Let’s Be Fair: Do Polling Locations Prime Votes?

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**Keywords**: Priming; Voter behavior; Vote choice

**Introduction**

The 21st century is witnessing a change in how Americans cast their votes with fewer and fewer voters going to a designated location to vote. Throughout the 20th century, voters cast votes by going to an assigned location on voting day. But today, in three states—Colorado, Oregon and Washington—all ballots are cast by mail. Although the main reason for the changes is to increase voter turnout and decrease cost, they may have the additional value of eliminating the priming effects caused by polling location. That is, the location of where people vote may affect how they perceive issues and candidates. For example, voters casting votes in churches may cast more conservative ballots on moral issues than those voting in other locations, because the religious symbols may stimulate memories of religion’s views on these issues.

The idea that what happens around voters as they cast their votes can bias elections is not new. Numerous campaign laws currently exist regarding polling places. For instance, to prevent voter intimidation, most states prohibit campaigning within 100 feet of a polling place, while some locations even bar voters from wearing buttons or t-shirts in support of candidates [1]. The effects of voting location on voters are unlikely to be as covert but may exist nonetheless. And indeed, there is a growing body of literature suggesting that the polling place location (particularly churches and schools) has the ability to prime voters, and affect their votes on same-sex marriage and education funding ballot items.

First it is reasonable to expect that churches cause religious priming in people and that it can affect their views on same-sex marriage. A recent study concludes religious locations prime significantly higher conservative attitudes and negative attitudes towards gay men and lesbian, than non-religious locations [13]. LaBouff et al. [13] also find religious context contributes to more self-reported religiousness, than a non-religious context. Additional studies find positive relationships between religion and prejudiced attitudes in individuals [14-16]. This is consistent with research indicating religion to be one of the internal thoughts, feelings or behavior [6]. Activated by a stimulus, stimuli, without our recognition [7]. For instance, research shows priming can influence what wine we buy [8], how fast we walk [9], or how helpful we are [10]. Most important for this study, research confirms that locations can serve as a contextual prime, and stimulate specific attitudes and behaviors [11,12]. And we expect that voting location (particularly churches and schools) has the ability to prime voters, and affect their votes on same-sex marriage and education funding ballot items.

Recent work examines whether polling places influence voters through priming1. Priming is understood as a non-conscious form of memory based on identification of objects and ideas [5]. We develop this memory as children, and it is related to our associations of objects and ideas [5]. This happens when external stimuli "manipulate" internal thoughts, feelings or behavior [6]. Activated by a stimulus, priming triggers these associations in our long-term memory. These associations are stored as knowledge in our memory. Priming has the ability to influence our decisions through inadvertent contact to stimuli, without our recognition [7]. For instance, research shows priming can influence what wine we buy [8], how fast we walk [9], or how helpful we are [10]. Most important for this study, research confirms that locations can serve as a contextual prime, and stimulate specific attitudes and behaviors [11,12].

1The constitutionality of voting in churches has been raised a few times [25,26]. In each instance, the court rules that there is not enough evidence to show that voting in a church was unconstitutional.

**Literature Review**

First it is reasonable to expect that churches cause religious priming in people and that it can affect their views on same-sex marriage. A recent study concludes religious locations prime significantly higher conservative attitudes and negative attitudes towards gay men and lesbian, than non-religious locations [13]. LaBouff et al. [13] also find religious context contributes to more self-reported religiousness, than a non-religious context. Additional studies find positive relationships between religion and prejudiced attitudes in individuals [14-16]. This is consistent with research indicating religion to be one of the

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most compelling predictors regarding negative attitudes toward homosexuality and same-sex marriage [17]. Religion and conservative faiths are strong predictors of American’s views on same-sex marriage, such that white evangelicals and highly religious Americans are among the strongest opponents of gay rights [17,18]. Research also finds strong evidence that levels of peoples’ religiosity, or the extent of their faith, and attitudes toward gay men and lesbians are negatively associated [19]. Moreover, a meta-analysis of 64 studies on religiosity and attitudes concerning homosexual persons finds that “most forms” of religiosity contribute to negative attitudes toward homosexual persons [19]. Churches could also help frame the issue of same-sex marriage to one of morality. Gay and lesbian issues are framed in two different ways: moral issues and civil rights issues. When the issues are framed as moral issues, Americans tend to offer less support than when the issues are framed as civil rights issues. That is, Americans are more likely to want gays and lesbians to have rights than to see same-sex relationships as acceptable, and many see their views on gay issues in conflict with their religion [20].

