND DEMOCRACY IN AMERICA 211–27 (1993) (considering solutions to the question of why turnout in presidential elections declined from 62% in the 1960s to barely half in the 1980s).

28. See *id.* at 214 (“In 1960, only four out of ten American adults had earned a high school diploma, and only one out of thirteen had a college degree. In 1988, in contrast, three out of four adults had completed high school, and one out of five had finished college.”).

higher turnout³⁰—participation rates in the United States have not risen.³¹ Some suggest that participation of the eligible voting population has not been declining in the past three decades, and that the apparent decrease in turnout among the voting age population is largely due to the increased number of those ineligible to vote.³² Others focus on registration laws, in particular the interaction between registration and the high mobility of the American population.³³ The United States is unique both in its requirement that voters re-register each time they move and in the high mobility of the population.³⁴ To address this interaction between registration and mobility Congress passed the National Voter Registration Act, popularly known as “Motor Voter.”³⁵ Calls for further easing registration continue, however, with some advocating for same-day registration.³⁶

In addition to easing registration to facilitate turnout, others advocate shifts to alternative modes of voting in order to make the voting process easier.³⁷ Of increasing interest to scholars and reformers

29. Catherine Mulbrandon, *Real Gross National Income per Person*, VISUALIZING ECONOMICS (July 22, 2007), <http://www.visualizingeconomics.com/2007/07/22/real-gross-national-income-per-person>.

30. RAYMOND E. WOLFINGER & STEVEN J. ROSENSTONE, WHO VOTES? 34 (1980).

31. See, e.g., ROSENSTONE & HANSEN, *supra* note 27, at 248 (cautioning “the more recent decline of citizen involvement in government has yielded a politically engaged class that is not only growing smaller and smaller but is also less and less representative of the American polity”).

32. See Michael P. McDonald & Samuel L. Popkin, *The Myth of the Vanishing Voter*, 95 AM. POL. SCI. REV. 963, 963 (2001) (calculating “an accurate estimate of the voting-eligible population . . . from the [voting age population] and show[ing] that, since 1972, the ineligible population is growing faster than the eligible population, which gives rise to the perception that voter participation is decreasing”).

33. See ADAM SKAGGS & JONATHAN BLITZER, BRENNAN CTR. FOR JUSTICE PERMANENT VOTER REGISTRATION 1–3 (2009), <http://www.brennancenter.org/page/-/Democracy/Permanent%20Registration.pdf> (“Permanent registration systems increase electoral participation; in fact, states with permanent registration systems had some of the highest voter turnout rates in the 2008 election.”); Michael P. McDonald, *Portable Voter Registration*, 30 POL. BEHAV. 491, 499 (2008) (“If all states . . . embraced statewide registration portability, the national turnout rate would likely increase by about 1% point.”).

34. See JENNIFER S. ROSENBERG, BRENNAN CTR. FOR JUSTICE, EXPANDING DEMOCRACY: VOTER REGISTRATION AROUND THE WORLD 2 (2009), <http://www.brennancenter.org/page/-/publications/Expanding.Democracy.pdf> (“The United States is one of few democratic nations that place the entire burden of registering to vote on individual citizens.”).

35. National Voter Registration Act of 1993, Pub. L. No. 103–31, 97 Stat. 77 (1993) (codified as amended at 42 U.S.C. § 1973gg-1 to gg-10 (2006)).

36. See SKAGGS & BLITZER, *supra* note 33; McDonald, *supra* note 33.

37. State government officials have been among the leading advocates for early voting. See Bill Bradbury & Sam Reed, *The Voting Booth at the Kitchen Table*, N.Y. TIMES, Aug. 21, 2001, at A17 (citing increased turnout in Oregon and Washington

are alternatives to a single day of voting in the polling place, such as vote-by-mail, absentee voting, early voting, and voting centers, which aim to increase turnout by making voting more convenient.³⁸ At the other extreme are proposals urged to combat fraud, such as requiring voters to present government-issued photo identification or proof of citizenship in order to vote, which may also inhibit participation and access by certain groups.³⁹

Much more needs to be learned about the impact of such reforms on participation both in the aggregate and among demographic subgroups. Some scholars suggest that measures such as early voting or vote-by-mail do not appreciably increase turnout but rather simply change the mode of voting of those who would still otherwise vote.⁴⁰ In contrast, opponents of voter identification requirements point to the large numbers of people, especially racial minorities, the poor, and the elderly, who do not possess government-issued voter identification.⁴¹ However, a high correlation exists between possession of such identification and the demographic variables that predict turnout, thereby

after both states allowed voting by mail). At the time, Bradbury was Oregon Secretary of State and Reed was Washington Secretary of State.

38. See EAC SURVEY, *supra* note 8, at 1 (“The increasing use of alternative means of casting a ballot means that, in 2008, fewer than two-thirds of American voters cast a regular ballot in person at a polling place on Election Day.”).

39. See Spencer Overton, *Voter Identification*, 105 MICH. L. REV. 631, 638–39 (2007) (history of voter identification laws as anti-fraud measures).

