

12-16-07

IT MUST BE MANDATORY FOR VOTERS TO CHECK OPTICAL SCAN BALLOTS BEFORE THEY ARE OFFICIALLY CAST

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Overview and Conclusions

In the Everest Project report just issued by the Ohio Secretary of State², Recommendation #4 states that “Vote centers would also be equipped ...with two precinct-based optical scan machines for voters *who wish to* check their ballots for overvotes or undervotes by scanning them (with no tabulation occurring, but some firmware needed to read ballots to detect overvotes or undervotes).” (my bolding added). The following report provides documentation that *unless* it is *mandatory* that all voters check their optical scan ballots, it is absolutely predictable, based on past research, that:

- tens of thousands of Ohio voters will lose their votes in Ohio’s 2008 General Elections;
- about twice as many votes for Governor or Senator will be lost as for President;
- the loss of vote will disproportionately affect African American and less wealthy Ohioans

Past research by others clearly shows that this loss of vote and discriminatory effect can be greatly reduced if voters are required to check their optical scan ballots for under-vote and especially for over-vote before they are cast (although the voter still has the choice of whether to correct the ballot or to go ahead and cast their vote knowing that overvotes will not be counted). Carefully planned culturally appropriate voter education is also likely to prevent loss of vote.

A. “Unrecorded” votes (aka “residual” or “invalid” votes)

The tally of “unrecorded votes” is taken by looking at the total voter sign-ins or cast at polling places and subtracting the total number of votes finally counted for any office or issue. Often this is expressed as the unrecorded votes as a percentage of those “cast”. Votes are “unrecorded” if the voter does not indicate a choice (“undervote”), indicates more than one choice for the same office (“overvote” – all counters throw these out) or if there is some other glitch in the system from the time the vote is cast until it is counted (e.g. ballots lost on the way to central office or in an electronic black hole). In states, unlike Ohio, that require separate recording of undervote and over-vote, it is found that the “undervote” for Presidential races is low (0.3-0.7%) so that *the main factor in “unrecorded votes” is overvote.*

¹ Robbins is on the Executive Committee of the Greater Cleveland Voter Coalition, an advisory member of the Secretary of State’s Voting Rights Institute, and a member of the Shaker Hieghts League of Women Voters. This draft document, however, is not an official document of any of these organizations.

² Project E V E R E S T, Evaluation and Validation of Election Related Equipment, Standards and Testing, *Report of Findings*, Ohio Secretary of State Jennifer L. Brunner Columbus, Ohio, December 14, 2007

B. Ohio State data showing that “Unrecorded” votes are a documented major problem

Table 1. Preliminary calculations for 2000 and 2002 Ohio elections (data from the Ohio Secretary of State):

Machine type	Number of counties (2000)/(2002)	Unrecorded as % of all ballots cast (average value per county)		
		President 2000	US Senator 2000	Governor 2002
Punch Card	70/70	2.4	5.5	4.3
Optical scan	11/13	1.1	5.1	3.2
DRE	6/6	1.0	5.7	3.4
Lever	2/0	0.7	7.4	--

The above Ohio data, which are similar to the national figures reported by others, illustrate another consistent finding, which is that many more unrecorded votes appear in Governor and Senate races than in that for President. Possible reasons may include greater voter unfamiliarity with or confusion between candidates, and voter fatigue, but note: DRE’s which prevent overvoting do not have a better record.

Large numbers of votes were unrecorded in recent Ohio elections in which most counties did **not** offer “second chance” voting:

Presidential, 2000: 90,532 2004: 94,488

Senate, 2000: 343,853

Governor, 2002: 127,293

With the elimination of punch card voting in the Ohio General Election of November 2006 (so that all counties used optical scan or Electronic touch screen voting), the number of unrecorded votes cast at polling places statewide for the Governor’s race was 15,966 or 0.5%³. While this advantage of electronic voting was overshadowed by malfunctions and serious problems in auditing paper trail records, it showed that “second chance” voting reduces unrecorded votes very substantially (in this case, mostly correction by touch screen, but it could just as well have been via precinct-level optical scan).

C. National data showing that precinct-level (“second chance”) optical scan voting has significantly fewer lost votes than central scanning.