Although churches seem like they should prime voting on gay rights issues, the research on the priming effects of churches on vote choice has met with some mixed results. On the one hand, Rutchick’s [3] examination of voting in churches in South Carolina finds voters voting in churches are more conservative in their votes and more likely to oppose same-sex marriage items. Specifically, his analysis of the 6th congressional district election results from 2004 and 2006 reveals that individuals who vote in churches are more likely to support the conservative Republican challenger and less likely to support pro-gay rights amendments [3]. On the other hand, Pryor, Mendez, and Herrick’s [4] examination of a 2004 ballot item banning same-sex marriage in Oklahoma finds voters who vote in churches are not significantly different from others. However, they suggest these results may be attributed to the lack of variation in support for the ban on same-sex marriage: the ban passed with 76% of the vote. Also, Daniels [21] finds that after controlling for race, population density, and religious affiliation, voters casting ballots in churches are similar to other voters in their support for California’s 2008 general election and Proposition 8. Proposition 8 sought to invalidate California’s Supreme Court decision that allows for same-sex marriage. A major caveat to this research, which Daniels points out, is that he was unable to obtain data at the precinct-level. Additionally, he finds that polling locations in the study are not random. Polling places at churches are significantly more likely to occur in rural counties, in counties with more African-Americans and women, and counties with more religious affiliation [21]. Similarly, Glas [22] finds little evidence of voting location affecting 2008 votes on Proposition 8. What is unclear is whether the lack of findings in the studies occurs because of methodological weakness or whether churches do not prime voters on this issue.

In addition to churches affecting vote choice, schools may affect voters’ choices for education related items. When voters walk into schools they are likely to be primed to think about their school days. Rothenberg [23] categorizes school memories into the following categories: academic challenges and successes, failures and humiliation, competition and fairness, and assessment and transitions. Later research suggests that most memories are social as opposed to academic, and the most common specific memories concern misfortunes, sports, misbehavior, honors and boy-girl relations [24]. These memories do not clearly lend themselves to indicate schools needing more or less funding. Instead, voters may remember the ads with teachers and students in them or see problems with the school that need fixing. Research on voting location supports the expectation that schools prime voters. Berger et al. [2] analyze data from Arizona’s 2000 general election and after controlling for several factors, such as demographic characteristics, find that people who vote in schools are significantly more likely to support a statewide proposition to increase the state sales tax to finance education. They find that 56.02% of individuals voting in schools support the education proposition, compared to 53.99% of individuals not voting in schools [2]. Their conclusions are supported by a supplementary experiment. The experimental group of subjects is primed with images of schools and the control received images of other locations. Then subjects were asked to “vote” on a number of initiatives— including the school funding initiative. As expected, the experiment reveals those individuals primed with images of the schools are more likely to support the school funding initiative [2]. Pryor, Mendez, and Herrick’s [4] examination of Oklahoma’s 2004 referendum to create a lottery to fund education finds further evidence of priming. They find voters voting in schools are more supportive of the referendum than are those casting votes in other locations. Also in an unpublished work, Glas [22] finds that in California’s 2008 general election, voters voting in “primary schools” are more supportive of a proposition to fund children’s hospitals, than those voting elsewhere.

These recent studies raise interesting questions but produce mixed results. One reason for these mixed results may be weaknesses in the research. For example, one has the wrong unit of analysis (counties instead of precincts) and one examines races with little variation. To help with these weaknesses we conduct analysis of two topics: same-sex marriage and education. This paper presents two expectations. First, it is expected that voting in a church results in a smaller percentage of voters voting to support same-sex marriage, compared to those voting in other locations, specifically community buildings and miscellaneous locations. Second, it is expected that voters voting in school buildings results in a higher percentage of voters supporting educational measures, compared to those who vote elsewhere.

Data and Methods
To test the hypotheses, data from the 2012 general election are analyzed. We examine three items dealing with same-sex marriage: Question 1 in Maine, Question 6 in Maryland, and Amendment 1 in Minnesota7. These are the only cases in which states have same-sex measures on the ballot. Question 1 in Maine seeks to overturn a 2009 ballot measure that banned same-sex marriage in Maine. This measure passes with 52% of the vote. Question 6 in Maryland is a referendum in response to the Civil Marriage Protection Act. The Civil Marriage Protection Act allows for same-sex couples to acquire a civil marriage 8Wording of ballot items: Question 1 stated, “Do you want to allow the State of Maine to issue marriage licenses to same-sex couples?” (www.maine.gov/sos/cec/elec/2012/CITIZENS%20GUIDE.pdf); Question 6 stated, “Established that Maryland’s civil marriage laws allow gay and prohibited from marrying; protects clergy from having to perform any particular marriage ceremony in violation of their religious beliefs; affirms that each religious faith has exclusive control over its own theological doctrine regarding who may marry within that faith; and provides that religious organizations and certain related entities are not required to provide goods, services, or benefits to an individual related to the celebration or promotion of marriage in violation of their religious beliefs.” (www.elections.state.md.us/elections/2012/ballot_question_language.html#state6); Amendment 1 stated, “Shall the Minnesota Constitution be amended to provide that only a union of one man and one woman shall be valid of recognized as a marriage in Minnesota?” (http://electionresults.sos.state.mn.us/ENR/Results/AmendmentResultsStatewide/1); Question 1 stated, “Do you favor an $11,300,000 bond issue to provide funds for capital to build a diagnostic facility for the University of Maine System; for capital improvements and equipment, including machine tool technology, for the Maine Community College System; and for capital improvements and equipment at the Maine Maritime Academy?” (www.maine.gov/cec/elec/2012/CITIZENS%20GUIDE.pdf).