40. See JOHN C. FORTIER, ABSENTEE AND EARLY VOTING: TRENDS, PROMISES, AND PERILS 47–48 (American Enterprise Institute, 2006) (reviewing academic literature and concluding absentee, mail, and early voting have minimal impact on voter turnout); ROBERT M. STEIN, JAN LEIGHLEY & CHRISTOPHER OWENS, WHO VOTES, WHO DOESN’T, WHY AND, WHAT CAN BE DONE? A REPORT TO THE FEDERAL COMMISSION ON ELECTORAL REFORM 11 (2005), <http://www.american.edu/ia/cfer/0630test/stein.pdf> (“Simply put, in-person early voting has been used by those who otherwise would have been most likely to vote on Election Day.”); Paul Gronke, Eva Galanes-Rosenbaum & Peter A. Miller, *Early Voting and Turnout*, 40 POL. SCI. & POL. 639, 643 (2007) (finding “little evidence that early voting reforms increase turnout, except for [voting by mail] in Oregon, and then only in presidential elections,” while early in-person voting and no-excuse absentee balloting plus no-excuse early in-person voting actually depress turnout in presidential election years).

41. See BRENNAN CENTER FOR JUSTICE, CITIZENS WITHOUT PROOF: A SURVEY OF AMERICANS’ POSSESSION OF DOCUMENTARY PROOF OF CITIZENSHIP AND PHOTO IDENTIFICATION 3 (2006), http://www.brennancenter.org/page/-/d/download_file_39242.pdf [hereinafter CITIZENS WITHOUT PROOF] (finding elderly, minority, and poor citizens are less likely to have photo ID). *But cf.* R. Michael Alvarez, Delia Bailey & Jonathan Katz, *The Effect of Voter Identification Laws on Turnout* 19 (Caltech/MIT Voting Technology Project, Working Paper No. 57, 2007) (finding “no evidence that voter identification requirements are racially discriminatory”).

making it difficult to discern the disenfranchising or deterrent effect, if any, of such ID laws.⁴²

We are left, then, with a multitude of questions concerning the effect of the regime of election law and administration on participation. Some of the most basic questions that lack definitive answers include:

- What is the size of the eligible electorate?
- How many people actually voted (submitted absentee ballots or went to the polls) in the last election?
- What is the effect of recent registration reforms, including statewide registration systems, on rates of turnout?
- How are voter registration rolls managed? How many applications for registration are denied and how many names are purged from the rolls?
- How many voters are discouraged from voting by certain aspects of the voting experience, such as physical access to polls, voter identification, and lines?
- How much vote fraud occurs?
- How much confidence do Americans have in election administration procedures?
- Does confidence in the election process affect participation?⁴³

Data compiled thus far cannot answer these questions with complete precision, but surveys, recounts, and other research tools have increasingly been used to study the various well-known pathologies in the electoral system. The following Parts will examine the current data sources and election measurement tools, identifying some ongoing problems with data collection.

II.

DATA SOURCES AND QUALITY

Although the questions listed in the previous Part cannot be readily answered given the information available today, a wide variety of

42. See *CITIZENS WITHOUT PROOF*, *supra* note 41, at 11 (discussing aggregation bias); Overton, *supra* note 39, at 635 (calling for greater empirical work to establish effect).

43. The Caltech/MIT Voting Technology Project offered one attempt at identifying other important questions and data needs. See *CALTECH/MIT VOTING TECHNOLOGY PROJECT, INSURING THE INTEGRITY OF THE ELECTORAL PROCESS: RECOMMENDATIONS FOR CONSISTENT AND COMPLETE REPORTING OF ELECTION DATA 4–5* (2004), http://vote.caltech.edu/drupal/files/report/insuring_integrity_of_electoral_process.pdf (listing data to collect before, during, and after election, along with administrative and demographic data).

data are available to study elections. The most important are (1) election returns, (2) public surveys, (3) recounts and audits, and (4) election office reports. Most research on elections has focused on the first two data sources. We see a need for investment in more systematic collection of data from recounts and audits and of election office information and reports.

Election results are central to measurement of election performance. In addition to the typical notion of “results” as how many votes each candidate received, we would include data concerning the total number of people registered, total voters, total votes for each office, and votes using various modes (in-precinct, absentee and early, provisional). In every jurisdiction these data exist at the precinct level, as that is the level at which voting occurs. Most jurisdictions, however, report at the office (e.g., state legislative district), town, or county level.⁴⁴ Actual election returns provide unbiased measures of performance, often at a fine geographic level. One cannot observe effects of types of voters on votes, owing to the secrecy of the ballot, but data on vote histories make it possible to study participation rates and modes of participation for some characteristics, including age, gender, party affiliation, and in some states, race.

Problems of data quality have been noted for some of the more obscure numbers. For example, Michael Pitts found large discrepancies between state and county reports of the reasons why provisional ballots were cast.⁴⁵ To our knowledge, there has been no study of the incidence of discrepancies between certified state election results and county reports. Discrepancies often exist between state-level reports and aggregated county reports concerning the basic numbers as to how many people voted and how many votes candidates received. It would be useful to know the magnitude and frequency of such discrepancies.

