

Can Voter ID Laws Be Administered in a Race-Neutral Manner? Evidence from the City of Boston in 2008*

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ABSTRACT

Is it feasible in the current United States to administer voter identification laws in a race-neutral manner? We study this question using rigorous field methods and state-of-the-art statistical techniques, thus accounting for sources of uncertainty (including survey non-response and clustering) that previous studies ignore. We conduct a sensitivity analysis to account for voters who were legally required to have been asked for ID under federal and state law. We conduct an experiment with a training program that clarified proper ID law administration. Finally, we study a jurisdiction and an election in which administration of ID laws was *unlikely* to pose issues of racial difference, and in which (under the law) the decision to request an ID was nondiscretionary. We find strong evidence that Hispanic and black voters were asked for identification at higher rates than white voters, even after adjusting for a number of other factors. The magnitudes of the differences are significant. We explore the theoretical and legal consequences of our findings.

We provide evidence on the following question: is it feasible in the current United States to administer voter identification laws (specifically laws that require some but not all would-be voters to show ID) in a race-neutral manner?¹ Previous studies on this subject focus on either a national population characterized by differences in state ID laws (Ansolabehere, 2009) or an election day that included a high-profile, extraordinarily competitive contest in which heightened concerns of voter fraud might have induced particular vigilance on the part of election administration officials regarding ID requirements (Atkeson *et al.*, 2010). Further, the sampling schemes in these studies either do not allow a random sample to be drawn from the true target population (voters) or prevent rigorous treatment of inherent aspects of polling and voting data, such as non-response, clustering by precinct, and the difficulty of recalling the potentially low-salience event of being asked

¹ We use “race” as a shorthand for both race and ethnicity.

for an ID. In contrast, we conducted a well-staffed, well-funded exit poll and use state-of-the-art statistical techniques to account for non-response. We use hierarchical modeling to address likely clustering by voting location of ID requests. We conduct a sensitivity analysis to account for voters who, under applicable federal and state law, were legally required to be asked to show ID. We implemented a training program that clarified proper ID request procedure for poll workers in a randomly selected group of locations. Finally, we focus on a jurisdiction, the City of Boston, and an election, the 2008 general, in which, for a variety of reasons, voter ID laws were *unlikely* to pose issues of racial difference; among these reasons is that poll workers were given no discretion over whether to request an ID from would-be voters.

Despite all the above, we find significant racial differences in the administration of voter ID laws. We find strong evidence that Hispanic and black voters were asked for IDs at higher rates than similarly situated white voters. Our modeling and sensitivity analysis suggests that these differences are unlikely to be due to several other factors, including other voter characteristics observable by poll workers (we include a proxy for accented speech patterns, for example) as well as the potential for racial differences in methods of registration, in first-time voting, and in classification of voters as “inactive.” Previous studies do not account for most of these factors, but differences in inactive status and method of registration in particular are important because of the identification requirements of state laws regarding inactive voters and because of the federal Help America Vote Act (“HAVA”), which compels officials to request IDs under certain circumstances.

To the extent one hypothesizes, as we do, that our results may be due to unconscious assumptions on the part of poll workers paid less than minimum wage to work 15-hour days, we provide some evidence that such assumptions may resist remediation via simple training programs. Thus, our results raise the question of whether it is operationally feasible to administer voter ID laws in a race-neutral manner in the current United States, unless (presumably) such laws are amended to require IDs from all voters (such as some states currently require), or an intrusive system of monitors is implemented. Finally, we contribute to the theoretical and legal development of this area by highlighting the legal importance of studies, such as ours, demonstrating that a racially differential effect of voter ID laws stems from the actions of government officials.

Theoretical Background & the Massachusetts Situation

Previous Work

Portions of the theoretical debate regarding voter ID requirements are by now well-established. Proponents of such requirements point to the possibility of voter fraud that might be prevented through ID verification (Carter–Ford Commission on Federal Election Reform, 2005). Opponents argue that such requirements constitute barriers to the exercise of the franchise, barriers that may have a differential impact on racial minorities, the less educated, the young, and the very old (Wang, 2005; Overton, 2007). Speaking more generally, voting reforms, especially those designed to make voting more convenient, have expanded dramatically across the United States in the last two decades. From liberalized absentee balloting, to early in-person voting, to voting-by-mail, states have adopted a variety of reforms. National surveys find relatively low levels of support for most voting reforms (Konisky and Powell, 2009). However, in states in which such reforms have been adopted, support increases (Alvarez *et al.*, 2010). The exception, however, is voter identification laws, which experience wide support across the United States. Survey after survey finds over 70% of voters typically support photo identification requirements, with over 60% of Democrats and just under 90% of Republicans in favor (Alvarez *et al.*, 2010; Green-Atchley, 2007). Moreover, public opinion polls suggest that majorities of whites, blacks, and Hispanics support voter ID laws (e.g., Alvarez *et al.*, 2010).

Because of the obvious partisan consequences of the stringency of ballot access laws generally and ID requirements in particular (Erikson and Minnite, 2009), as well as the incentives partisans have to manipulate the composition of the electorate (Kousser, 1974; Piven, 2000), the conflict between ID-requirement advocates and opponents became an issue in the 2002 passage of HAVA. A compromise eventually emerged in that HAVA established a uniform federal minimum standard that ID be requested under certain conditions. Specifically, HAVA mandated that all states require ID of would-be voters who (i) registered by mail, (ii) did not include photocopies of valid IDs with their mailed registration forms, and (iii) were voting for the first time (42 U.S.C. § 15483(b)(1)). We call would-be voters who fit this description “HAVA voters,” and they form an important part of our sensitivity analysis, explained below.

Massachusetts regulations also provide that poll workers must request identification from persons who are classified as “inactive” voters, i.e., those who have not voted in recent elections or who have failed to respond to a local census (950 C.M.R. § 52.03(5)(b)). It is possible for an inactive voter to cast a ballot without showing an ID by employing the challenged ballot procedure, but such a voter would first be asked whether he/she had an ID. The exit poll we administered inquired simply whether voters were asked to show an ID, not why. Thus, inactive voters and HAVA voters would both have answered “Yes” to our survey question. Nothing in our quantitative analysis depends on whether a would-be voter was asked for ID because of his/her status as a HAVA voter or because of his/her classification as inactive. Thus, for ease of reference, we group inactive voters legitimately asked for ID together with HAVA voters and use the phrase “HAVA/inactive voters.”

Like many pieces of federal legislation, HAVA served as a catalyst for election reform across the states, in part because it effectively required states to adopt conforming legislation. Thus, voter identification was debated in every state (Haile and McNeal, 2010). Following HAVA’s passage, 30 states and even some cities went further than the minimal federal requirements, passing stricter voter identification rules.² In 2008, the United States Supreme Court upheld Indiana’s strict, photo-ID law against a facial constitutional challenge (*Crawford v. Marion County*, 553 U.S. 181 (2008)).

Three strands of empirical scholarship have emerged regarding the consequences of voter ID laws. As we outline in the discussion, although all three strands of scholarship may be of interest to political scientists, the strands have different legal consequences. The first strand examines the extent to

² Currently, 20 states and the District of Columbia have codified the minimum HAVA ID requirements: CA, DC, IA, IL, MA, MD, ME, MN, MS, NC, NE, NH, NJ, NM, NV, NY, OR, PA, VT, WV, and WY. A total of 30 states either currently go beyond the HAVA minimum, requiring voters to show ID before voting. Seven states have (or have recently passed) strict photo identification requirements, meaning that voters must show photo IDs in order to vote. Voters who do not bring photo IDs to the polls are permitted to vote with provisional ballots, but their ballots are only counted if the voters return to election officials within several days after the election to show a photo ID: GA, IN, KS, SC, TN, TX, and WI. An additional seven states ask voters to show an ID in order to vote, but voters without photo IDs may still vote if they meet certain other criteria: AL, FL, HI, ID, LA, MI, and SD. Finally, 16 states require either photo or non-photo identification: AK, AR, AZ, CO, CT, DE, KY, MO, MT, ND, OH, OK, RI, UT, VA, and WA. National Conference of State Legislatures (2011).

which otherwise eligible voters possess IDs that would satisfy their states' requirements. Implicit in some of these studies is a concern that even if voter ID laws are administered exactly as enacted (i.e., with perfect fairness), they might impose differential burdens on salient classes of the citizenry because some groups are less likely to possess or obtain the needed IDs (e.g., Pawasarat, 2005). Scholars report that for this reason stricter ID requirements negatively affect certain demographic groups (Barreto *et al.*, 2009; Hood and Bullock, 2008; Mycoff *et al.*, 2007).

A second strand of empirical scholarship seeks to take advantage of state-level variation in ID laws to discern whether more stringent requirements are associated with lower turnout either generally or within particular groups. Results from this strand have been mixed. Some studies find no evidence that voter ID laws limit participation generally (Lott, 2006; Alvarez *et al.*, 2008), while others find associations between stricter ID laws and lower turnout among certain groups (e.g., Alvarez *et al.*, 2008 (less educated and lower income, but not racial minorities), Vercellotti and Andersen, 2006 (blacks and Hispanics)).

