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INTRODUCTION

It is understandable and appropriate that much of the research on residual votes in elections that for various reasons do not count (ProCon.org, 2008) has focused on technical issues such as problems caused by ballot design or by different types of voting machines. The concept of some voters casting more ballot choices than allowed (overvoting) or making no valid choice in a race (undervoting) gained attention after the disputed 2000 presidential election. Voting irregularities in Florida led to legal challenges of the results and the U.S. Supreme Court deciding the winner. Many problems in Florida were caused by outdated voting machines that did not record votes and by ballot designs that, critics claimed, confused voters. Researchers have studied the causes of residual votes and of undervotes in particular to explore whether undervoting signals the denial of voting rights. Activists decried a disproportionate incidence of undervoting among African-American voters. They argued that invalidation of many African-American votes in Florida effectively disenfranchised that group from the political process (Walton, 2002, p. 21).

relationships between ballot rolloff and demographic and electoral variables without a high-

same correlations plus a relationship with median household income were found. The strongest significant relationships of any variable, though, were found in both houses between rolloff and district competitiveness. Bivariate regression analysis confirmed the correlations at statistically significant levels. However, those relationships all but vanished in multivariate regression analyses. Only the relationship between rolloff and competitiveness survived at statistically significant levels and provided the strongest explanatory power.

Survey data collected for this research generally reinforce(nisf)5(oind)-3(nc-9(g)10(h o)f s-8(yg)78nific)

thousands of votes were discounted because machines did not always fully punch out the area of the ballot signifying a presidential selection. The punch machine sometimes left a hanging piece of paper, and sometimes left no indication of a vote at all. Optical scanners did not always accurately read marked ballots. Even without technical problems, many voters and critics said confusing ballot designs led to unintentional undervotes, overvotes, and miscast votes. More than 2,000 people told Democratic Party officials they believed they had voted for independent Patrick Buchanan instead of Gore because the ballot design was so confusing (Bai, 2000). Although the only state with more than 2 million votes cast nationwide in the 2000 election, 1.6 million did not register a vote for president (Hargrove, 2004). While Florida brought the problem of residual votes to the attention of the nation, Hargrove (p. 7) notes that seven states had higher roll-off rates than Florida including New Jersey.

The historic nature of the Florida experience has strongly influenced the literature and ballot rolloff research. Much of the research but not all centers on the technical apparatus of voting and on ballot design. A large percentage of election reform proposals since 2000 call for updating technical equipment (Kimball D. C., 2005, pp. 508-509). Some of the issues raised are no longer relevant to New Jersey, as all counties in the state have upgraded their voting machines to electronic equipment, with most counties using the same model (Clemmensen, 2013). But the body of undervote research, which sometimes comes to opposing conclusions, reflects the complexity of the topic. Theories relate rolloff to ballot location, design, demographic factors, and conditions related to an election. Understanding the many relevant issues helps explain why the New Jersey election provides a good subject for this study.

Fischer (2001) provides a useful overview of the five main voting technologies:

- Paper ballots, on which voters mark their choices from lists of candidates or ballot questions. Only 3 percent of U.S. precincts still used paper ballots in 2000.
- Lever machines, which mechanically counts votes after voters turn levers next to their choices on a posted ballot. About 22 percent of precincts employed lever machines in 2000, although the equipment was no longer manufactured.
- Punch cards, in which voters punch holes in a paper ballot that is read by a computer. About 37 percent of precincts used some form of punch cards in 2000.
- Marksense forms, or optical scan, in which voters fill in ovals or boxes on a paper ballot that is scanned and read by a computer. About 25 percent of precincts used this equipment.
- And direct recording electronic (DRE) voting, in which voters push buttons or touch computer screens to electronically record their choices. About 7 percent of precincts used DRE systems in 2000.

Studies have found correlations between the type of voting equipment used and the incidence of undervotes (Ansolabehere 2001). However, the conclusions of various studies have not been uniform except to find that punch card systems are most associated with residual votes.