Surveys provide information about individuals’ voting experiences and behavior. These may be aggregated to provide national estimates and, with sufficiently large surveys, state-level estimates of quantities of interest. But the most important use of surveys to date has been estimating the effects of individuals’ characteristics and the

44. See EAC SURVEY, *supra* note 8, at 4–5 (explaining voting data collection); see also R. MICHAEL ALVAREZ & THAD E. HALL, CALTECH/MIT VOTING TECHNOLOGY PROJECT, IMPROVING THE ELECTION DAY SURVEY 2–4 (2006), http://vote.caltech.edu/drupal/files/report/improving_election_day_survey.pdf (noting problems with data collection); Alvarez, Ansolabehere & Stewart, *supra* note 8, at 18–19 (describing challenges that result from inconsistent reporting across counties).

45. Michael Pitts, *Empirically Assessing the Impact of Photo Identification at the Polls through an Examination of Provisional Balloting*, 24 J.L. & POL. 475, 488–91 (2008).

context of voting on rates of electoral participation and the incidence of barriers to voting. Perhaps the most important surveys in this regard are the Current Population Survey, which has large samples (75,000 cases) and offers measures of election experiences,⁴⁶ and the American National Election Study, which covers every presidential and most midterm elections since 1952, albeit with much smaller samples.⁴⁷ The Cooperative Congressional Election Surveys of 2006, 2008, and 2010 also offer measures of election experiences and barriers to voting for very large samples (at least 35,000 cases each).⁴⁸ National exit polls have not asked about voting experiences, but such polls represent great opportunities for such investigations in future elections.

Audits and recounts present more limited opportunities to study election administration problems. Audits and recounts occur in every election year, although only for a few elections or jurisdictions.⁴⁹ The data produced are very useful because they offer a level of detail about system failures that is otherwise unavailable. Recounts, for example, provide information about the types of problems encountered with each ballot, the incidence of ballots not counted on the first tabulation, and the incidence of votes counted the wrong way.

Election offices issue many reports and collect additional data about their systems. Data readily available from election offices include size of office staff and budget, types of voting equipment and registration system (paper or computerized), registration applications received and accepted, numbers of poll workers, and political features of the election office (a single head or committee, elected or appointed).⁵⁰ Such information has not been collected and compiled systematically, but the prospect of doing so represents a huge opportunity. For example, Election Data Services collected the type of voting equipment used in each county since 1980; when the 2000 election controversy hit, Election Data Services was able to provide these

46. CENSUS BUREAU, NOVEMBER CURRENT POPULATION SURVEY (2008) [hereinafter CPS], <http://www.census.gov/prod/2006pubs/p20-556.pdf> (providing results of the November 2008 Current Population Survey).

47. AMERICAN NATIONAL ELECTION STUDIES, <http://www.electionstudies.org> (last visited Sept. 3, 2010).

48. 2008 COOPERATIVE CONGRESSIONAL ELECTION SURVEY (2008) [hereinafter CCES], <http://web.mit.edu/polisci/portl/detailpages/portlcces2008.html> (last visited Sept. 3, 2010).

49. See, e.g., *Topic-by-Topic Coverage (Recount Procedures)*, ELECTION LAW @ MORITZ (last visited Apr. 14, 2010), <http://moritzlaw.osu.edu/electionlaw/topics/index.php?ID=47> (covering recounts and challenged results from recent elections).

50. See EAC SURVEY, *supra* note 8.

data.⁵¹ But most information about local election administration has not been gathered. For example, it is widely conjectured that partisan election administrators affect election outcomes and that non-partisan administration would lead to fairer results.⁵² Because comprehensive data have not been gathered, no study has been able to measure whether that claim is true or how large the effects may be.

III.

MEASURES AND RESULTS

A. *How to Calculate the Size of the Electorate*

The size and scope of the electorate and the voting public provides the starting point in understanding and assessing the performance of the U.S. election system. The total electorate and total vote are the baseline against which calculations of “error rates” or “system failure rates” are to be measured. It is helpful to keep in mind the size of the electorate simply to understand the magnitude and nature of the system, because small percentages in failure rates can affect millions of voters. The facts and figures concerning the size of the electorate also underscore the massive operational scale of every election.⁵³ Every two years, the United States conducts a “census” of all eligible and actual voters in the entire nation. That enumeration is conducted in a relatively short amount of time (the period allowed for casting votes, culminating in Election Day) and requires a high degree of accuracy.

The Census Bureau estimated the adult population in the United States at 233 million.⁵⁴ The eligible electorate, excluding non-citizens

51. See Alvarez, *supra* note 12, at 2 (“[Decentralization] made it very difficult to collect a critical piece of data needed for the evaluation of election technology—what type of voting system was used by the local election officials in a particular jurisdiction. As luck would have it, a private election data company (Election Data Services, Inc.) had been collecting this information in the United States before the 2000 presidential election, and we were able to reach an arrangement to get access to the data they had collected.”).