9We remove all absentee and early voting from the analysis.
license and protected clergy from marriage ceremonies that violate their religious convictions. This measure also passes with 52% of the vote. Amendment 1 in Minnesota seeks to define marriage in the state’s constitution as between one man and one woman. This measure fails with 47% of the vote. These three questions serve as a combined dependent variable for same-sex marriage. Since in Minnesota a “yes” vote means opposed to same-sex marriage and the other states a “yes” vote means support same-sex marriage; the Minnesota vote is recoded. Thus the dependent variable is coded as the percentage of voters voting at the assigned voting location in each precinct that support same-sex marriage. This means our unit of analysis is precinct even though we are really interested in individual behavior. Although this may result in the ecological fallacy, we feel comfortable making the ecological inference since every vote included in the total is cast at the assigned location.

We also examine one item concerning education. Question 2 in Maine seeks to establish an $11.3 million bond to construct a diagnostic facility for the University of Maine System, provide capital improvements and equipment for the Maine Community College System, and to the Maine Maritime Academy. This measure fails to pass, garnering just 46% of the vote. The variable is coded as the percentage in each voting precinct, who voted at the assigned location, that support the education question.

Although there are eleven states in the 2012 general election that had state questions concerning education. The Maine question is the only suitable case to substantiate whether priming is found in schools, because of the severe limitations of the framing of other state questions. These limitations include a question asking to raise taxes to fund education, but also asking to change the tax rate for high-income tax brackets (California); questions regarding establishing charter schools (Georgia), collective bargaining, teacher contracts and pay (Idaho), and in-state tuition for illegal immigrants (Maryland). There are a number of suitable state questions on raising taxes to fund education, but are omitted from the current study because of the lack of variation in the election results (California, New Jersey, New Mexico, Rhode Island). The way in which these questions are framed does not provide clear insight to a voter’s decision to vote for or against a measure. In addition, precinct-level data is unavailable for Oregon and Washington, since all ballots are cast by mail.

For the scope of this study, polling location is the independent variable. To evaluate the priming effect on polling location, four dummy variables are generated: church, school, community building, and miscellaneous locations. Community buildings include fire departments, community centers, community halls, town halls, and public libraries. Miscellaneous variables include locations such as apartments, golf courses, country clubs or automotive repair shops. Each location is coded as a one to represent the precinct votes in that location and as a zero otherwise. Overall, 2.0% of voters in Maine vote in churches, 11.1% in schools, 74.1% in community buildings and 12.8% in miscellaneous locations. In Maryland, 10.9% of voters vote in churches, 67.7% in schools, 14.9% in community buildings and 6.4% in miscellaneous locations. In Minnesota, 16.8% of voters vote in churches, 9.6% in schools, 60.6% in community buildings and 12.9% in miscellaneous locations.

We analyze our data in two different ways. First we use a difference of means test to see whether those voting in churches are less likely to vote for same-sex marriage and those voting in schools more likely to support education. Second, to help eliminate confounding explanations we also use OLS regression to control for ideological leanings of the precinct (measured by vote for President Barack Obama). For the same-sex marriage variable we also use a series of dummy variables to control for state. The Minnesota variable serves as the excluded or reference group and the Maine and Maryland variables are included in the model. In this model we use a set of dummy variables to measure voting location (church, school and miscellaneous) and community buildings serve as the reference group.

Results

The first tests of our hypotheses involved a difference of means test between different voting locations, and support for the same-sex marriage and education measures. A difference of means test tells us whether the mean percentage across all precincts in support for each measure varies across locations. Table 1 presents the results of these tests.