One of the first post-2000 studies (Caltech/MIT Voting Technology Project, 2001) analyzed data on voting machines and residual votes from two-thirds of U.S counties over four presidential elections from 1988 to 2000. The research linked hand-counted paper ballots to the fewest spoiled votes, followed by lever machines and optically scanned ballots; the most spoiled ballots correlated to punchcards and DRE systems. Bullock and Hood (2002), seeking to build upon Caltech/MIT, found that optical scanners and lever machines produce the fewest undervotes, while punch cards produce the greatest percentage. The authors, analyzing

systems used in Georgia congressional districts, created variables representing different voting technologies and performed multivariate analysis with undervotes as the dependent variable. It should be noted that the preceding studies were conducted at a time when DREs accounted for a small percentage of voting equipment. But Ansolabehere and Stewart (2005) also associated electronic systems and punch cards with the highest levels of undervoting among the five major technologies. The authors analyzed data from all U.S. counties for presidential, U.S. Senate, and gubernatorial elections between 1988 and 2000.

Yet other research suggests that DRE systems are no worse than others and could potentially reduce the percentage of undervotes. Fischer (2001, 8) notes that voting technologies differ in how they help a voter prevent or correct errors and that DREs can reduce undervotes by flagging skipped contests, by guiding voters electronically through complex ballots, and by allowing voters to review their choices before casting final votes. VotersUnite.org (2007) reports that undervote rates among Hispanic and Native American voters plummeted from 2004 to 2006 after New Mexico switched from DRE systems to all paper ballots, but the change produced hardly any effect among Anglo voters. Tomz and Van Houwelling (2003) arrive at opposing conclusions regarding racial differences in their analysis of millions of voting records in South Carolina and Louisiana. Measuring the difference in undervote rates beween African American and white voters, the authors find that undervoting is 4 to 6 percentage points higher among black voters than whites when optical scanners and punch cards are used, but that undervoting is cut to a gap of only. 0.3 to 0.7 percentage points with lever and DRE machines. Warf (2006, 544-51), who reviewed nationwide county-level residual voting rates for different technologies, finds undervotes for different racial and ethnic groups to be largely proportional

their percentage of the voting population, and that different groups using different technologies was unlikely to bias undervote levels.

Related to hypotheses that equipment affects ballot rolloff is the theory that the design of the ballot relates to voting irregularities and errors. Herrnson (2012, pp. 717-8) cites the infamous butterfly ballot as a factor in large numbers of Palm Beach County, Florida voters inadvertently voting for Buchanan instead of Gore in 2000. The Brennan Center for Justice (Norden, 2012) argues that poor ballot design is linked to residual votes, including ballot rolloff, and that 400,000 votes were not counted nationwide in 2008 and 2010. Norden (2012, pp. 1-6) provides examples in which he claims that poor design confused voters into skipping races:

- The ballot in East St. Louis in 2008 lacked clear headings distinguishing between the presidential and U.S. Senate candidates. Nearly 10 percent of East St. Louis voters failed to cast a vote for Senate, contrasted with a 4.4 percent rolloff rate statewide.
- The ballot in Sarasota County, Florida similarly did not distinguish well between gubernatorial and 13th Congressional District candidates. More than 14,000 Sarasota County ballots did not include a vote for Congress in a race decided by 369 votes. The undervote rate was 14 percent, while it was only 2.5 percent in adjacent Charlotte County.

Kimball and Kropf (2005, p. 510) note that resea.144 376.b02sugglsubC /P <</Mt,.

they find that poor ballot design was related to levels of unrecorded votes. Henson et al. (2012) experimented by having 1,540 participants representative of the voting population simulate voting with different types of ballots. They find that voters using a standard office-bloc ballot, which groups all of the candidates for the same office together, make fewer unintentional undervotes (p. 517).

While ballot design has been a target of criticism in New Jersey, a review of the literature finds little complaint that ballots confuse Garden State voters into skipping contests. Most criticism centers on the effect of ballot position on candidates [illegible] with the preferred position being at the top or to the left of the ballot (Ryzewicz 2013). In 2009, independent gubernatorial candidate Chris Daggett began generating interest after strong debate performance. But he faced poor ballot position throughout the state, where county election officials influence such placements and where major party candidates are given the preference (Fletcher, 2009). Review of the literature suggest that poor design has not been publicly claimed to cause ballot rolloff in New Jersey.