Kimball has an excellent compilation of data showing interaction of voting technologies, ethnicity and income status⁴. In studies of over 2500 counties in the Presidential races, Kimball reports:

Lost votes in 2000: 1.8% central vs. 0.9% precinct level

Lost votes in 2004: 1.7% central vs. 0.7% precinct level

D. Does presence or absence of “second chance” voting discriminate more or less against certain classes of voters?

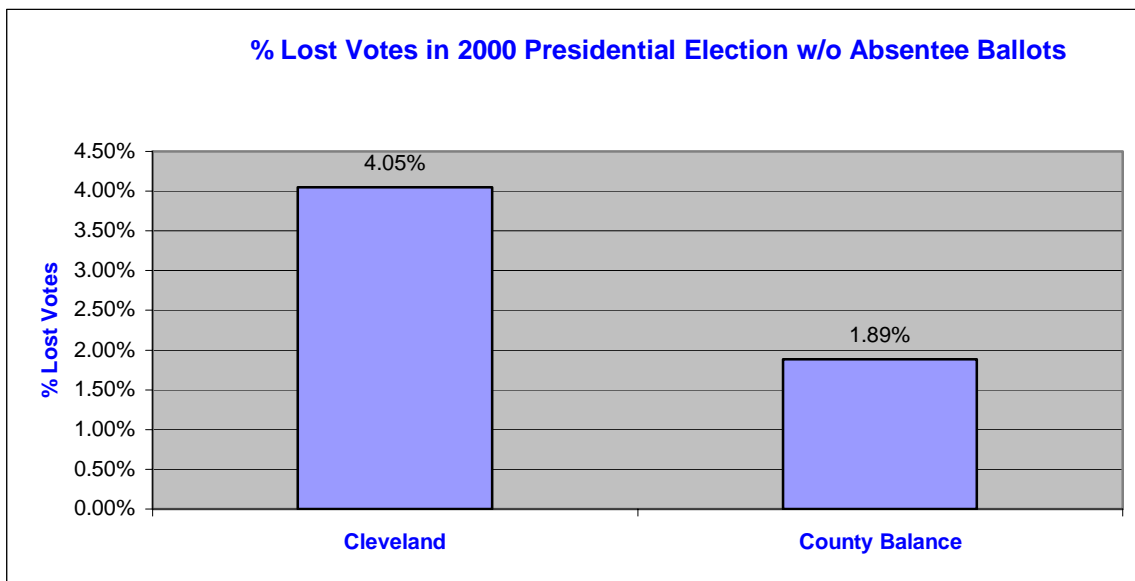
³ Computations based on data submitted to the EAC by the Ohio Sec. of State

⁴ <http://www.umsl.edu/~kimballd/rtables.pdf>

Repeatedly it is reported that *education, income, and minority status are associated with higher percentages of unrecorded votes*. For instance, in the 2000 Presidential elections, counties with over 30% black population had 3.1% unrecorded votes vs. 1.5% in counties with less than 10% black population ⁵. Similar disparities were found comparing counties with median incomes less than \$25,000 to those with incomes over \$40,000. See Reference 3 for very complete data on these issues. In the Ohio 2002 Gubernatorial race, the 10 counties (majority white) with the state’s highest unrecorded vote also had a percentage of college graduates half that of the state average ⁶.

Results from Cuyahoga County, 2000 General Election, in which punch card voting did not permit “second chance” correction, showed big disparities in unrecorded votes depending on income and ethnicity.