In the third strand of empirical scholarship, researchers survey voters to discern the extent to which poll workers request IDs as well as whether the frequency of such requests varies by group. The mechanism implicit in these studies is that even if all relevant groups lack legally sufficient IDs at exactly the same proportions, disparate administration of a facially neutral law could cause a greater impact on certain groups. Studies in this category include Ansolabehere (2009) and Atkeson *et al.* (2010). Ansolabehere's (2009) data are national and stem from the Cooperative Congressional Election Study and the Caltech/MIT Voting Technology Project's internet survey. Atkeson *et al.*, (2010) use a probability-based mixed mode (mail and internet) survey, achieving approximately a 22% response rate with no reported adjustment for missing data. Below, we briefly discuss methodological concerns with polls that rely on the Internet. Both studies find that poll workers request IDs from Hispanics at a higher rate than similarly situated whites, a disparity that persists when other variables are included in models; Ansolabehere (2009) finds a similar association for blacks vis-à-vis whites.

The distinction among these three strands of literature, the first and third of which are associated with different mechanisms by which a racial difference arises, and the second of which does not posit a mechanism, is important. As suggested above, different mechanisms may imply different legal consequences. We return to this point in our discussion.

Voter ID Laws & Poll Workers in Boston

As noted above, Massachusetts adopted the minimum HAVA ID requirement, under which poll workers should request IDs from HAVA voters, i.e., would-be voters who (i) registered by mail, (ii) did not include a photocopy of a valid ID with their mailed registration forms, and (iii) were voting for the first time (M.G.L. ch. 54, § 76B).³ As noted above, Massachusetts law also requires that ID be requested from inactive voters, which are those who had either failed to vote in recent elections or who had failed to respond to a municipal census. In 2008, the ID requirement was supposed to have been administered in the following way: a voter entering a polling station checked in with a poll worker by stating his/her address followed by his/her name. The Voters List provided to each precinct was sorted by address. The poll worker located the voter's address and name in the Voters List. Some voters had symbols next to their names indicating that the poll worker needed to take some types of further action before providing the voter with a ballot. HAVA/inactive voters had the letters "I" or "ID" next to their names. Under these circumstances and these circumstances only, the poll worker was supposed to request an acceptable form of ID from the voter. There was no room for discretion to request or to decline to request an ID.

If the voter was able to provide the identification, the voter received a regular ballot; if the voter was unable to provide the identification, the voter was issued a provisional ballot.

In 2008 the City of Boston experimented with a new poll worker training program. One of us helped to produce and implement the new program, which was used in a randomly selected subset of Boston polling locations, as described below. Poll workers in the remaining locations received the City's old training program.⁴ The revised training program included the use of a Powerpoint presentation with a slide titled, "Voter has 'ID' next to name. What do I do?" and an oral discussion of the legal reasons for why only certain voters were supposed to be asked for identification and what acceptable forms of identification were. In addition, the new training

³ Under 950 C.M.R. § 54.04(6B), a city or town clerk or a registrar of voters may empower poll workers to request IDs of any would-be voter so long as these request are "entirely random, consistent, or based on reasonable suspicion." There was no suggestion that this provision was invoked in the City of Boston in 2008.

⁴ The experiment regarding the training program was not implemented perfectly in that there was some contamination; some poll workers from the "control" group attended sessions using the new training program.

program had a role-play covering ID requirements. The old training program had neither the slide nor the role-play, although the manual given to each poll worker covered the law and procedures described above.

Our Study: Methods and Data

Methodological Choices and Advances

Our study is in the third category of scholarship identified in the previous section in that we seek to discern the extent to which poll workers request IDs as well as whether the frequency of such requests varies by group. We advance the field in several ways. To begin, we focus on a jurisdiction, the City of Boston, and an election, the 2008 general, where one would not expect voter ID laws to have a large and disparate impact across racial groups. While preventing ineligible voters from casting ballots is always a concern of election officials, the contests at the top of the ticket in 2008, Obama versus McCain and the reelection bid of four-term Senator John Kerry, were not expected to be (and in fact were not) competitive,⁵ providing little reason for hyper-vigilance on the part of election officials with respect to voter fraud vis-à-vis voter access.

Events occurring in the few years before the 2008 election in the City led us to think that Boston election officials would be particularly focused on ballot access (as opposed to fraud prevention) issues. In the years prior to the 2008 election, Boston was the subject of several Voting Rights Act lawsuits. One of these suits was filed against the City itself by the United States Department of Justice and alleged a failure to address the access needs of Hispanic and Asian voters in the City; the City remained under federal examiner designation during the 2008 general.⁶ Moreover, there was the new poll worker training program identified above, and the fact that Massachusetts law imposed only the minimum HAVA ID requirement. And finally, Boston had been growing into a true melting pot jurisdiction; in 2007, the City's

⁵ Obama won 80% of the two-party vote in Boston, Kerry 83%. <http://www.cityofboston.gov/elections/results/4Nov08.asp> (last visited Feb 5, 2009). There were no other candidate contests on the ballot. There were three statewide ballot initiatives, one to repeal criminal penalties for possession of small amounts of marijuana, one to repeal the state income tax, and a third to ban dog racing. Only the dog racing ban proved competitive.

⁶ See *United States v. City of Boston*, complaint available at <http://www.justice.gov/crt/voting/sec.203/documents/boston.comp.php>, as well as *Black Political Task Force v. Galvin*, 300 F. Supp. 2d 291 (D. Mass, 2004), and *Meza v. Galvin*, 322 F. Supp. 2d 52 (D. Mass, 2004).

citizen voting age population was approximately 64% white, 19% black, 10% Hispanic, and 7% Asian (United States Bureau of the Census, 2007). This racial diversity was mirrored in Boston's election administration officials. We conducted a mail survey of the City's poll workers, which indicated that roughly 7% of poll workers were Hispanic as well as a racial distribution as follows: 57% white, 27% black, 7% percent Asian; 4% multi-racial; 5% percent other.⁷

We also advance the field in several ways in terms of the data collection and analysis methods we employ to assure accuracy of information and honest estimates of uncertainty. We fielded a well-funded and well-staffed exit poll, as opposed to the Internet- and mail-plus-Internet-based techniques in Ansolabehere (2009) and Atkeson *et al.* (2010). While exit polls have their issues (Edison Media Research and Mitofsky International, 2005), they are peculiarly well-suited to obtain accurate information about potentially low-salience details of the voter experience because voters are approached within seconds of completing the voting process, as opposed to after the lapse of a day or days characteristic of other survey methods. The short time lapse is particularly important when requesting information about whether a voter was asked for an ID; if many voters had IDs handy (as we suspect is true), they might forget the requests quickly.

Moreover, depending on how one defines the sampling frame, mail- and Internet-based sampling techniques either are unable to sample directly from the population of interest (voters) or cannot rigorously address missing data, particularly non-response. In contrast, our exit poll used an interval sample with an interval wide enough to make an assumption of randomness plausible. Furthermore, as detailed below, we used both field and statistical techniques (specifically, multiple imputation (Rubin, 1978)) to account for nonresponse in a rigorous manner.

Finally, we employ statistical techniques appropriate for the way in which our data arose. Voter experience data are inherently clustered by precinct; analysis models that fail to take this structure into account run the risk of false precision. We also address via a sensitivity analysis an issue ignored in the previous literature, namely, that different racial groups may have had

⁷ The results should be interpreted with caution, as the poll worker survey achieved approximately a 50% initial response rate, and local administration officials requested that we neither conduct planned non-response followup nor obtain data needed for sophisticated non-response adjustment.

disparate fractions of HAVA/inactive voters from whom election officials would have been required to request IDs.

The Exit Poll

During the summer and early fall of 2008, we recruited undergraduate, graduate, and law students from 11 Boston area colleges and universities to conduct an exit poll of Boston voters. This exit polling project, named the Boston Area Colleges Exit Poll, was designed to (a) learn about the voting experiences of Boston voters, (b) evaluate the new poll worker recruitment and training protocol, and (c) assess the feasibility of conducting a student-based, large exit poll in a multi-ethnic, multi-lingual environment.

Our recruiting yielded over 400 student pollsters, whom we organized into teams led by a graduate student or law student serving as the team captain. Each team worked one 7-hour shift. Because of the large number of pollsters available, we placed multiple pollsters in each location, at least three and ordinarily more (our busiest location required nine pollsters to be present). That allowed us both to cover all exits to the relevant buildings throughout the day and to assure that, say, pollster A could approach a voter with a form while, say, pollsters B and C maintained an accurate interval count (every eighth voter leaving the polling location was to be approached by an exit pollster).