Research finds that positioning of races on the ballot has impact not only on candidates, but on voters in relation to ballot rolloff. Hill (2009) collected images of nearly 1 million anonymous ballots from 15 Florida counties for the 2006 midterm general election. With an overall rolloff rate of 7.5 percent, Hill finds that rolloff levels are lower at the top of the ballot at 1 to 2 percent that year for the gubernatorial and U.S. Senate races, respectively, and that rolloff increases as voters progress down ballot (2009, p. 11). Augenblick and Nicholson (2009, p. 2) argue that voting

precinct. They report (p. ³ $ F U R V V Dwe found that lowering a given contest by one position on the ballot increases precinct-level undervoting (Van Deeuw and Engstrom (1987) studied differences not only in rolloff at the top and bottom of the ballot, between white and African American voters. The authors theorize that black voters, who before 2012(File, 2013)turned out in smaller percentages than whites, may be doubly under-represented by undervoting. They find that while differences in the undervote in gubernatorial elections at the top of the ballot was not significant, black rolloff was higher than white undervoting in referendum questions at the bottom of the ballot (pp. 1090-1).

While much of the literature correlates rolloff to technical and design issues, significant research ties undervotes to demographic factors, particularly race, but also to other variables such as ethnicity, sex, income, and education levels, as well as factors germaine to specific elections such as the competitiveness of the election district or the level of information available about the election. Because critics charged that African American voters in particular were disenfranchised in the 2000 election, a number of studies have focused on rolloff among black voters.Not all research finds race to be a factor. Analysis of Voter News Service exit polls from 1992(Knack, 2003, pp. 7-8)finds barely any variation between reported undervotes in the presidential election between African American and white voters. But generally, enough literature has reported correlations between race and rolloff that a number of authors accept the link and seek to build on it in their research.

Although the focus of Kimball and Kropf (2005, pp. 520-522) is on E D O O R W G H V L J Q ¶ V L P voting irregularities, they note greater problems in counties with high African American populations, concluding that: 7 K H V L J Q L I L F D Q W U H O D W L R Q V K L S E H W Z H H strongest in counties Z L W K S R R U O \ G H Vwith large African American populations (2003, p. 46)

F L W H ³D Q D F F X P X O D W L Q J E R G \ R I U H V H D U F K W K D W S R L Q W

Americans, several studies suggest, cast invalid presidential votes at a higher U D W H W K D Q Z K L W H

The authors attribute much of the disparity to types of voting equipment found more frequently in areas with large black populations. But one study (Sinclair, 2004) that controlled for voting systems found a postive correlation between undervotes and race, as well as with other demographic variables. Sinclair and Alvarez studied votes in 2000 in Los Angeles County, which used only a punch card system. Bullock and Hood (2002, p. 990) considered the percentage of African American voters as a variable in their large N study of Georgia congressional districts and find that regardless of type of voting equipment, undervotes are more prevalent in areas with higher percentages of black voters, as well as in areas with concentrations of new voters and voters with lower levels of education. Like Tomz and Van Houweling, Herron and Sekhon (2005, 154) accept the body of research that links residual votes to race, citing a difference between white and black voters of sometimes more than 10 percent. The authors W K H R U L] H W K D W X Q G H U D ' R Z Q \ L D Q ´³ H D W E R Y R W H V H Q W H R consciously decide to not vote in certain races. They analyze precinct-level voting in 1998 in Cook County, Illinois, and find that the gap in white-black undervoting shrinks when black candidates are on the ballot. Wattenberg et al. (2000, p. 241), studying intentional ballot rolloff, find a correlation between levels of rolloff and higher percentages of African American populations in 1992 and 1996 congressional district elections. The authors theorize that low salience of House elections for these voters and low information may drive the undervoting, but produce no evidence to that effect. Still, their drawing upon competing theories relects a common theme throughout the literature: Ballot rolloff is tied to multiple and complex factors, some related to voter demographics, some related to technology and design, and some related to

environmental variables. Nordon (2012, p. 13) argues that poor ballot design is a major cause of XQUHFRUGHG YRWHV EXW FRQFHGHV ³8QGRXEWHGO\ WKH GHPRJUDSKLFV RU ORFDO LQWHUHVW LQ D SROLWLFDO FRQ