52. See HEATHER K. GERKEN, *THE DEMOCRACY INDEX: WHY OUR ELECTION SYSTEM IS FAILING AND HOW TO FIX IT* 16–18 (2009) (“The problem is not just that election officials are likely to root for their own political party. The problem is that election officials *depend on their party for their jobs.*”); Cathy Dubin, *Candidates, Parties, and Local Election Politics*, in *COUNTING VOTES: LESSONS FROM THE 2000 PRESIDENTIAL ELECTION IN FLORIDA* 91, 91–92 (Robert P. Watson ed., 2004) (advocating for nonpartisan election officials).

53. See, e.g., Leahy, *supra* note 4, at 63–67 (detailing scope of work involved in election planning).

54. EAC SURVEY, *supra* note 8, at 7. The population figure is a projection based on data from the 2000 Census and is “prone to error.” *Id.* at 7 n.2. The 2008 CPS estimated total adult population of 225 million. CPS, *supra* note 46, at 2.

and felons, is estimated to be 212 million⁵⁵ and registration, at 146 million.⁵⁶ In the 2008 election, approximately 133 million Americans voted.⁵⁷ In other words, turnout in the 2008 general election was approximately 55% of the voting age population, 63% of voting eligible population, and 91% of registered voters.

The precision of these numbers is difficult to determine. There is surely some random error in vote totals, and not all states report total voters (an important threshold problem that itself requires legislative remedy).⁵⁸ Registration rolls are known to include errors, both omissions and duplications,⁵⁹ and the measures of voting age and eligible populations are themselves estimates based on surveys and models.⁶⁰ The standard errors and confidence intervals of the estimated population, eligible electorate, registered voting population, and total votes are not known. Any assessment of performance ought to be mindful of error in these baseline numbers and the possible effects such errors have on inferences drawn about performance. Scholars working in this area should produce confidence intervals and report models used to construct estimates completely. The Census Bureau reports confidence intervals along with its estimates of the voting population and number registered; the national-level confidence interval for turnout and registration estimates from the CPS is +/- 0.4 (four tenths of 1%).⁶¹ Recounts reveal random variability in vote reports on the order of 0.5% at the town level.⁶² Estimates of the eligible and registered populations depend on the model. State and national vote and voting age population figures may be treated as much more precise. Nevertheless, any

55. Michael McDonald, *2008 General Election Turnout Rates*, UNITED STATES ELECTION PROJECT (last updated Oct. 6, 2010), http://elections.gmu.edu/Turnout_2008G.html.

56. CPS, *supra* note 46, at 2.

57. McDonald, *supra* note 55.

58. See EAC SURVEY, *supra* note 8, at 5.

59. See MYRNA PÉREZ, BRENNAN CENTER FOR JUSTICE, VOTER PURGES 7–20 (2008) (explaining how errors occur on voter registration rolls and flaws with state methods for purging erroneous entries).

60. See CPS *supra* note 46, at 15–16.

61. U.S. CENSUS BUREAU, SOURCE AND ACCURACY STATEMENT FOR THE NOVEMBER 2008 CPS MICRODATA FILE ON VOTING AND REGISTRATION, <http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2008/sa2008.pdf>; Michael McDonald, *2008 Current Population Survey Voting and Registration Supplement*, UNITED STATES ELECTIONS PROJECT (May 17, 2010), http://elections.gmu.edu/CPS_2008.html.

62. See, e.g., Stephen Ansolabehere & Andrew Reeves, *Using Recounts to Measure the Accuracy of Vote Tabulations: Evidence from New Hampshire Elections 1946–2002* 7 (Caltech/MIT Voting Technology Project, Working Paper No. 11, 2004) (“The discrepancy between initial counts and recounts falls to about 0.5% with the optically scanned ballots.”).

change or effect less than 1% in magnitude cannot be separated, with confidence, from the noise in the statistical estimates.

B. How to Determine “Lost Votes”

Assessment of system performance requires an additional set of measures, not just numbers of registered voters and total votes for each office. To measure quality of election administration, we also need to know what fraction of voters did not have their preferences registered in the final election tallies.

However, no single measure of the quality of election administration exists. Such a measure must be built up from the assessment of individual components of the voting process. The challenge is to find appropriate measures and to use those measures to assess the system. The bottom line assessment might boil down to a single data-driven index, as suggested by Professor Gerken,⁶³ or it may be more effective to identify performance of critical components of the system individually and communicate weaknesses and strengths to election administrators.

One model for how to proceed is that presented in the analysis of “lost votes” by the Caltech/MIT Voting Technology Project, initially produced in 2001.⁶⁴ That analysis consists of calculating the number of votes not tabulated and the number of people denied access owing to election administration. It is not a comprehensive measure.⁶⁵ In particular it does not include errors in casting ballots that result in voting for the “wrong candidate,” as occurred with the “butterfly ballot.”⁶⁶ However, we follow that approach here, and expand it as more extensive data are available today.