Each of the student pollsters took part in a live, in-person training program that covered basic exit polling techniques. For instance, we instructed pollsters to move away from voters after handing them questionnaires and asking them to place completed forms directly in visibly closed boxes (Bishop and Fisher, 1995). In addition, we instructed our exit pollsters to record the time of day and their *perceptions* of the approached voter's age, sex, and race/ethnicity, along with the pollsters' own names (which we could match to demographic information about them) and whether the voter took the survey, refused, or was missed. Our exit pollsters recorded this information on separate mini-sheets with numerical codes that allowed us to match the pollsters' reports to the forms respondent-voters filled out. That, in turn, enabled us to assess the accuracy of our pollsters' perceptions against the self-reports of respondent voters. Effectively, this allowed us to adjust for non-response by turning what would have been a unit non-response problem into an item non-response problem, where we tackled the latter via multiple imputation, as explained below (see Greiner and Quinn (2010) for further details). The basic training program for rank and file exit pollsters lasted

approximately one hour while the training session for the captains lasted about 90 minutes. The web appendix provides a slightly redacted version of the written instructions given to all pollsters. The live, in-person training emphasized and expanded on these points.

In addition, five specially trained, two-person quality control teams rotated among polling locations throughout the day, monitoring the exit pollsters for compliance with polling protocol. Our cadre of pollsters included a quantity who spoke Spanish, Haitian Creole, Cantonese, and Vietnamese, and to the extent possible, we matched the linguistic competencies of the exit pollsters with the languages spoken by the voting population in polling locations. Survey forms were available (and used) in English, Spanish, Chinese, and Vietnamese. In sum, while we acknowledge that fielding a student-centered exit poll has its risks, we believe that our operation had several advantages over most professionally run exit polls, including the presence of multiple pollsters per location, in-person pollster training, and on-site verification that pollsters followed protocol (compare Edison Media Research and Mitofsky International, 2005).

Due to the multiple aims of the exit poll, only some polling locations were selected via a random sample. Specifically, the following process was used. First, matched pairs of polling locations were constructed so that the matched polling locations were as similar as possible on a number of location-specific measures including: total population, voting age population, previous turnout, ethnic composition, average educational attainment, median age, and the number of precincts in the polling location. The 13 most similarly matched pairs were selected, and the new poll worker training program was randomly assigned to one polling location in each pair. What we call below the *Treatment* variable is simply an indicator of whether a polling location was assigned to receive the experimental poll worker training program. We selected 13 additional polling locations via an unequal probability sampling scheme where the selection probabilities were proportional to the effective number of ethnic groups, i.e., the inverse Herfindahl–Hirschman index of ethnic groups, in each polling location (see Greiner and Quinn (2010) for further details). This sampling scheme made it more likely to sample ethnically diverse polling locations. The result was a list of 39 polling locations in which the exit poll was conducted.

We instructed pollsters to approach every eighth voter. Our pollsters were to have absolutely no discretion over whom to approach. These approaches alternated between a “voter experience” form, which generated the data of

primary interest in this paper,⁸ and a “voter choice” form, which generated additional data on the decisions made by voters. Thus, the effective interval for the experience form was every 16th voter. In addition, we used two versions of the voter experience form. These forms were identical save for the order in which the answer scales ran. For instance, one version of a question listed the answer categories as “strongly disagree”, “disagree”, “neutral”, “agree”, and “strongly agree” while the alternative form listed the answer categories as “strongly agree”, “agree”, “neutral”, “disagree”, and “strongly disagree.” In the results below we refer to this as the *Answer Format* with which a respondent was presented. The *Answer Format* was varied deterministically so that the i th and $(i + 1)$ th voters approached with an experience form saw different *Answer Formats*. Prior coordination with the City of Boston, along with the absence of laws regulating exit polling in Massachusetts, allowed our exit pollsters to approach voters immediately outside the exits of the polling locations.

We check whether our pollsters accurately implemented the 1 out of 8 sampling interval by comparing the known number of voters in each polling location to the number of voters our pollsters approached. If our pollsters kept to their interval and only voters exited the polling location then the number of voters divided by the number of approaches should be equal to 8. Figure 1 plots these ratios by polling location. Overall, we see that these ratios are close to 8 — typically between 7 and 9 — indicating that our pollsters did a reasonable job of sticking to the 1 out of 8 interval.

When approaching the voter, the exit pollster was instructed to be polite and professional and to convey quickly the following points to the voter:

- “you have been randomly selected,”
- “it takes about 90 seconds to complete,”
- “this poll is non-partisan,”
- “you will remain 100% anonymous,” and

⁸ The experience form included questions on length of time needed to vote, the voter’s interactions with the voting equipment, and other subjects. The specific wording of the question providing the data for this paper was: “Were you asked to show ID of *any kind* at the polling place today? (check one)”. The possible answers were “No—Yes—Don’t remember” or “Yes—No—Don’t remember,” depending on the *Answer Format* variable explained in the main text. Immediately following this question was an inquiry asking whether, if ID had been required, the voter had been specifically asked for a photo ID. For the race/ethnicity variables, the questions were: “Are you Hispanic or Latino? (check one) Yes—No” and “Your race: (check all that apply) Asian-Black/AfricanAmerican—White—Other.” Full survey forms are available from the authors.

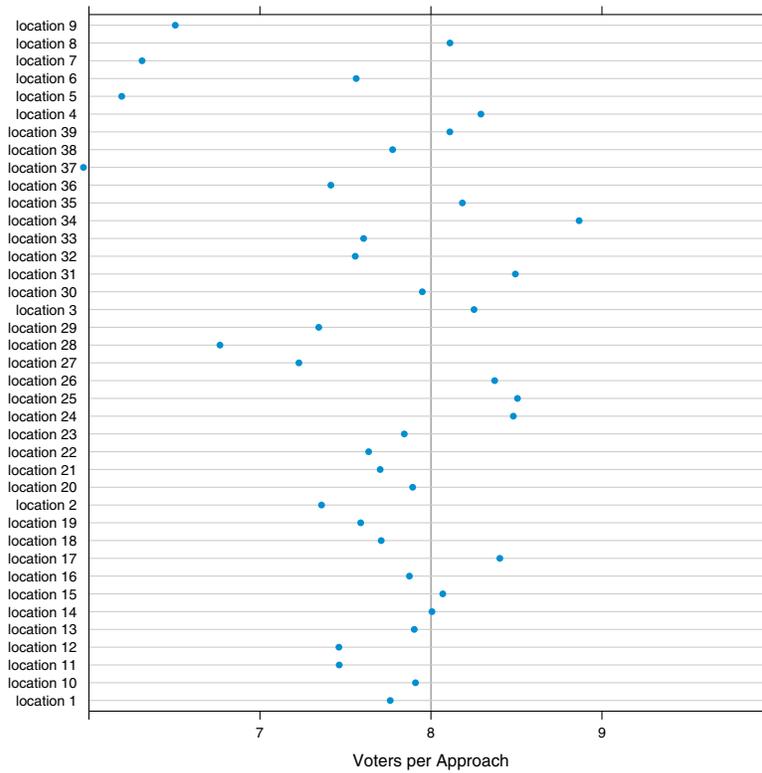


Figure 1. Actual number of voters (from official returns) divided by number of approaches made by exit pollsters (by polling location).

If the exit pollsters perfectly executed the 1 out of 8 sampling intervals and everyone coming out of the polling location had been a voter then these ratios would be exactly equal to 8.

- if the voter asks, “the results won’t be released until after the election is over.”

If the voter agreed to fill out the questionnaire, the exit pollster was instructed to:

- ask the voter to put the completed form in the box designed for this purpose (the pollster was not to volunteer to do this for the voter),
- move a polite distance away from the voter, and announce to the voter that he/she (the pollster) was doing so to assure that the responses were confidential, and

- record his/her (the pollster’s) perception of the voter’s demographics on a mini-sheet numbered to match the voter’s questionnaire.

If the voter refused to participate in the survey, the exit pollster was instructed to:

- record his/her (the pollster’s) perception of the voter’s demographics on the mini-sheet numbered to match the voter’s questionnaire, and
- discard the form offered to the voter (pollsters were explicitly told not to re-use survey forms).

Unit non-response was addressed in both the field operation, as discussed above, and statistically, as discussed below in further detail.

The Data

Our pollsters approached 4296 voters with voter experience forms, of whom 2399, or 56%, answered at least 1 question on the survey. Item non-response among these 2399 respondents was extremely low — slightly less than 1% of respondent-items were not answered.

To account for non-response — both the 44% who did not respond and the 1% of missing items — we create 10 completed datasets via multiple imputation. We use a loglinear model, as implemented in Shafer’s `cat` package,⁹ as the imputation model. The fairly large number of variables to impute and our desire to allow for more complicated associations than would be possible under a multivariate normal model or a two-way loglinear model create computational challenges. To deal with these challenges we use a bootstrap approach (Honaker and King, 2009) along with a factorization of the full data distribution that allowed us to work with the data in moderately sized chunks.

Our procedure is the following. First, we create 10 bootstrap datasets by sampling rows with replacement from the observed data matrix. We partition the variables in each of these bootstrap datasets into three sets — pollster-specific attributes, voter demographics, and voter experience variables. Then, for each of the bootstrap datasets, we impute pollster-specific attributes, voter demographics given the imputed pollster attributes, and finally voter experience data given the imputed voter demographics and a subset of the imputed pollster characteristics.

⁹ <http://cran.r-project.org/web/packages/cat/index.html>.