Environmental factors that are found to correlate with rolloff include the competitiveness of an election or of an election district, and the amount of information available about the candidates. The rational voter model (Crain, 1987, p. 221; Wattenberg, 2000, p. 239) theorizes that a voter casts ballots when the benefits exceed the costs. Crain et al. note the reward for voting may be greater when an election is close and each vote could make a difference. The authors theorize that the rational voter will be more likely to abstain in safe races and vote in more competitive races. They create a measure of relative closeness between U.S. Senate and House races on the same ballot by dividing votes from race into the other, and find less rolloff between Senate and House races when the House election is closer (p. 228). Knack and Kropf (2003, p. 14), analyzing National Election Studies (NES) surveys from 1980-2000, find the closeness of a presidential election in a state correlates to undervoting in that race, with undervoting increasing when the victory margin increases to 10 percentage points. Wattenberg, et al. (2000, pp. 239-40), who studied contested House districts in 1992 and 1996, find rolloff percentages increase as the victory margin increases, although the authors say other factors must be at work because 3-5 percent of voters skipped House races even in close districts. Hall (2007) studied rolloff in state judicial elections as compared to presidential, gubernarotial and Senate elections from 1980-2000. She finds that the presence of challengers reduces the average rolloff UDWH RI SHUFHQW (p. 1054) and that competition helped to lower rolloff. Holbrook and Van Dunk (1993) find that closer margins of victory reduces rolloff by 4.5 percent. A subsequent study of state judicial elections (Streb M. J., 2009, pp. 655-6) QDUJHO\ FRQILUPV +DOO¶V ILQGLQJV ZLWK

contested intermediate appellate court elections from 2000-2007 reducing rolloff by 20 percent. Streb, et al. note , however, that they defined competitiveness with narrower victory margins than did Hall.

The authors also tie competitiveness to the information available about an election (p. 661), speculating that more advertising is bought in a competitive election, and that helps inform voters who feel qualified to vote in a particular race. In a subsequent study, Streb and Frederick (2011) find that campaign spending had no correlation to ballot rolloff in 172 contested intermediate appellate court elections. However, they question whether enough was spent to FURVV DQ ³LPDJLQDU\ WKUHVKROG IRU PRQH\ WR LQIOXHQF itself is simply too obscure for money to matter (p. ´ 7KH REVHUYDWLRQ LV significant. While a number of researchers suggest that undervoting is more prevalent in low-information elections, a YRWHU¶V NQRZOHGJH is a difficult variable to measure. McMurray (2010) creates an index of voter knowledge, using American National Election Studies survey results, based on UHVSRQGHQWV¶ HGXFDWLRQ OHYHO DJH LQFRPH DQG UH current affairs. He finds that the higher the information rating in comparison with other voters, the less likely the voter is to roll off from presidential to U.S. Senate and gubernatorial elections (pp. 21-2). Hall (2007, p. 1151) notes that voters look at incumbency as informational, and incumbency has been used as a factor in studying low information elections and competitiveness (Abramowitz, 2006)(Hill, 2009). Wattenberg, et al. (2000, p. 236) theorize that voting is like

questions about political awareness. They find rolloff tied more to low information than to demographic factors (pp. 243-7), although the findings are not totally persuasive. The variables formulated are somewhat subjective, not black-and-white indicators of low information, a complicated quality to measure.

An interesting question about undervoting tied to low information is whether rolloff is

particular elections. They find that when black candidates are on the ballot, rolloff decreases among black voters and increases among white voters (pp. 160-172).

While this debate is an interesting and important one, the issue of intention in ballot rolloff is beyond the scope of this study. The question is one of many that can be asked regarding undervotes. The multiple facets of research evident in the literature underscore the complexity of the topic. However, the literature lays out a foundation of research on which a narrow study of New Jersey undervoting can be based.