The calculation of lost votes focuses on election administration failures that either fail to register votes or discourage people from voting. Votes can be lost due to technological problems, failures in the voter authentication process, and problems that lead otherwise eager

63. See GERKEN, *supra* note 14; Heather Gerken, *How Does Your State Rank on the Democracy Index?*, LEGAL TIMES, Jan. 1, 2007, at 36, available at <http://www.law.yale.edu/news/4044.htm>.

64. That analysis is found in CALTECH/MIT, VOTING, *supra* note 3, at 8–10.

65. See ALVAREZ, *supra* note 12, at 3–4 (noting inability of residual vote measure to distinguish between overvotes and undervotes); Alvarez et al., *supra* note 8, at 21 (correcting residual vote data that originally included write-in votes).

66. See Henry E. Brady et al., *The Butterfly Did It: The Aberrant Vote for Buchanan in Palm Beach County, Florida*, 95 AM. POL. SCI. REV. 793, 803–04 (2001) (“Had [Palm Beach County] used a ballot format in the presidential race that did not lead to systematic biased voting errors, our findings suggest that, other things equal, Al Gore would have won a majority of the officially certified votes in Florida.”).

voters to avoid voting. Residual votes attributable to voting technology represent the failure to tally voters' intentions as a result of problems that voters encounter in registering their preferences during ballot preparation⁶⁷ and problems concerning tabulation equipment.⁶⁸ Failures in the authentication process, including denial of the vote due to voter identification and registration problems encountered at the polls. Finally voters can be discouraged from voting because of inaccessible polling places, long lines, failure to receive absentee ballots, and other administrative obstacles.

Residual votes are measured from election returns directly. The residual vote for a given office equals the total number of ballots cast minus the number of votes counted for that office, divided by the total number of ballots cast. Adjustment for intentional non-voting requires some information about the frequency with which voters intentionally skip a race. Exit polls and post election surveys contain such numbers; in the 2000 election roughly 0.5% of people intentionally cast a ballot without voting in the presidential race.⁶⁹ This is consistent with the rate at which people choose "none of these candidates" in the state of Nevada, the only state that offers that option.⁷⁰

In the 2000 election residual votes nationwide averaged 2% in the presidential election (without adjustment for intentional abstentions).⁷¹ The figure reached as high as 4% in one state, and in some counties as high as 20%.⁷² According to estimates of Ansolabehere and Stewart, changing technologies from punch cards and lever machines could have reduced that figure considerably.⁷³ The Help America Vote Act⁷⁴ assisted states and counties with upgrading of

67. See *supra* text accompanying notes 4–7.

68. *Id.*

69. CALTECH/MIT, VOTING, *supra* note 3, at 8.

70. See 2008 OFFICIAL STATEWIDE GENERAL ELECTION RESULTS, NEV. SEC'Y OF STATE, available at <http://nvsos.gov/SOSelectionPages/results/2008StateWideGeneral/ElectionSummary.aspx>, (showing "none of these candidates" received 0.65% in 2008); 2004 OFFICIAL STATEWIDE GENERAL ELECTION RESULTS, NEV. SEC'Y OF STATE, available at <http://nvsos.gov/SOSelectionPages/results/2004General/ElectionSummary.aspx> (showing "none of these candidates" received 0.44% in 2004); 2000 OFFICIAL STATEWIDE GENERAL ELECTION RESULTS, NEV. SEC'Y OF STATE, available at <http://nvsos.gov/SOSelectionPages/results/2000General/ElectionSummary.aspx> (showing "none of these candidates" received 0.54% in 2008).

71. See Charles Stewart III, *Residual Vote in the 2004 Election*, 5 ELECTION LAW JOURNAL 158 (2006); CALTECH/MIT, VOTING, *supra* note 3, at 20.

72. CALTECH/MIT, VOTING, *supra* note 3, at 89–90; see MICHAEL ALVAREZ ET AL., ELECTRONIC ELECTIONS: THE PERILS AND PROMISES OF DIGITAL DEMOCRACY 108 (2008).

73. See Ansolabehere & Stewart, *supra* note 22, at 366 (finding as much as a 2% difference between the best and worst performing voting equipment).

74. Pub. L. No. 107-252, 116 Stat. 1666, 42 U.S.C. §§ 15301–15545 (2006).

equipment and incentivized the phasing out of punch card equipment.⁷⁵ The residual vote rate nationwide was 1% in 2004⁷⁶ and 0.8% in 2008. No state had a residual vote rate in excess of 3%.⁷⁷ A residual vote rate of 0.8% translates into approximately one million ballots without a preference recorded for president in 2008, and in roughly half of those cases voters may have intentionally skipped the office.