Each imputation step works as follows. Given a particular bootstrap dataset we calculated the posterior mode of the cell probabilities using the ECM algorithm. We then sample the missing data from the appropriate multinomial distribution with probabilities given by the maximum *a posteriori* estimates. For the pollster-specific data (which had very little missingness) we employ a loglinear model with all three-way interactions and a Dirichlet prior for the cell probabilities with parameters all equal to 1.0001. For the voter demographic data we use a loglinear model with all three-way interactions that are significant at the 0.01 level and a Dirichlet prior for the cell probabilities with parameters all equal to 1.0001. For the voter experience data (which had more missingness) we use a loglinear model with all two-way interactions and a Dirichlet prior on the cell probabilities with parameters equal to 1.001. We employ a similar procedure to impute missing data from the voter choice survey.

To get a sense as to whether the sample data from our exit poll, as augmented by the multiple imputation, are representative of the full data from in-sample polling locations, we compare the true fraction of the two-party vote for Obama to the estimates of this quantity derived from the exit poll data (calculated with adjustments for the multiple imputations). Calculation of the average difference between the estimated Obama fraction and the true Obama fraction yields an average difference of one percentage point. Thus there is no reason to think that our exit poll results are seriously biased.

Figure 2 plots the true Obama fraction along with the 95% confidence intervals from the exit poll estimates. The nominal 95% confidence intervals cover the truth in 33 of 39 (85%) polling locations. While this suggests that the exit poll estimates may be falsely precise, the fact that the truth is too far to the right in three polling locations and too far to the left in three other polling locations is again consistent with a lack of serious bias in the exit poll. We derive further confidence from the fact that cluster sample estimates of the city-wide results in the four other electoral contests we polled matched the observed city-wide results reasonably well (see Greiner and Quinn, 2010 as well as the web appendix for further details).

Results: Are Minorities Disproportionately Asked for Identification?

Basic Bivariate Associations

Simple cross-tabulations of ID requests by race from the raw exit poll data as well as from the 10 multiply imputed datasets appear in Table 1. The

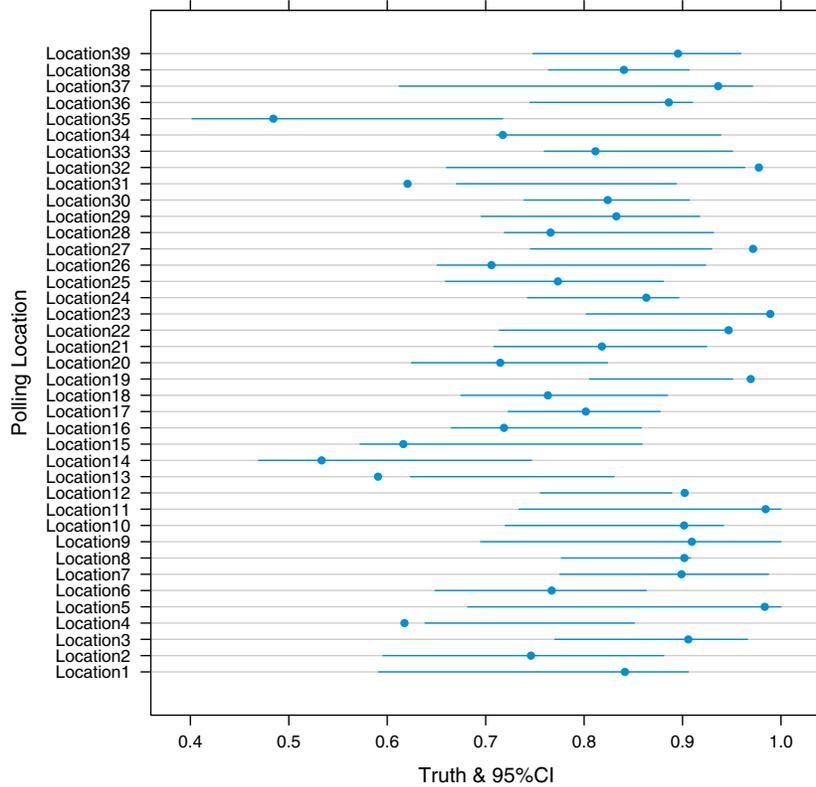


Figure 2. Survey estimates of Obama fraction of the two-party vote along with true Obama fraction by polling location.

Dots correspond to the true Obama fraction of the two-party vote and the line segments correspond to the 95% confidence intervals for the exit poll estimates of this quantity. The nominal 95% confidence intervals cover the truth in 33 of 39 (85%) polling locations, but of the six “misses,” three are too far to the left and three are too far to the right, indicating the possibility of false precision but no serious bias.

numbers for the imputed datasets are averages over the 10 imputations. These numbers suggest substantial differences in requests for ID among various racial groups. Nonetheless, it is also possible that racial minorities might disproportionately have other characteristics associated with higher rates of ID requests, thus complicating an interpretation of these data in terms of race.

One such possibility is that racial minorities are more likely to hold jobs that allow them to go to the polls only at off-peak hours and that pollworkers are more likely to scrutinize voters when there is less congestion

Table 1. Cross-tabulation of ID requests by race and ethnicity.

	Asian		Black		Hispanic		White	
	Raw	Imputed	Raw	Imputed	Raw	Imputed	Raw	Imputed
Not asked for ID	91 78%	160 67%	447 75%	848 67%	168 64%	302 62%	1160 88%	1775 78%
Asked for ID	26 22%	79 33%	153 25%	426 33%	93 36%	186 38%	165 12%	520 23%

The columns labeled (Raw) correspond to frequencies and percentages based on the exit poll data in which non-respondents were dropped. The columns labeled (Imputed) correspond to posterior means taken over 10 imputed datasets.

at the polling location. To examine this possibility, we develop a measure of congestion experienced by each voter in the dataset. Our measure of congestion for individual i in polling location j is simply the number of individuals in the exit poll dataset from location j who were approached by an exit pollster within 30 minutes (before or after) voter i was approached divided by the total number of individuals approached in location j . Given that voters were approached at equal intervals, a congestion value of 0.1 for individual i in polling location j means that approximately 10% of the individuals who went to the polls at location j did so within a one-hour window centered at the time individual i went to vote.

Figure 3 depicts the relationship between ID requests and polling place congestion. Here we see that the probability of being asked for ID varies little as a function of congestion — this is especially the case for the range of congestion values between roughly 0.05 and 0.125, where the bulk of the data are. This suggests that polling place congestion is not a major cause of the differences in ID requests by race and ethnicity. Nonetheless, we include this measure of congestion (entered as a cubic spline) as a predictor in the probit models that follow.

While it appears unlikely that congestion at the polling place drive the differences among racial groups in Table 1, there are many other background variables that may be relevant for explaining ID requests. The next subsection makes use of a hierarchical probit model to examine this possibility.

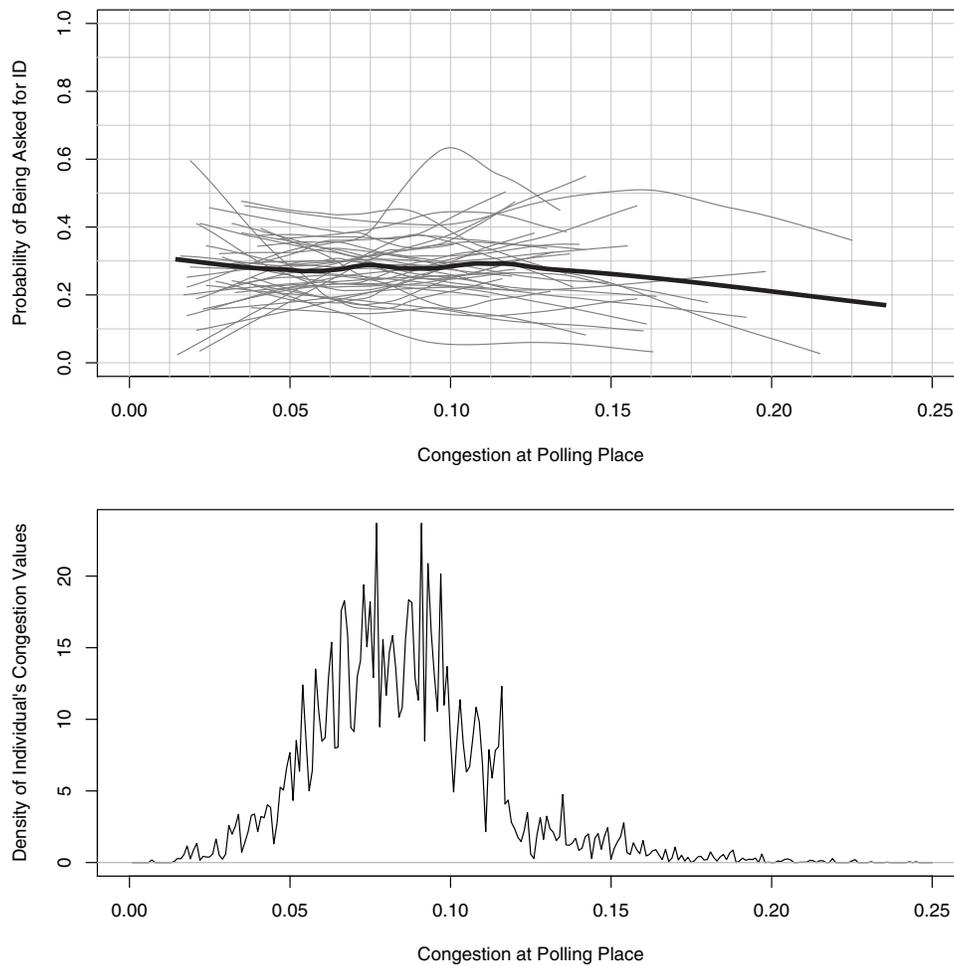


Figure 3. ID requests and polling place congestion.