RESEARCH DESIGN

Two hypotheses discussed in the literature form the focus of this research, which will study voting results and independent variables at the New Jersey state legislative election district level. Hypothesis 1: Undervoting/ballot rolloff correlates to demographic factors, including race, sex, Hispanic ethnicity, income, education levels, poverty levels, language, and age. Hypothesis 2: Undervoting/ballot rolloff correlates to the competitiveness of an election district. The first segment of this large N study will utilize a non-experimental, correlational cross sectional design. Rolloff levels can be identified in analysis of the 2011 New Jersey state Senate and state Assembly election returns in 40 districts. The undervote variable will be created for each Senate race by subtracting the sum of votes received by all candidates from the total ballots cast in that election. The undervote variable will be created as a percentage of ballots cast. For the Assembly races, the sum of votes received by all candidates will be divided by two because two Assembly seats are contested in each district, and that number will be subtracted from total ballots cast. The undervote level will be the dependent variable. Analysis will

American Community Survey data. A limitation of this design is the inability to isolate vote results

undervoting. Multivariate analysis with linear regression (y_j = b

machines and are less likely to be confused by them (Hill, 2009, p. 13). The dataset is recent and complete[1]. Demographic data are available from the U.S. Census Bureau at the state legislative district geographic unit. A review of the literature does not reveal similar state-level analysis of New Jersey ballot rolloff.

Also, the effects of different types of voting mechanisms on rolloff are significantly reduced by using New Jersey as the case study. In the wake of Florida's problems, New Jersey election officials upgraded voting machines (Campisi, 2013) and no longer use older technologies. Direct recording electronic (DRE) voting machines are now used throughout New Jersey (Appel, 2009), and all of the state's electronic voting machines are the exact same model (Elections N. J., 2011). This fact helps control for the effect of different voting technologies on rolloff.

Demographic data are available at the New Jersey legislative district level for all 40 districts from the U.S. Census Bureau's American Community Survey 5-Year Estimates. The data released in 2012 and covering 2007-11 will be used to generate variables of race, ratio of males to females), Hispanic ethnicity, income, education levels, poverty levels, language, and age. Using three- or one-year ACS estimates is not an option because the state legislative district geographic unit is available only in the five-year estimates. However, five-year is the best choice

Finally, independent statewide survey data on ballot rolloff in New Jersey will be analyzed. The survey was conducted from Oct. 8-22, 2012 by the Stockton Polling Institute with 811 completed interviews. 7 R T X D O L I \ D ³ O L N H O \ Y R W H U ´ U H V S R Q G H Q W V affirmatively to three screening questions that asked: whether they were registered to vote; whether they had voted in the last election; and how likely they were to vote in the 2012 general election. Live interviewers on the Stockton College campus called a random sample of both landline and cell phone numbers. Results were weighted according to United States Census Bureau demographics for the New Jersey voting age population. 7 K H V X U Y H \ ¶ V P D U J L Q R was +/-3.5 percentage points.

ANALYSIS

Results for each of 40 New Jersey state Senate and state Assembly elections were tabulated in spreadsheet format with total ballots cast in each race. The Senate undervote was calculated by subtracting combined votes for all Senate candidates from total ballots cast. Because voters were asked to select two Assembly members, the Assembly race undervote was calculated by subtracting combined votes for all Assembly candidates divided by two from total ballots cast. This captures actual votes and the total votes possible in each race and controls for any independent or minor-party candidates on the ballot. Rolloff/undervote was calculated in the number and percentage of votes possible but not cast in each race.

Rolloff was found in all 80 legislative contests. (See Table 1 in Appendix.) Rolloff levels were higher in the down-ballot Assembly races than in the Senate races topping the ballot. In the Senate, the undervote exceeded 1,000 in all but one district. The Senate undervote ranged from 967 to 3,657, with an outlier of 13,371 in an uncontested District 8 Senate election. The Senate