This represents a very significant improvement since 2000. The Caltech/MIT Voting Technology Project estimated that there were 1.5 million uncounted votes in 2000.⁷⁸ Had the system remained unchanged, applying their estimation procedure to the 2008 turnout figures, uncounted votes would have reached two million. In actuality, returns available at the time of this writing reveal that the incidence of uncounted votes was approximately 0.5 million.⁷⁹

Whereas assessments of residual votes capture failures on the back end of the administration process, particularly recording and tabulating votes, the 2008 Survey of the Performance of American Elections found that the failures on the front end of the process were even greater. In particular, the survey notes problems with the registration process that lead voters not to cast ballots, although the survey had no independent way of gauging voter discouragement.⁸⁰ To measure failures in the authentication process, that study used questions from the Election Supplement of the Current Population Survey (CPS).⁸¹ That survey asks registered non-voters why they did not vote. In 2004, the CPS projected sixteen million registered non-voters.⁸² Of that number, 6.8% reported that they did not vote because of registration problems or absentee ballot problems and 3.0% reported that they did not vote because of difficulty with polling places.⁸³ Based on these two figures, 1.6 million votes were lost in 2004 owing to registration and polling place problems. The Caltech/MIT report put the figure

75. 42 U.S.C. § 15302 (2006).

76. Charles Stewart III estimates the residual vote in 2004 at 1%, or roughly 1.2 million votes. Charles Stewart III, *Residual Votes in the 2004 Election*, 5 ELECTION L.J. 158, 158–59 (2006).

77. See CALTECH/MIT, VOTING, *supra* note 3; Ian Urbina, *Hurdles to Voting Persisted in 2008*, N.Y. TIMES, Mar. 10, 2009, at A18; Charles Stewart III, *Election Technology and the Voting Experience in 2008*, available at http://web.mit.edu/cstewart/www/papers/stewart_midwest2009.pdf.

78. CALTECH/MIT, VOTING, *supra* note 3, at 8.

79. See Stewart, *supra* note 77.

80. 2008 SURVEY, *supra* note 23, at 32–36.

81. *Id.* at 33.

82. KELLY HOLDER, U.S. CENSUS BUREAU, CURRENT POPULATION REPORTS, NO. P20-556, VOTING AND REGISTRATION IN THE ELECTION OF NOVEMBER 2004, at 14 (2006), <http://www.census.gov/prod/2006pubs/p20-556.pdf> [hereinafter 2004 CPS].

83. *Id.* at 15.

between two and four million votes in 2000.⁸⁴ In 2008, the CPS reported fifteen million registered non-voters, of which 6% reported that they did not vote because of registration problems and 2.7% reported that they did not vote because of difficulty with polling places.⁸⁵ These two figures project that 1.3 million votes were lost in 2004 as a result of registration and polling place problems.⁸⁶

The CPS measures of registration and polling place problems have two faults. First, the survey lacks sufficient detail to discern the exact nature of the problem. Were these survey respondents turned away at the polls, or did they decide not to vote at all and simply offered the administrative practices as the reason? The registration question in particular does not discriminate between registration problems and absentee ballot problems.⁸⁷ Second, the survey lacks measures of other sorts of problems, such as lack of identification and long lines. A sizable fraction of respondents chose the “Other” category,⁸⁸ suggesting the list of reasons for not voting was incomplete.

C. *The Cooperative Congressional Election Study*

Some of the information lacking from the CPS data has recently been gathered by the Cooperative Congressional Election Study (CCES). In 2006 and 2008, the CCES developed extensive instrumentation to measure difficulties related to registration and voting.⁸⁹ The study asked in the pre-election survey and in the post-election survey whether the respondent was registered. The survey’s vote question distinguished among those who simply did not vote, those who definitely voted, those who thought about it and those who usually vote, and those who tried to vote but were not allowed (“did not or could not”).

84. See CALTECH/MIT, VOTING, *supra* note 3, at 8–9.

85. THOM FILE & SARAH CRISSEY, U.S. CENSUS BUREAU, CURRENT POPULATION REPORTS, NO. P20-562, VOTING AND REGISTRATION IN THE ELECTION OF NOVEMBER 2008, at 14 (2010), available at <http://www.census.gov/hhes/www/socdemo/voting/publications/p20/2008/tables.html>.

86. *But see* Michael McDonald, 2008 Current Population Survey Voting and Registration Supplement, http://elections.gmu.edu/CPS_2008.html (last updated May 17, 2010) (raising questions about the reliability of the 2004 CPS).

87. The CPS asks non-voters to select one answer to the question, “What was the main reason (you/name) did not vote? . . . (8) Registration problems (i.e. didn’t receive absentee ballot, not registered in current location).” U.S. CENSUS BUREAU, CURRENT POPULATION SURVEY, NOVEMBER 2004: VOTING AND REGISTRATION SUPPLEMENT FILE 9-2, <http://www.census.gov/apsd/techdoc/cps/cpsnov04.pdf>.