The top panel plots the probability of an individual being asked for ID as a function of congestion at the polling place in question. The light gray lines are loess fits to data from individual polling places and the thick black line is a population-weighted average of the polling place estimates. The bottom panel displays an undersmoothed density estimate of the congestion value associated with each individual in the exit poll dataset. Note that most voters had congestion values between roughly 0.05 and 0.125 and that over this range the relationship between being asked for ID and congestion is basically flat.

Bayesian Hierarchical Probit Results

To determine whether voters with certain demographic characteristics are more likely to have been asked for identification while accounting for the fact

that our exit poll data are clustered by polling location, we fit a Bayesian hierarchical probit model to data from the exit poll. The model takes the form

$$y_{ij} \stackrel{ind.}{\sim} \text{Bernoulli}(\pi_{ij})$$

with

$$\pi_{ij} = \Phi(\mathbf{x}'_{ij}\boldsymbol{\beta} + \mathbf{w}'_{ij}\boldsymbol{\alpha}_j), \quad j = 1, \dots, m, \quad i = 1, \dots, n_j$$

and

$$\boldsymbol{\alpha}_j \stackrel{ind.}{\sim} \mathcal{N}(\mathbf{0}, \boldsymbol{\Sigma}), \quad j = 1, \dots, m.$$

where the outcome variable y_{ij} is coded as a 1 if voter i in polling location j reported that he/she was asked for identification and the covariates in \mathbf{w}_{ij} are assumed to be a subset of those in \mathbf{x}_{ij} and typically includes a constant term. Here j indexes polling locations, i indexes respondents, and n_j is the number of respondents in polling location j . We let $n = \sum_{j=1}^m n_j$ denote the total number of voters in the sample. We assume a highly dispersed Gaussian prior for $\boldsymbol{\beta}$ and an inverse Wishart prior for $\boldsymbol{\Sigma}$.

The righthand side variables in the models we fit include: *Black* (an indicator of whether the voter reports being Black/African-American), *Hispanic* (an indicator of whether the voter reports being Hispanic), *Female* (an indicator of whether the voter is Female), *Asian* (an indicator of whether the voter reports being Asian), *Non-English Speaker* (an indicator of whether the voter reports that a language other than English is the primary language spoken at home), *Educ \geq College* (an indicator of whether the voter has a college education or higher), *Young Voter* (an indicator of whether the voter is 25 years old or less), *Old Voter* (an indicator of whether the voter is over 55 years old), *Answer Format* (an indicator as to which answer format was on the respondents questionnaire), and finally a cubic spline in the congestion variable with knots at 0.075 and 0.125. We drop the small number of non-Hispanic voters who report their race as ‘‘other’’ along with a few voters who are missing the exit-pollster-recorded time of approach variable (and thus the congestion variable). This gives us 4096 voters in 39 polling locations.

Table 2 presents the results from fitting this model to the 10 multiply imputed datasets. The first column summarizes the posterior distribution from a model in which only the intercept may vary across polling locations (i.e., $w_{ij} = 1$).¹⁰ The second column reports results from a model in which

¹⁰ Here we use an inverse Wishart prior for the random effects’ variance with three degrees of freedom and inverse scale equal to 0.3I.

Table 2. Significant racial differences demonstrated by results from hierarchical probit regressions of request for ID on various demographic variables.

	(a)	(b)
Black	0.284 (0.153, 0.408)	0.279 (0.120, 0.428)
Hispanic	0.343 (0.182, 0.516)	0.339 (0.146, 0.540)
Asian	0.159 (-0.070, 0.371)	0.148 (-0.122, 0.402)
Non-English speaker	0.275 (0.095, 0.446)	0.276 (0.093, 0.450)
Educ \geq College	-0.139 (-0.272, -0.028)	-0.141 (-0.274, -0.029)
Female	-0.088 (-0.181, 0.005)	-0.089 (-0.180, 0.004)
Young voter	0.090 (-0.048, 0.236)	0.094 (-0.046, 0.241)
Old voter	-0.090 (-0.221, 0.036)	-0.088 (-0.218, 0.039)
Answer format	-0.022 (-0.124, 0.077)	-0.020 (-0.124, 0.079)
Treated	-0.089 (-0.212, 0.034)	-0.092 (-0.225, 0.039)
Constant	-0.406 (-2.261, 1.265)	-0.402 (-2.226, 1.277)
σ_C^2	0.019	0.058
σ_{Af}^2		0.052
σ_H^2		0.068
σ_{As}^2		0.087
σ_{CAf}		-0.009

(Continued)

Table 2. (*Continued*)

	(a)	(b)
σ_{CH}		-0.005
σ_{CAs}		-0.003
σ_{AfH}		0.002
σ_{AfAs}		0.004
σ_{HAs}		-0.001
$m = 39$		
$n = 4096$		

Single entries are posterior medians. Entries in parentheses are central 95% credible intervals. $\sigma_C^2(\sigma_{Af}^2, \sigma_H^2, \sigma_{As}^2)$ is the variance of the random effect on the constant (Black, Hispanic, Asian) term. $\sigma_{CAf-HAs}$ are the associated covariances. In column (a), only the intercept is allowed to vary across precincts. In column (b), the intercept as well as the coefficients on Black, Hispanic, and Asian vary across precincts. Coefficients on a cubic spline in polling place congestion with knots at 0.075 and 0.125 have been omitted.

the coefficients on Black, Hispanic, and Asian along with the intercept may vary across precincts.¹¹ From the table we see that blacks and Hispanics were significantly more likely to be asked for ID than were whites of similar sex, education, and age. While the coefficient estimates for Asians are also positive, they are of a smaller magnitude than those for Blacks and Hispanics and the associated 95% credible intervals overlap 0. Our results also indicate that voters whose primary language at home is a language other than English were more likely to be asked for ID. We also find that voters with a college degree or more were less likely to be asked for ID than less educated voters, all else constant. In general, the coefficient estimates are similar across the two specifications, which is consistent with the near-0 estimates of the random effects variances.¹²

¹¹ For this specification we used an inverse Wishart prior for Σ with six degrees of freedom and inverse scale equal to 0.6I.

¹² We examine model specifications identical to those discussed above with the exception that they also included polling-place-level measures of Black-, Hispanic-, and Asian-voting-age-population as a fraction of total voting-age-population. The results, presented in the web appendix, are qualitatively identical to those reported here. We also fit a variety of models to the raw (non-imputed) data as well as to data with some polling locations removed. The

Table 3. Fitted probabilities of being asked for ID from hierarchical probit regressions of request for ID on various demographic variables.

	Black	Hispanic	White	Non-English speaker	Educ \geq College	Probability of being asked for ID
(a)	✓					0.37
(b)		✓				0.40
(c)			✓			0.27
(d)	✓			✓		0.48
(e)		✓		✓		0.50
(f)			✓	✓		0.37
(g)			✓	✓	✓	0.32
(h)			✓		✓	0.23

Results are based on the random intercept model in in column (a) of Table 2. In all cases, the hypothetical voter is assumed to be a man, between the ages of 26 and 55, who received answer format 0, who was not in a “treated” polling location, and whose congestion variable is equal to 0.075.

To get a better sense of the substantive magnitude of these results we compute fitted probabilities for voters with particular characteristics. These probabilities appear in Table 3. The magnitude of the differences across racial and language groups is large and substantively disturbing. For instance, the probability that a black or Hispanic voter was asked for ID is approximately 10 percentage points higher than the probability that an otherwise similarly situated white voter was asked for ID. The differences between well-educated, English speaking whites versus blacks and Hispanics are even larger. Further, the probability that a non-English speaker was asked for ID was roughly 10 percentage points higher than a similarly situated English speaker. Overall, our results provide strong evidence that blacks, Hispanics, and non-English speakers were asked for ID at much

point estimates based on the raw data are qualitatively similar to those based on the imputed data. Not surprisingly, given that the raw data have roughly half as many observations as the imputed data, the confidence intervals based on the raw data are wider than those from the imputed data. In some cases the 95% confidence interval on the Hispanic coefficient includes 0. The 95% confidence interval for the black coefficient never includes 0. Dropping potentially problematic polling locations (those outside the confidence intervals in Figure 2) does not appreciably change any inferences. All of these results are available in the web appendix.

higher rates than whites and English speakers. Finally, we believe that the Non-English Speaker variable constitutes a reasonable proxy for the likelihood that a voter would pronounce his/her name to poll workers in a heavily accented fashion, which might induce the poll worker to request (incorrectly and illegally) an ID as a means of finding out the voter's name. Accounting for this variable does not decrease the magnitude of the racial differences we observe.