more pronounced in the closest (1st) District in Cape May and Cumberland counties, where only 1,051 votes separated the winning and losing Assembly candidates. The undervote in that race was 3,200, more than WKUHH WLPHV WKH YRWHV QHHGHG IRU YLFWRU\. In the 8th District, the undervote of 3,675 was nearly triple the 1,259 votes that separated the winner and loser. Voters who rolled off in the 7th District could have prevented a change in party control of an Assembly seat. In two other districts, the undervote and victory margins were closer but still FRXOG KDYH VWDWLVWLFDOO\ FKDQJHG WKH Districts, where WLRQ RXWFRPH. In the 2nd District, there were 171 more skipped votes than the 3,087-vote victory margin in the Assembly election. And LQ $WODQWLF &RXQW\'V 2nd District, the undervote was only 20 more than the number of votes separating the Assembly race winners and losers. In sum, the undervote could statistically have changed the outcome of elections in one out of eight New Jersey legislative districts in 2011, and could have been a deciding factor in three very close districts.

Having established the levels of ballot rolloff, this research moves to testing for relationships between the level of rolloff expressed as a percentage of ballots cast and demographic and electoral variables in each legislative district. Does rolloff relate to demographic characteristics of the district population? Does it relate to the competitiveness of the district election? Correlational analyses will explore potential relationships using scale variables created from Census Bureau American Community Survey (ACS) data. The variables include:

- Percentage of whites in the population
- Percentage of blacks/African Americans in the population
- Percentage of Hispanic ethnicity in the population
- Percentage of non-English speakers in the population

Froo

signaling perhaps more experienced voters.

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disappeared. In every model calculated, victory margin consistently proved to have a statistically significant relationship.

[TABLE 4 HERE]

Similar results were produced by linear regressions using Assembly rolloff as the dependent variable. (See Table 5 in Appendix A.) Again, a model testing the racial, Hispanic ethnicity, and language variables produced no significant relationships. Neither did a regression analysis of education level, median household income, and median age. A comparison of income and people in poverty found a relationship with the poverty level at the .015 significance level, but that significance evaporated when the Assembly victory margin variable was introduced. In every model in which the Assembly victory margin was included, the variable was found to have a relationship at significance levels of .001 or of .000.

[TABLE 5 HERE]

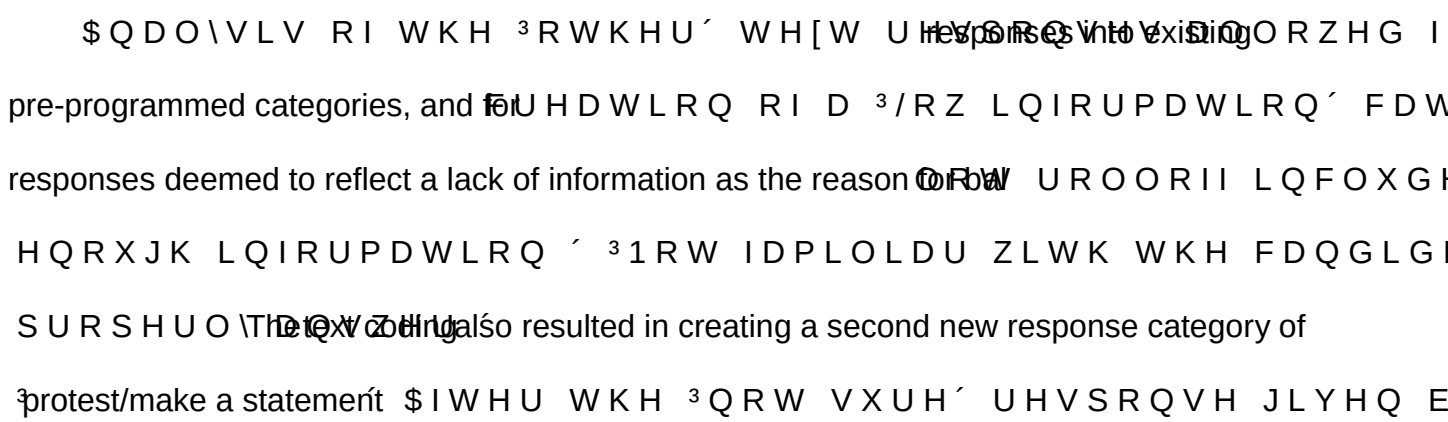
Overall, the individual regression analyses tend to support the hypothesis that demographic

competitiveness as expressed by margin of victory, is positively correlated to rolloff, and that relationship remains statistically significant in multivariate analyses.