88. More than 10% of respondents indicated “Other reason.” 2004 CPS, *supra* note 82, at 15.

89. CCES, *supra* note 48.

Of registered voters, 84.6% reported that they voted (compared with a projected 79%), and 2.7% reported that they “attempted to vote but could not or did not.”⁹⁰ The remaining 13.7% of registered non-voters did not attempt to vote.⁹¹ Focusing on those who did not vote, we can further determine the reasons for non-voting. Overall, 82% of registered non-voters cited dislike of the candidates or another reason not connected in any way to administration as their reason for not voting.⁹² The remainder cited a range of administrative problems: 2% of all registered non-voters said they lacked appropriate identification, 3% said they were not in fact registered, 4% said the lines were too long, 2% said they were not allowed to vote at the polls, 2% said that they requested but did not receive absentee ballots, and 2% did not know where to vote.⁹³ All told, 18% of registered non-voters, or 6.3% of the eligible electorate (a projected 12 million people), said that they did not vote for administrative reasons.⁹⁴

There are many potential sources of error in the CCES survey and data. People may not answer such questions truthfully. For example, fully one-third of those who said they were not allowed to vote at the polls also said that they did not try to vote. Moreover, since the CCES employs a probability sample from a pool of respondents who are already users of the internet, it would not pick up difficulties disproportionately experienced by those who do not have internet access. In other words, the estimates that the CCES provides might be low, if one believes that those with internet access may be less likely to face administrative barriers or that they might be better able to navigate such barriers. Even so, the CCES represents the best (and sometimes only) data available on some of these topics, and it has proven especially accurate for certain purposes, such as predicting election outcomes. In addition, its findings are consistent with those from the CPS, which interviews a random sample of the U.S. adult population.

For the purposes of analyzing the effects of election administration on those interested in voting, it makes more sense to focus on the 2.7% who said that they attempted to vote but failed. Focusing on those who attempted to vote reveals that systems failures directly affect 1% of the eligible electorate in their efforts to vote. Of registered non-voters who attempted but failed to vote, 40% cited some form of administrative failure, including lines, identification, polling place lo-

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

cation, absentee ballots, registration, and not being allowed at polls, while 60% cited some other reason, such as being sick or out of town.⁹⁵ Two-fifths, then, of the 2.7% who attempted to vote but failed equals 1% of all eligible voters, which projects to two million people who attempted to vote but failed because of administrative problems. This is a much sharper estimate than is possible with the CPS because the CPS does not clearly measure intentions to vote and it does not clearly distinguish between different sorts of voting-related problems.

The data further point to specific problems with absentee voting that need to be addressed and reveals lingering questions of access for disabled and sick people. Table 1 presents the reasons for non-voting among registered non-voters who attempted to vote and those who did not attempt to vote. Of those who tried to vote the three most common reasons for non-voting were: sick or disabled (19.6%), out of town (15.1%), and requested but did not receive absentee ballot (13.6%). Of those who did not try to vote, the most common reasons were: not liking the candidates (28.8%), sick or disabled (11.4%), and out of town (9.1%).⁹⁶

Taking these data literally, about 300,000 people nationwide attempted to vote at the polls but were not allowed to vote. Difficulties getting absentee ballots were twice as common.

An alternative way to gauge problems encountered at the polling place is to ask people directly whether they attempted to vote and if they encountered problems in the voter authentication process, registration or identification. Again the answer is that these problems affected about 1% of voters.⁹⁷

The survey asked respondents who voted or attempted to vote whether they encountered problems with their voter registrations or were asked to show photographic identification. Half of all voters (55.0%) were asked to show identification, while a small fraction (3.8%) of all voters reported problems with their registrations.⁹⁸ Of those asked to show identification and of those who reported registration problems, the survey followed up with a question asking whether the respondent was allowed to vote.

95. *Voter Registration: Assessing Current Problems: Hearing Before the S. Comm. on Rules and Admin.*, 111th Cong. 15 (2009) (statement of Stephen Ansolabehere, Professor, Harvard University and Massachusetts Institute of Technology) (citing CCES, *supra* note 88), http://www.vote.caltech.edu/drupal/files/news/03112009Ansolabehere_Testimony.pdf.

96. *Id.* at 16 (citing CCES, *supra* note 48).

97. *Id.* at 17 (citing CCES, *supra* note 48).

98. *Id.*

TABLE 1: REASONS FOR NON-VOTING, REGISTERED NON-VOTERS,
2008 CCES

Reason	Tried To Vote	Did Not Try
I forgot	0.2%	1.8%
Not interested	0.0	5.2
Too busy	5.1	6.0
Didn't like candidates	2.3	28.8
Not registered	2.7	5.2
Lack ID	3.9	1.5
Out of town	15.1	9.1
Sick/disabled	19.6	11.4
Transportation	2.9	2.1
Bad weather	0.5	0.9
Long line at polls	8.1	3.0
Not allowed at polls	8.2	1.0
Requested, didn't receive absentee ballot	13.6	2.1
Didn't know where	3.1	1.6
Didn't know enough	2.0	5.1
Other	12.8	13.0
Don't know	0.0	2.3

Source: 2008 Cooperative Congressional Election Survey (2008), <http://web.mit.edu/polisci/portl/detailpages/portlcces2008.html>.