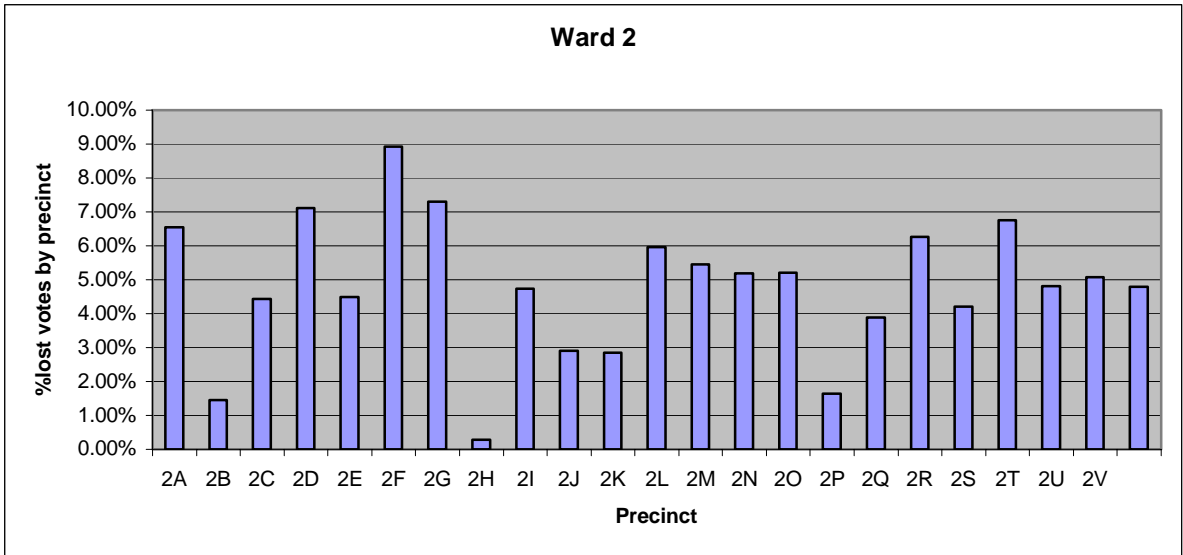
There was a big disparity in % unrecorded votes in the City of Cleveland proper when compared to suburban cities in the county. In the city of Cleveland, 5518 votes, i.e. 4 % votes of votes cast were “unrecorded”, while outside of Cleveland, 7230, i.e. 1.9% of every votes cast were unrecorded. In other words, the percent of unrecorded votes in the City of Cleveland was more than twice that in the rest of Cuyahoga County (see figure below).



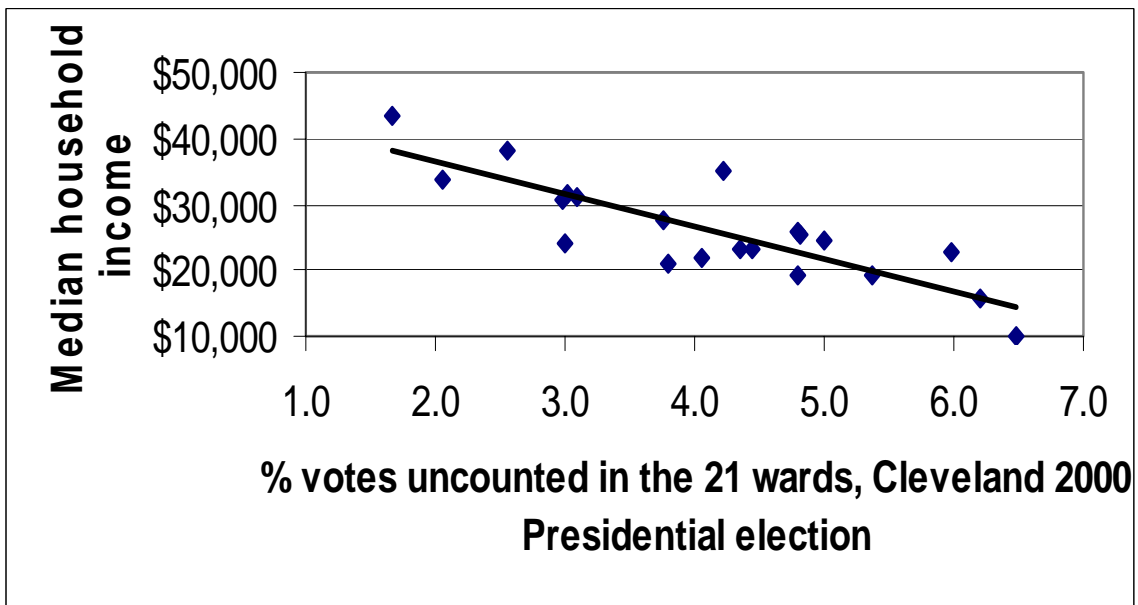
⁵ Kimball, D.C., Owens, C.T., & Keeney, K.M., “Unrecorded votes & political representation”, in *Counting the Votes: Lessons from the 2000 Presidential Election in Florida*, Robert P. Watson, ed., Gainesville, FL: University Press of Florida, 2004. www.umsl.edu/~kimball/unrep.pdf