Survey data of New Jersey likely voters collected for this research tend to confirm the findings of the analyses of 2011 election results and the correlations and regressions. Frequencies and crosstabs of the survey data show that: a significant percentage of voters roll off on some parts of the ballot; rolloff correlates to racial, ethnic and other demographic variables, but the relationships tend to be weak; and that electoral environmental factors play a strong role in explanining rolloff.

In October 2011, interviewers for the Stockton Polling Institute completed 811 telephone interviews with likely New Jersey voters. Interviewers asked: "In the last election that you voted in, did you cast votes for every office or question on the ballot, or did you not cast votes on every part of the ballot?" (See Figure 1 in Appendix.) Interviewers asked the 12.7 percent said they voted on every race and question. One in eight respondents (12.7 percent) said they did not vote on every part of the ballot, while 5.1 percent were not sure or could not remember.

[FIGURE 1 HERE]



Jersey legislative elections, and so bear review. Trends found in the correlational analysis hold up in crosstabs of variables of whites in the population, Hispanic ethnicity, income, sex, and age, while results differ from the correlations with variables of education level and percentage of African Americans/blacks. (See Table 6 in the Appendix.)

[TABLE 6 HERE]

First, rolloff declined as age categories increased, although the range from lowest to highest (11.2 percent for ages 65 and older to 15.7 percent for ages 18 to 29) only slightly exceeded the margin of error of +/-3.5 percentage points. This reflects the weak relationship found in correlations and bivariate linear regression. A sizable difference in rolloff percentages was shown in Hispanic (18.9 percent) to non-Hispanic respondents (12.2 percent). Rolloff among whites (10 percent) was half that of black respondents (20 percent). The crosstabs present a stronger tie between percentage of African Americans/blacks and undervote than do the correlations and regressions. A weak trend of undervoting being associated with lower income is seen in the crosstabs, although the rolloff level increases again among respondents with incomes of more than $150,000. One difference between crosstabs and correlations finds a negative association between rolloff and education level, while correlations produced no significant

U H O D W L R Q V K L S 7 K L V G H P R J U D S K L F Y D U L D E O H F R Q W D L Q H

The disputed 2000 presidential election in Florida brought the concept of undervotes to the public consciousness (Knack, 2003, p. 31), and researchers have since focused on the phenomenon. Confusing ballot design was a factor in voided ballots in Florida in 2000, and much of the research on ballot rolloff has focused on design and technical equipment used in voting (Kimball D. C., 2005). This is often true even when research has studied correlations to minority voting or to other demographic factors (Herron, 2005).

district. Although the Assembly races are located below the Senate, they can be considered part of the top of the ballot in the sense that many senators campaign with their Assembly district mates as a team and the three make up the district.

points. This evidence of electoral environmental forces relating to undervote naturally raises questions of whether other characteristics of the elections are tied to ballot rolloff. Does the amount of information known by the voter about the candidates affect rolloff? Does the level of campaign spending, which might provide information to the voter through advertising, affect rolloff? Does the presence of incumbents or challengers on the ballot affect rolloff? (Because redistricting seeks to protect incumbents and has created so many safe districts, research on the effect of incumbency on rolloff would likely require a longitudinal study involving only a few cases each election.) Is most of the undervote intentional?

Statewide survey data appear to confirm both the extent of ballot rolloff and the direction that future research should take. About 13 percent of likely New Jersey voters said they skipped voting on at least one portion of the ballot in their last election. This finding suggests self-awareness of voter behavior that runs counter to rolloff being the result of mistakes and confusion. If most of the undervote found in the survey were the result of mistakes, most of the respondents would likely be unaware that they did not vote the entire ballot and would have said that they had voted in every race. Close to 50 percent of those who said they did not vote in all races cited reasons related to factors related to the election, including not having enough information, disinterest, and dislike of the candidates or of the system. Those reasons suggest that the voter made a conscious choice to not vote. About 28 percent were unsure of the reason, could not remember, or refused to specify.