We also analyze whether the experimental poll worker training program discussed above, which covered voter ID law and procedure, affects our results. We fit additional hierarchical probit regression models to the same data as above, but this time we include interactions between all the variables and an indicator of whether the polling location is assigned to the active treatment — the new pollworker training regimen. These results, available in the web appendix, reveal neither significant interactions between treatment status and background variables nor a significant main effect coefficient for the treatment indicator. The results for blacks, Hispanics, and college educated individuals are qualitatively the same as in Table 2.

A final concern is that social desirability bias may be responsible for some of the racial differences that we estimate. If members of some racial/ethnic groups (here blacks and Hispanics) feel defensive about their ability to vote legally, they may over-report being asked for ID. While our data do not allow us to directly address this concern, we can provide some indirect evidence. First, such social desirability effects would most likely to appear in interactions between minority voters and white pollsters. To address this issue we included an indicator variable to capture whether the exit pollster was white. We include this variable along with interactions between this variable and the race/ethnicity of the voter as well as whether the voter was a non-English speaker. The results from these models are consistently qualitatively similar to the results in presented here — blacks and Hispanics report being asked for ID at higher rates than whites even after adjusting for the race of the exit pollster. These results are available in the web appendix. Second, social desirability forms a part of our sensitivity analysis (which focuses primarily on HAVA/inactive voters), as discussed immediately below.

HAVA/inactive Voters

A factor that complicates the interpretation of the results above is that, according to HAVA, would-be voters must be asked for ID if they (i) reg-

istered by mail, (ii) did not include a photocopy of a valid ID with their mailed registration forms, and (iii) are voting for the first time. Similarly, Massachusetts law requires that inactive voters be asked for ID. Combine this with the fact that the Obama candidacy may have prompted some minority citizens to vote for the first time and one might wonder whether the significant associations we see in Table 2 are the result of inactive or first time black and Hispanic voters who are legally required to have been asked for identification. Although some of this first-time voting behavior is probably accounted for by the other variables in our hierarchical probit model (particularly age), it remains true that interpretation of our results hinges in part on the extent of legally required ID requests.

We did not ask exit poll respondents whether they were HAVA or inactive voters, deeming the recall task associated with such a question too difficult. There is no way to match the completed questionnaires (which were anonymous) to the voting rolls. However, we did obtain paper copies of the actual voter lists used in the sampled precincts in the 2008 general election from the City of Boston. These records contain the information that pollworkers had regarding which voters were inactive or were what we are calling “HAVA voters.” These data tell us how many HAVA/inactive voters were in each polling location. Unfortunately, we do not have race information for any of these voters, but we can nevertheless proceed with several analyses.

To begin, we note that if it were the case that Hispanic (black) voters were particularly likely to be HAVA/inactive, we might possibly see an association between the percentage of Hispanic (black) voters responding to our poll in a particular polling location and the fraction of HAVA/inactive voters in that polling location. This is an aggregate relationship, so it is subject to the ecological fallacy, but it may provide a rough check. Figure 4 provides the relevant graphs for each racial group; there appear to be only weak positive aggregate-level relationships between the fraction of Hispanic (black) exit poll respondents in a polling location and the fraction of inactive voters in that polling location.¹³ Note also that the overall fraction of inactive voters is far lower than the rate at which voters in our exit poll reported being asked for ID.

¹³ The outlier polling location in Figure 4 is located at a university where, we suspect, many students voted. It is the location that generated (by some margin) the smallest number of exit poll responses. Thus, this location does not exercise a large influence on our analysis, and even if it did, its racial composition is such that we do not believe it to be particularly troubling.

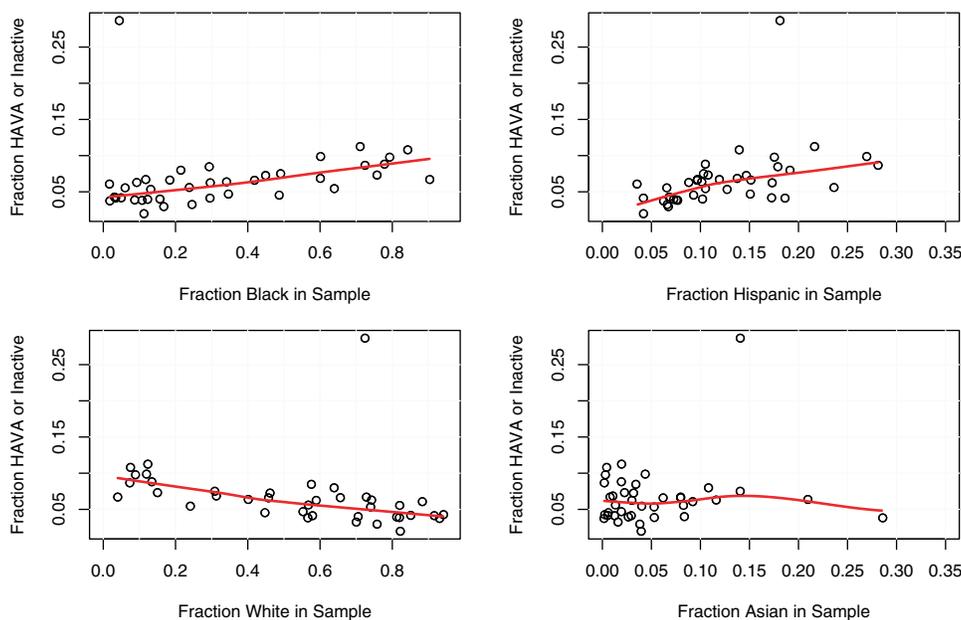


Figure 4. HAVA/inactive status by aggregate race of polling locations.

Each point is a polling location. The y -axis gives the fraction of HAVA/inactive voters among the entire population of 2008 voters in the polling location. The x -axis gives the sample fraction of voters of each racial group from our exit-poll. Note that there are only weak ecological associations between race and HAVA/inactive status and that the aggregate fraction of HAVA/inactive voters is about 0.10. This is much less than the rates at which voters were asked for ID in our exit poll — see Table 1.

Next, we conduct a sensitivity analysis, as follows. If we know which of the voters who were asked for ID were actually HAVA/inactive voters we would remove them from the dataset and fit the model to the reduced data. This would allow us to estimate the probability of being asked for ID given HAVA/non-inactive voter status, race, and the other demographic variables. While we do not observe HAVA/inactive voter status, we can treat this as missing data and ask about its distribution. If this distribution is known or estimable we could stochastically remove respondents from the dataset with probabilities equal to their probabilities of being an HAVA/inactive voter. While it is not possible to estimate the probabilities of interest given the data at hand, it is possible to write these probabilities in a way such that they depend only on a single quantity about which we do have some background knowledge, namely, the probability of being an HAVA/inactive voter given a particular race/ethnicity category.

We adopt the following stylized notation. IH is a variable that indicates whether a voter is an HAVA/inactive voter, $Race$ gives the race/ethnicity of the voter (*Black*, *Hispanic*, *Asian*, *white*), L is an indicator of the polling location, and ID indicates whether a voter was asked for ID . We would like to know $\Pr(IH|Race, ID, L)$ so that we could randomly drop individuals from the dataset and see how the mixed effects estimates for *blacks* and *Hispanics* change.¹⁴ For instance, if we know that the probability is 0.25 that a *Hispanic*, in a particular polling location, who was asked for ID , was in fact an HAVA/inactive voter, we would randomly drop about 25% of the *Hispanics* who were asked for ID in that polling location from the dataset and rerun the analysis. While we do not know $\Pr(IH|Race, ID, L)$ we can write it as:

$$\begin{aligned} \Pr(IH|Race, ID, L) &= \frac{\Pr(IH, Race, ID, L)}{\Pr(Race, ID, L)} \\ &= \frac{\Pr(IH|Race, L) \Pr(Race|L) \Pr(L) \Pr(ID|Race, IH, L)}{\Pr(ID|Race, L) \Pr(Race|L) \Pr(L)} \\ &= \frac{\Pr(IH|Race, L) \Pr(Race|L) \Pr(L) \cdot 1}{\Pr(ID|Race, L) \Pr(Race|L) \Pr(L)} \\ &= \frac{\Pr(IH|Race, L)}{\Pr(ID|Race, L)} \end{aligned}$$

where the third line follows from the conservative assumption that all HAVA/inactive voters are asked for ID . $\Pr(ID|Race, L)$ can be estimated from the data, but $\Pr(IH|Race, L)$ cannot. We can, however, vary these probabilities across the various racial groups and polling locations. The individual-level data from the City of Boston discussed at the beginning of this subsection give us the fraction of HAVA/inactive voters among all 2008 voters by polling location. This is $\Pr(IH|L)$. Note that this quantity is related to $\Pr(IH|Race, L)$ by the accounting identity

$$\begin{aligned} \Pr(IH|L) &= \Pr(IH|White, L) \Pr(White|L) + \Pr(IH|Black, L) \Pr(Black|L) \\ &\quad + \Pr(IH|Hispanic, L) \Pr(Hispanic|L) \\ &\quad + \Pr(IH|Asian, L) \Pr(Asian|L) \end{aligned}$$

where, continuing our abuse of notation, *White*, *Black*, *Hispanic*, and *Asian* denote the four values of the $Race$ variable.