⁶ N. Robbins, preliminary calculations

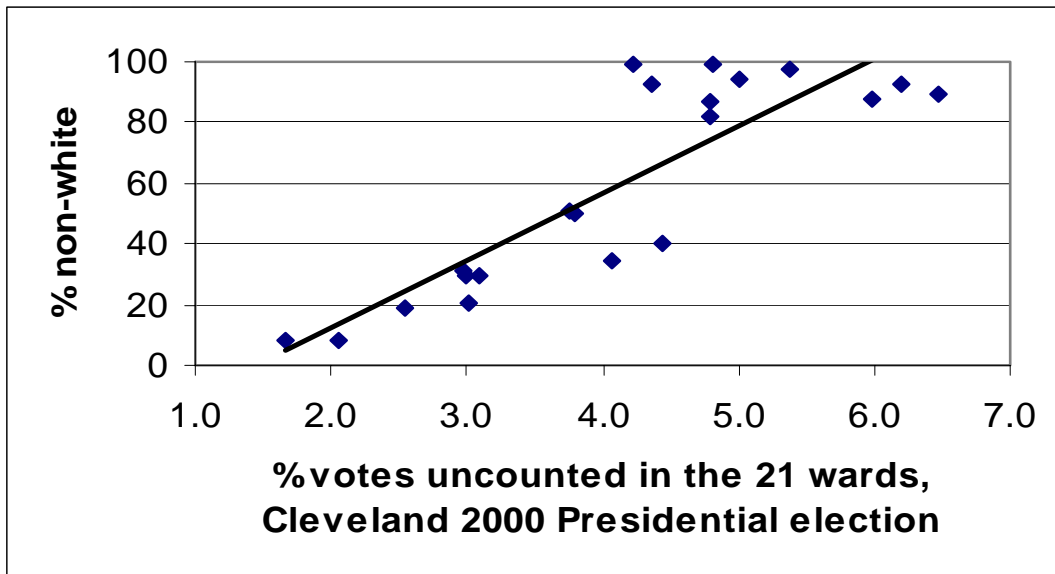
The data from Cuyahoga County at the ward level conceal further disparities. For instance, in about 16 City of Cleveland precincts, the % unrecorded votes ranged between 8 and 13%. To illustrate the wide variation between precincts, here are the results for Ward 2:



Within the City of Cleveland, the % votes uncounted were clearly greater in low income than in high income wards – i.e. low income voters had more votes uncounted, about 6.5% in the worst wards.



An ethnic disparity is also evident: as the percentage of non-white population increases, so did the percentage of uncounted votes, again with some 6.5% uncounted in the worst cases.



Many cities or counties in Ohio have substantial low-income and/or minority populations, and based on the national studies mentioned below, there is every reason to believe that income or ethnic disparities in unrecorded votes, similar to those in Cuyahoga County, exist in those cities as well. County-level data often obscure these glaring disparities. Also, mainly white low income counties are also affected: of the 10 “worst” counties in Ohio with respect to unrecorded votes (excluding Holmes County where Amish don’t vote for federal offices), nine were low income Appalachian counties.

E. National data showing the importance of “second chance” voting technology to reduce racial and monetary inequalities

The choice of voting equipment can magnify or almost eliminate these disparities, notably depending on whether there is a “second chance” technology which allows voters to check their ballots and make corrections. Knack & Kropf reported⁷ sizeable racial, ethnic, poverty, and education-related “differences in the rate of invalidated votes for equipment that is more prone to overvoting [punch cards, central counted optical scan], but these racial differences are absent among counties using voting technology that can be programmed to prevent overvoting [DRE’s, precinct counted optical scan].”

⁷Knack, Stephen and Martha E. Kropf, report which was previously on line from the CalTech Voting Center

Table 2. Racial and economic disparity in % unrecorded votes in the 2000 Presidential election (condensed from Reference 3)

Racial composition	Unrecorded votes in counties using:			
	Votomatic punch cards	Optical scan - central	Optical scan - precinct	DRE's
Less than 10% black	2.2%	1.3%	0.9%	1.7%
Over 30% black	5.6%	5.0%	1.9%	1.7%
Median Income				
Less than \$25,000	4.5%	4.4%	1.4%	2.6%
Over \$40,000	2.2%	1.0%	0.8%	1.3%

Note *the huge disparities due to race and income with punch cards (column 2), the persistent but much smaller disparity with centrally counted optical scans, and finally, the small disparity when voters use “second chance” technology – either precinct level optical scans or DRE’s which tell voters of errors and allow them to correct them. Note that the precinct optical scanners do even better than DRE’s.*