Failure of demographic variables to explain rolloff in regression analyses does not mean their role should be dismissed. Though the relationships may be weak, the findings are statistically significant and the correlations are consistent. Undervoting negatively correlates to white populations, higher household income, and age, and positively correlates to Hispanic

populations, non-English speakers, and higher levels of poverty. These findings are entirely consistent on a socio-economic level. They are also generally consistent with the results of the statewide survey, in which crosstabs of the undervote question and demographic variables showed relationships similar to those found in the correlations. These relationships may not explain the undervote, but they are part of the phenomenon. Future research could explore whether certain demographic variables relate to electoral environmental factors in ways that create disinterest, distrust, or dissatisfaction with the election process, and in turn, lead to ballot rolloff.

CONCLUSION

In the low-salience 2011 New Jersey legislative election, undervoting was widespread and found at high levels starting at the top of the ballot. This election, without a race for president, governor, or federal legislative office on the ballot, would be expected to bring out voters who

It is rare to have a statewide election without some high-salience contest on the ballot. This occurred in New Jersey in 2011, but the findings point to the need for further research in low-salience elections. Many of the New Jersey voters clearly were not failing to cast votes because of confusion or mistakes. Survey data point to voters being aware of their failure to cast votes on all parts of the ballot, and having reasons to explain such behavior. Their reasons, including dissatisfaction with the candidates or with the government or not knowing enough to make an informed choice, reflect a segment of society that is engaged in the electoral process yet disaffected at the same time. This should be of concern to elected officials and policy makers. The effect of these voters failing to cast votes, as shown in districts where undervote could have changed, suggests implications for U.S. democracy that are worthy of further study.

APPENDIX

Table 1. Frequency and percent of ballot rolloff

Table 2. Correlations between ballot rolloff and demographic/competitiveness varia
2011 New Jersey state Senate elections

Variable by legislative district	Pearson Corr.	Sig.	Significance level
Percentage of whites in population	-0.335	0.04	0.05
Percentage of blacks/African Americans in population	0.219	0.18	
Percentage of Hispanics in population	0.442	0.01	0.0
Percentage of non-English speaking population	0.414	0.01	0.0
Percent older than 25 with BA degree or better	-0.176	0.28	
Median household income	-0.302	0.06	
Percentage of people in poverty	0.456	0	0.01
Median age	-0.368	0.02	0.05
Number of males per 100 females	0.175	0.290	
Senate victory margin (percentage points)	0.631	.000	0.01

Table 3. Correlations between ballot rolloff and demographic/competitiveness va
2011 New Jersey state Assembly elections

Variable by legislative district	Pearso Corr.	Sig.	Significance level
Percentage of whites in population	-0.465	0.002	0.01
Percentage of blacks/African Americans in population	0.305	0.056	
Percentage of Hispanics in population	0.642	.000	0.01
Percentage of non-English speaking population	0.612	.000	0.01
Percent older than 25 with BA degree or better	-0.226	0.162	
Median household income	-0.415	0.008	0.01
Percentage of people in poverty	0.531	.000	0.01
Median age	-0.445	0.004	0.01
Number of males per 100 females	0.163	0.314	
Assembly victory margin (percentage points)	0.751	.000	0.01

FIGURE 1

Frequency chart, Stockton Polling Institute poll of 800 likely New Jersey voters, October 2012

BALLOTQ

In the last election that you voted in, did you cast votes for every office or question on the ballot, or did you not cast votes on every part of the ballot?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	VOTED ON EVERY OFFICE OR QUESTION	665	82.0	82.0	82.0
	DID NOT VOTE ON EVERY OFFICE OR QUESTION	103			

TABLE 6

Table 6. Percent who said they did not vote every part of	
From demographic crosstabs (Stockton Polling Institute)	
Variable	Rolled off
18 to 29	15.7%
30 to 49	14.0%
50 to 64	11.8%
65 and older	11.2%
Hispanic	18.9%
Non-Hisanic	12.2%
White	10.0%
African American/black	20.0%
Less than $50,000	15.0%
$50,000 to less than $100,000	13.4%
$100,000 to $150,000	10.1%
More than $150,000?	12.8%
High school graduate	17.9%
Some college	11.0%
Four-year college or higher	11.4%

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