¹⁴ We could condition on a wider range of demographic variables, but data sparseness makes this option unattractive. Given that our primary interest is in the interpretation of the $Race-ID$ associations we feel that conditioning on just $Race$ and ID is reasonable.

Our sensitivity analysis proceeds as follows. We assume that

$$\Pr(IH|Black, L) = \Pr(IH|White, L) + \delta, \quad \text{with } \delta \geq 0$$

with $\Pr(IH|Hispanic, L)$ and $\Pr(IH|Asian, L)$ having the same relationship to $\Pr(IH|White, L)$. Thus, for given a fixed value of δ and the known values of $\Pr(IH|L)$, $\Pr(White|L)$, $\Pr(Black|L)$, $\Pr(Hispanic|L)$, and $\Pr(Asian|L)$ the four values of $\Pr(IH|White, L)$, $\Pr(IH|Black, L)$, $\Pr(IH|Hispanic, L)$, and $\Pr(IH|Asian, L)$ are completely determined. We use these probabilities to calculate $\Pr(IH|Race, ID, L)$ for each racial group and polling location. With these quantities in hand, we remove from the data set the appropriate fraction of voters of each race who were asked for *ID* and rerun the analysis. Doing this for a range of δ values from 0 to 0.2 allows us to see how the *Hispanic* and *Black* coefficients change in magnitude and significance under a variety of assumptions about the gap between white and non-white HAVA/inactive status. These results are presented in Figure 5.

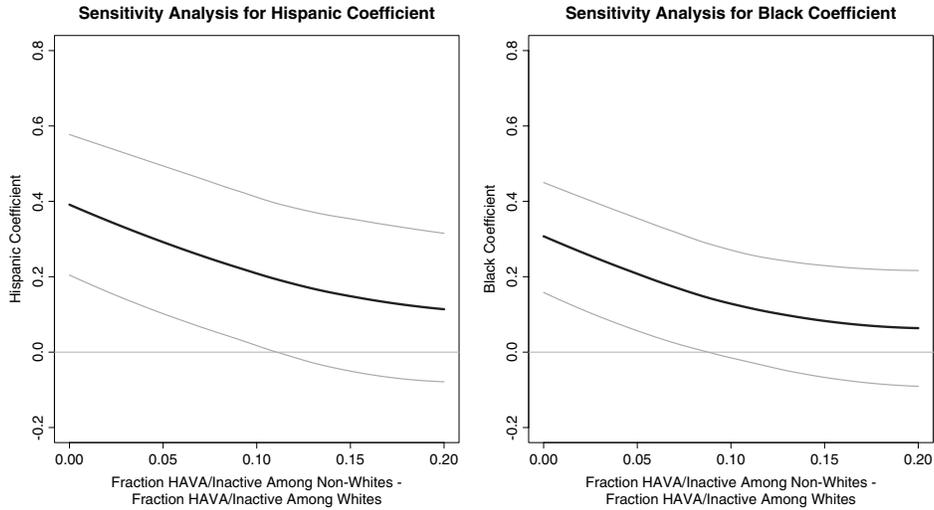


Figure 5. Summary of sensitivity analysis for *Hispanic* and *black* coefficients.

The *x*-axis gives the difference between the fraction of inactives among non-white voters and the fraction of inactives among white voters. This is the quantity δ in the text. The thick *black* lines trace out the point estimate of the coefficient in question across a range of δ values. The gray lines on either side of the *black* lines represent the associated 95% credible intervals. These credible intervals do not include 0 for values of δ of less than about 0.11 and 0.09.

It would take a δ value of about 0.11 or more to cause the Hispanic coefficient to become statistically indistinguishable from 0; note also that the point estimates never dip to 0 even at the extreme ends of the graph. To make this more concrete, suppose that 10% of white voters in our sample are on the inactive list or are HAVA voters and thus should be asked for ID, but that as high as 20% of Hispanic voters in our sample are also HAVA/inactive voters. Then there would still be reason to think that *within the population of voters who should **not** be asked for ID* Hispanics are being asked for ID at significantly higher rates than whites. A similar result holds for the Black coefficient. This is a strong evidence that the racial effects we see are not due solely to the presence of HAVA/inactive voters in our sample.

These results also speak to concerns about social desirability bias. If we interpret δ to be the difference between minorities and whites not just in HAVA/inactive status but also in their propensity to over-report being asked for ID because of social desirability bias, then our sensitivity analysis tells us how large the differential impact of social desirability bias *and* HAVA/inactive status would have to be to make the Black and Hispanic coefficients indistinguishable from 0.

Discussion

What explains our results? Following Page and Pitts (2009), we hypothesize that a plausible explanation is unconscious¹⁵ stereotyping or assumptions on the part of poll workers, the street level bureaucrats (Lipsky, 1980) charged with administering election laws. Rarely are poll workers even considered an arm of the state, or “as provider[s] of a service, even though they clearly operate as extensions of a government agency and do provide a service to the voter” (Hall *et al.*, 2008). United States electoral systems depend on this army of workers to arbitrate ID requirements, provisional ballot qualifications, special assistance needs, language assistance needs, and a host of other aspects of the voting system that require on-the-spot determinations. Meanwhile, poll workers often earn less than minimum wage and work, at most, one or two days per year. Election days are long; in Boston, for example, workers ordinarily are at the polls for at least 15 hours. Voters can be required to wait in lengthy lines, making interaction with them difficult.

¹⁵ We use “subconscious” and “unconscious” interchangeably.

As Page and Pitts (2009) suggest, such trying circumstances provide a setting in which subconscious assumptions regarding race and the need for additional verification of eligibility may operate.

If this is in fact the case, one might ask whether education in the form of improved training programs could address the racially differential administration of ID laws. Although the matter deserves further study, we are skeptical that easy-to-administer training programs are likely to be an effective option in the current United States. The new training program one of us helped construct did not mitigate the associations we observed. Meanwhile, across the nation, training varies significantly by locale. Only a few states have poll worker training standards; whether such standards are followed remains an open question. Further, United States elections are administered by political partisans who have powerful incentives to manipulate the composition of the electorate.

We also emphasize the legal importance of research, such as this paper, that identifies the mechanism of any relationship between voter ID laws and race. All such mechanisms are of interest to social scientists, but different mechanisms have different legal consequences (Tokaji, (2005) has a helpful analysis on this point). The mechanism identified in this paper, racial differences in ID requests from poll workers, implicates at least three different anti-discrimination sources of law. The first is a little-noticed provision of HAVA itself. Section 303(b)(1) of HAVA, 42 U.S.C. § 15483(b)(1), requires states to administer the statute's ID requirements "in a uniform and non-discriminatory manner." While it is not clear whether an individual voter could sue for a violation,¹⁶ it is clear that the United States Attorney General can sue for an injunction, 42 U.S.C. § 15511, perhaps requiring that monitors be physically present in polling locations to assure compliance with applicable law. An individual citizen may also be able to file a complaint with a state agency, 42 U.S.C. § 15512, although we are skeptical of this avenue as a form of relief.

The HAVA "uniform and non-discriminatory" language applies to the actions of election administrators. Thus, studies in the first category we identify earlier, those demonstrating disparate impact of (allegedly) neutrally administered voter ID laws on racial minorities because such minorities

¹⁶ See *Sandusky County Democratic Party v. Blackwell*, 387 F.3d 565 (6th Cir. 2004); *ACLU v. Kiffmeyer*, 2004 WL 2428690 (D. Minn. Oct. 28, 2004); *Brunner v. Ohio Republican Party*, 129 S. Ct. 5 (2008).

possess needed IDs at lower rates, do not implicate Section 303(b)(1) of HAVA. The same is true of studies in the second category we identify above, those that investigate associations between stringency of voter ID laws and turnout without identifying a mechanism. Studies such as ours, Ansolabehere (2009), and Atkeson *et al.* (2010), which focus on the actions of government officials, are a different kettle of fish.

The second anti-discrimination source of law implicated is the Equal Protection Clause of the Fourteenth Amendment. Here, again, the mechanism involved in the enforcement of ID laws is critical. In a series of decisions in the latter half of the 1970s,¹⁷ the United States Supreme Court established a general presumption that facially neutral laws having a disparate impact on racial minorities or women generally do not violate the Constitution. If government officials are unable to administer voter ID laws in a race-neutral manner, meaning that government officials are making race-based decisions (even subconscious ones), it becomes harder for courts to retreat to the previously established distinction between intentional discrimination and mere disparate impact. Legal scholars currently debate whether the federal judiciary would decide that subconscious bias is sufficiently “intentional” to violate the Constitution (e.g., Banks and Ford, 2009). Even if subconscious bias is deemed legally insufficient in other settings, however, the fundamental right to vote is implicated here and race-specific official conduct is involved. Accordingly, one might wonder whether courts would demand that election officials demonstrate that they cannot pursue the anti-fraud goals allegedly furthered by ID requirements using means less likely to be administered in a race-specific manner.