F. Voter education is important: An aggressive voter education program plus precinct level optical scan devices reduced unrecorded votes in largely African American Gadsden County from 12% (2000) to 1% (2002) ⁸ Also, in Cuyahoga County’s 2004 General Election, a major effort by the Greater Cleveland Voter Coalition to craft, publicize and distribute a flyer explaining how to avoid voting errors (see next page), in addition to strong educational efforts by the County Board of Elections may have helped reduce the number of lost votes. Lost Presidential votes in the City of Cleveland declined from 4.0% in 2000 to 2.7% in 2004, whereas in non-Cleveland suburbs of Cuyahoga County, there was also a decrease (from 1.9% in 2000 to 1.4%). At the same time, statewide, the decrease in unrecorded votes was only from 1.9 to 1.7% between 2000 and 2004.

⁸ Tallahassee Democrat, 11-23-03

Tips To Make Sure YOUR VOTE COUNTS

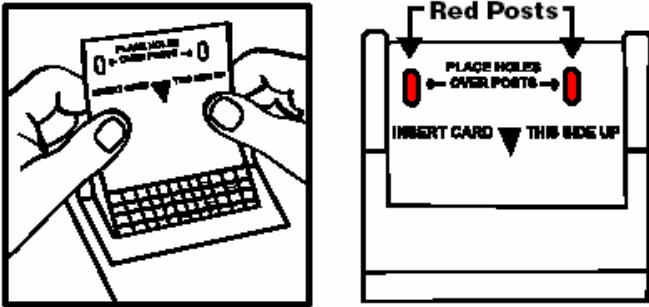
Take your time & ask for help if you need it

(If you make a mistake, you may ask for a new ballot twice)

Tip 1: Insert the card

Slide the ballot in all the way. Make sure you see the words **INSERT CARD ▼ THIS SIDE UP**. Slip the holes over the red posts.

If the card doesn't fit, ask a poll worker for help.



Tip 2: Vote correctly

Follow the directions on the ballot and vote for the number of candidates it says. Don't vote for more candidates than the ballot tells you to – or your vote won't be counted.

Vote by punching ONE to make your selection

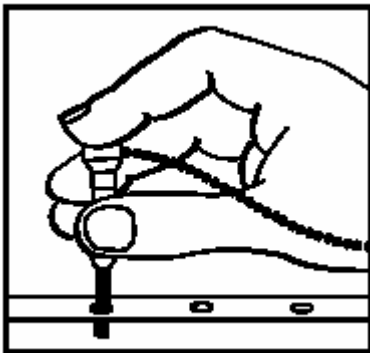
For Office X (Vote for not more than ONE)	Candidate A →	<input type="radio"/>
	Candidate B →	<input type="radio"/>

Vote carefully. If you make a mistake, ask for a new ballot.

Tip 3: Punch it hard!

Punch your ballot next to the arrow for your candidate or your answer to a question or issue.

For President and For Vice-President	Candidate Team XYZ →	<input type="radio"/>
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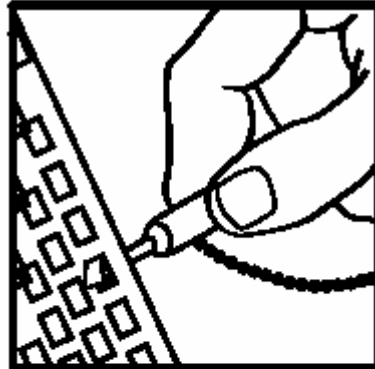


You should punch a clear, open hole **completely through** your ballot card.

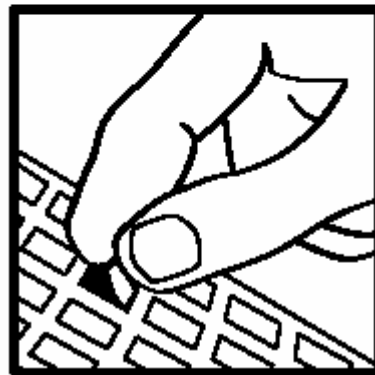


Tip 4: Fix it

Take your card out of the voting machine. Hold your card up to the light. Make sure that every hole looks like a small window and that the light shines through.



If a hole is not open all the way, use the **punching tool** to fix it.



Turn your ballot over. If small pieces of paper are attached to any of the holes, **carefully remove** these "hanging chads."

Now you are done.

When you are finished, put your ballot in the envelope and hand it to a poll worker.

Questions or problems: Call Election Protection toll-free at 1-866-OUR-VOTE (1-866-687-8683)