Exclusions because of authentication problems occur two ways—registration problems and lack of identification. First consider those with registration problems. Just under 4% of those who voted or tried to vote reported a problem with their registration.⁹⁹ Half of these people were allowed to vote a regular ballot and another quarter voted a provisional ballot.¹⁰⁰ Hence, one-fourth of those with registration problems (1% of the voters) reported that they were not allowed to vote.¹⁰¹

A second set of people experienced problems with voter identification.¹⁰² Half of all voters were asked to show identification; 3.4% of them said that they then voted provisional ballots, and 1.2% said that they were not allowed to vote at all.¹⁰³ Registration problems and ex-

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

clusions due to voter identification overlap considerably. 84% of those not allowed to vote because of a registration problem were asked for identification.¹⁰⁴ Hence, the exclusions due to authentication (identification or registration) problems comes to just over 1%, which is nearly identical to the number of excluded voters estimated by our earlier calculation.

Administrative failures, then, appear to have lost approximately two to three million votes in 2008. Most of those failings came at the front end of the process—absentees, registration, and voter identification. In short, the incidence of lost votes appears to have been cut in half since the 2000 election.

Election administration may also affect participation by discouraging voters. Potential voters may view the hassles of registration, obtaining a ballot, or waiting in line as sufficient reason for not voting. Table 1 is instructive about these issues as well. Approximately 12.7% of registered, eligible voters chose not to vote in 2008.¹⁰⁵ The second column of Table 1 suggests that the lion's share of these respondents cited non-administrative reasons: 14.4% identified registration, ID, lines, access to polls, and absentee ballots as reasons for not voting in 2008, and 85.6% had some other reason.¹⁰⁶ Excluding people who admitted that they were not registered, those who stated administrative reasons for non-participation shrink further, to less than 10%. So an additional 1% to 2% of the eligible electorate might have chosen not to vote because of the prospect of administrative hassles, such as long lines, voter identification, difficulty getting an absentee ballot and the like.¹⁰⁷ If true, another two to four million people stayed away from the election because of the hassle or the prospective administrative problems. This is a much more subjective number, because the people at issue here stated an administrative reason even though they did not have that particular experience during the election.

CONCLUSION

The continuing effort to improve election systems in the United States points to the need for high quality data about election outcomes, systems, and performance. The Caltech/MIT Voting Technology Project suggested one overall measure, lost votes, which is a composition of many different indicators. The most important of these indicators are residual votes, registration failures, and polling place failures. Ad-

104. *Id.*

105. *Id.* at 18 (citing CCES, *supra* note 48).

106. *Id.*

107. *Id.*

ditional research, especially through the development of more detailed survey instruments, allows for more refined study of failures in the authentication process and a better assessment of the prevalence of discouraged voters.

Data available about the 2008 election suggest that there has been a substantial improvement in the quality of election administration. The overall incidence of lost votes appears to have been cut in half, and the improvements have been developed in the systems for recording and tabulating votes and in registration and authentication. These data do flag one area of concern: there appears to have been an increase in the proportion of people having difficulty obtaining absentee ballots.

The data presented here are at the national level. Some of these data, especially residual votes, are readily disaggregated to the state and local levels, allowing comparison of the performance of different jurisdictions, types of equipment, and election laws. Perhaps the greatest challenge to constructing an index of performance is getting sufficient data to permit comparison across states or across counties. Survey data are the best available indicators for voters' experiences, but even the two large scale surveys presented here (the CPS and the CCES) are insufficient to provide an adequate picture of most states.

The problem is two-fold. First, very large surveys would be required to get sufficient nationwide data. Two thousand interviews per state would mean a 100,000-person survey. Second, the incidence of problems is sufficiently small, often on the order of a few percent, that state-level samples of two thousand or so (which is typical) would be insufficient to get highly accurate estimates of the effects of interest.

One solution may be to pool different years of each survey and different surveys in each year. Over the course of a decade the CPS and CCES would each yield samples in excess of 150,000 cases, and when combined, the pooled studies would exceed half a million. Doing so would require great care in modeling the differences in sampling frames and possible trends in the quantities of interest over time. In addition, there would need to be standardization of question wordings across the surveys. Other opportunities include asking election performance questions on exit polls and in other surveys, such as the ANES, the Annenberg Election Survey, and the American Community Survey.

A broader issue ripe for examination concerns the values targeted when assessing election system performance. The studies discussed above focused on making elections representative—minimizing errors so as to improve the degree to which election results reflect voters'

intentions. One might also imagine other objectives and other values to pursue in constructing an index of performance. Other possible values include transparency, equal treatment, legitimacy and acceptance of elections, competitiveness, and efficiency. Those other values might lead to completely different sets of indicators. For example, legitimacy might lead one to measure voters' confidence in the system and the rate at which they accept election outcomes, even if the elections present administrative and other problems.

Less than a decade after *Bush v. Gore* and the 2000 election controversy, the principal interest in election administration, however, remains making sure that election results reflect the expressed preferences and will of the voters. That requires making elections as accessible as possible, guarding against fraud without locking out legitimate voters, and producing valid records and tabulations of voters' intentions. At least at the national level, the data mustered here show a very substantial improvement in U.S. election administration since 2000. They also suggest that in some domains (such as residual votes) we are reaching the boundaries for further improvement, while in others (such as absentee balloting) considerable room for improvement remains.