The third anti-discrimination source of law potentially implicated is Section 2 of the Voting Rights Act, which prohibits any standard, practice, or procedure that results in a racial group’s having less “opportunity to participate in the political process and to elect candidates of choice,” 42 U.S.C. § 1973(b). Although Congress passed Section 2 to overrule *City of Mobile v. Bolden* (466 U.S. 55 (1980)) and restore a results test to race discrimination in voting, the United States Supreme Court’s recent redistricting decisions (*LULAC v. Perry*, 548 U. S. 399 (2006); *Bartlett v. Strickland*; 129 S. Ct.

¹⁷ *Washington v. Davis*, 426 U.S. 229 (1976); *Village of Arlington Heights v. Metropolitan Housing Development Corporation*, 429 U.S. 252 (1977); *Personnel Administration of Massachusetts v. Feeney*, 442 U.S. 256 (1979); *City of Mobile v. Bolden*, 446 U.S. 55 (1980). Note that *City of Mobile* is still good law as to what the Constitution requires in the voting context, although any holding with respect to Section 2 of the Voting Rights Act was superseded by the 1982 amendments to that statute.

1231 (2009); *Miller v. Johnson*, 515 U.S. 900 (1995)) show a reluctance to find violations of Section 2 or to allow states to use Section 2 to defend race-based districting. Accordingly, we find somewhat sanguine assertions that courts would find that facially neutral ID laws, even those with a demonstrable disparate impact on racial minorities, would violate Section 2 absent some whiff of intentional discrimination (as illustrated by Justice Kennedy's discussion of the Henry Bonilla district in *LULAC v. Perry*). The intentional actions of election officials in asking members of some racial groups for ID more than others, in ways that are difficult to explain with race-neutral explanations, might provide the necessary whiff.

Putting the law aside, the real-world harms possibly associated with racial administration of ID laws are troubling. We articulate three such possible harms here (there are others). The first is that minorities may be disproportionately deprived of the right to cast an effective ballot. Pitts (2008) used official documents in Indiana to compare (i) the fraction of provisional ballots cast because the would-be voter lacks requisite ID that ultimately counts as valid votes to (ii) the fraction of provisional ballots cast because of non-ID requirements that ultimately counts as valid votes. The former fraction (78/399, or about 0.20) was substantially lower than the latter (684/2372, or about 0.29), suggesting that provisional balloting induced by ID requirements may possibly be associated with a lower rate of valid voting than provisional balloting induced by non-ID requirements. The potential of racially differential exposure to this lower rate is thus troubling. A second potential harm is the possibility that street-level bureaucrats who administer any law in a race-specific manner might reinforce troubling stereotypes and tendencies in these officials, who represent officialdom in the lion's share of face-to-face interaction between the government and the citizenry. Finally, in the area of election law, "expressive harms" have particular salience (see, for example, Pildes and Niemi, 1993), and racial administration of ID laws might send troubling messages to the electorate. Such harms might seem particularly worrisome given our nation's history regarding race-based administration of facially neutral laws governing access to the ballot.

References

- Alvarez, M., D. Bailey, and J. N. Katz. 2008. "The Effect of Voter Identification Laws on Turnout." Presented at the Annual Meeting of the American Political Science Association, Boston, MA.

- Alvarez, R. M., I. Levin, T. Hall, and C. Stewart III. 2010. "Voter Opinions about Election Reform: Do They Support Making Voting More Convenient." Technical Report VTP Working Paper No. 98, Caltech.
- Ansolahehere, S. 2009. "Effects of Identification Requirements on Voting: Evidence from the Experiences of Voters on Election Day." *PS: Political Science & Politics* 42(1): 127–130.
- Atkeson, L. R., L. A. Bryant, T. E. Hall, K. Saunders, and M. Alvarez. 2010. "A New Barrier to Participation: Heterogeneous Application of Voter Identification Policies." *Electoral Studies* 29(1): 66–73.
- Banks, R. R. and R. T. Ford. 2009. "(How) Does Unconscious Bias Matter?: Law, Politics, and Racial Inequality." *Emory Law Journal* 58: 1053–1122.
- Barreto, M. A., S. A. Nuno, and G. R. Sanchez. 2009. "The Disproportionate Impact of Voter-ID Requirements on the Electorate? New Evidence from Indiana." *PS: Political Science & Politics* 42(1): 111–116.
- Bishop, G. F. and B. S. Fisher. 1995. "Secret Ballots and Self-Reports in an Exit-Poll Experiment." *Public Opinion Quarterly* 59: 568–588.
- Edison Media Research and Mitofsky International. 2005. "Evaluation of Edison/Mitofsky Election System 2004." Technical Report, National Election Pool.
- Erikson, R. S. and L. C. Minnite. 2009. "Modeling Problems in the Voter Identification-Voter Turnout Debate." *Election Law Journal* 8(2): 85–101.
- Green-Atchley, S. 2007. *Access to the Vote in the 2006 Midterm Election: Evidence from the 2006 Cooperative Congressional Election Study*. Master's Thesis, Massachusetts Institute of Technology.
- Greiner, D. J. and K. M. Quinn. 2010. "Exit Polling and Racial Bloc Voting: Combining Individual-Level and $R \times C$ Ecological Data." *Annals of Applied Statistics* 4(4): 1774–1796.
- Haile, K. and R. McNeal. 2010. "Election Administration Reform and State Choice: Voter Identification Requirements and HAVA." *Policy Studies Journal* 38(2): 281–302.
- Hall, T. E., J. Q. Monson, and K. D. Patterson. 2008. "The Human Dimension of Elections: How Poll Workers Shape Public Confidence in Elections." *Political Research Quarterly* 62(3): 507–522.
- Honaker, J. and G. King. 2009. "What To Do About Missing Values in Time Series Cross-Section Data." Harvard University Working Paper.
- Hood, M. and C. Bullock. 2008. "Worth a Thousand Words?: An Analysis of Georgia's Voter Identification Statute." *American Politics Research* 36(4): 555–579.
- Konisky, D. and M. A. Powell. 2009. "Public Attitudes on State Election Administration, Goals, and Reforms." Technical Report 05-2009, Institute of Public Policy, Truman Policy Research.
- Kousser, J. M. 1974. *The Shaping of Southern Politics: Suffrage Restriction and the Establishment of the One-party South, 1880–1910*. New Haven: Yale University Press.
- Lipsky, M. 1980. *Street Level Bureaucracy*. Russell Sage Foundation.
- Lott, J. R. 2006. "Evidence of Voter Fraud and the Impact that Regulations to Reduce Fraud Have on Voter Participation Rates."
- Mycoff, J. D., M. W. Wagner, and D. C. Wilson. 2007. "The Effect of Voter Identification Laws on Turnout." Chicago, IL.
- National Conference of State Legislatures. 2011. "Voter ID: State Requirements." Available at <http://www.ncsl.org/default.aspx?tabid=16602>.
- Overton, S. 2007. *Stealing Democracy: The New Politics of Voter Suppression*. W. W. Norton & Company.
- Page, A. and M. J. Pitts. 2009. "Poll Workers, Election Administration, and the Problem of Implicit Bias." *Michigan Journal of Race & Law* 15(1): 1–56.
- Pawasarat, J. 2005. "The Driver Licenses Status of the Voting Age Population in Wisconsin." <http://www4.uwm.edu/eti/barriers/DriversLicense.pdf>.

- Pildes, R. H. and R. G. Niemi. 1993. "Expressive Harms, "Bizarre Districts," and Voting Rights: Evaluating Election-District Appearances After Shaw vs. Reno." *Michigan Law Review* 92: 483.
- Pitts, M. J. 2008. "Empirically Assessing the Impact of Photo Identification at the Polls Through an Examination of Provisional Balloting." *Journal of Law & Politics* 24: 475-527.
- Piven, F. F. 2000. *Why Americans Still Don't Vote: And Why Politicians Want It That Way*. Boston, MA: Beacon Press.
- Rubin, D. B. 1978. "Multiple Imputations in Sample Surveys — A Phenomenological Bayesian Approach to Nonresponse." *Proceedings of the Survey Methods Section of the American Statistical Association*, pp. 20-27.
- Tokaji, D. P. 2005. "The New Vote Denial: Where Election Reform Meets the Voting Rights Act." *South Carolina Law Review* 57: 689-733.
- United States Bureau of the Census. 2007. "2007 American Community Survey 1-Year Estimates."
- Vercellotti, T. and D. Andersen. 2006. "Protecting the Franchise, or Restricting It? The Effects of Voter Identification Requirements on Turnout." Presented at the Annual Meeting of the American Political Science Association, Philadelphia, PA.
- Wang, T. A. 2005. "ID and Voting Rights." Technical Report.