The difference of means tests for same-sex marriage shows that precincts with churches as voting locations have more votes in support of same-sex marriage than other precincts, which is not as we hypothesize. About 53% of the votes cast in churches support same-sex marriage, compared to 52% of the votes cast in schools, 39% of the votes cast in community buildings and 48% in miscellaneous locations. Although this is not the direction we hypothesize, the findings do indicate that voting location is related to voting decisions since there are significant differences in the percentage of votes cast in support of same-sex marriage based on type of location.

The second column in Table 1 offers even more evidence that voting location affects voting decisions. This column indicates that in Maine, precincts with churches and schools as polling locations have a higher percentage of voters supporting the school bond issue than other polling locations. Since only 2% of the polling locations are in churches, too much should not be made of the amount of support found in precincts with churches as polling locations. What is more important for our hypothesis is that precincts with schools as voting locations gave more votes in support of education. About 47% of the votes cast in schools supported the education bond compared to only about 42% of the votes cast in community buildings or miscellaneous locations.

To help eliminate the possibility of spurious relationships, we used OLS regression to control for ideological leanings of the precinct and state. The results of these analyses are presented in Table 2. These findings reinforce the earlier findings. In the same-sex marriage model, there is much variation by voting location. Precincts with community

<table>
<thead>
<tr>
<th>Location</th>
<th>Same Sex Marriage</th>
<th>Education-ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Churches</td>
<td>52.78</td>
<td>53.54</td>
</tr>
<tr>
<td>Schools</td>
<td>51.72</td>
<td>46.66</td>
</tr>
<tr>
<td>Community Building</td>
<td>39.04</td>
<td>42.74</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>47.84</td>
<td>42.26</td>
</tr>
<tr>
<td>N</td>
<td>3492</td>
<td>599</td>
</tr>
</tbody>
</table>

The only relationships not statistically significant are between community building and miscellaneous in the education model.

Table 1: Difference of means test between precinct voting location and state question support.
buildings gave the smallest percentage of votes in favor of same-sex marriages, followed by precincts with miscellaneous locations, schools and then churches as voting locations. Precincts casting ballots in churches gave 10.7% more “yes” votes in support of same-sex marriages than did precincts where voters cast votes in community buildings. Precincts where voters cast votes in schools or miscellaneous locations had 6.9% to 5.4% more “yes” votes. That precincts where voters cast ballots in churches are the most supportive of same-sex marriages, however, does not support our hypotheses. Since the results in Table 2 compare all categories to the reference group, community buildings, it should be noted that precincts with churches as voting locations were also more supportive of same-sex marriage than those voting in schools or miscellaneous locations by about 4-5 points. We also ran the analyses using the miscellaneous group as the reference groups and found precincts where votes are cast in churches and schools were also significantly more supportive of same-sex marriage than those voting in miscellaneous locations (data not shown). The ideology control variable performed as expected. Areas with greater vote share for President Obama were more likely to support same-sex marriage. The control variables also suggested that voters in Maine were more supportive than those in Minnesota or Maryland, and that voters in Minnesota and Maryland are similar. We also analyzed the data per each state separately. Here both Maryland and Minnesota were consistent with the full model. However, in Maine, the coefficient for church is negative, though not significant, but remember only 2% of the voters in Maine cast ballots in churches.

For education, our results are more consistent with our hypotheses. First, in Maine, the coefficient for school is positive, meaning precincts where voters cast votes in schools were more supportive of Question 2 than precincts where voters cast votes in community buildings. Although the coefficient is not statistically significant, it is larger than the standard error, and the p-value nears significance (0.16, two-tailed test). Additionally, the coefficients only compare precincts where votes are cast in community buildings with other precincts. However, the results also imply that precincts with school voting locations were more supportive of education than precincts where voters cast votes in miscellaneous locations. The coefficient for miscellaneous variable is negative indicating people voting in these locations are even less likely to support education than those voting in community buildings.

**Table 2:** Effects of polling location on support for state ballot issues.

<table>
<thead>
<tr>
<th>Percent Obama vote</th>
<th>Same Sex Marriage</th>
<th>Education-ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Church</td>
<td>10.71***</td>
<td>4.97</td>
</tr>
<tr>
<td>School</td>
<td>6.85***</td>
<td>2.00</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5.42***</td>
<td>-0.04</td>
</tr>
<tr>
<td>ME</td>
<td>1.60***</td>
<td>-0.04</td>
</tr>
<tr>
<td>MD</td>
<td>0.14</td>
<td>16.62</td>
</tr>
<tr>
<td>Constant</td>
<td>17.21</td>
<td>16.62</td>
</tr>
<tr>
<td>N</td>
<td>5889</td>
<td>599</td>
</tr>
<tr>
<td>R², F, prob&gt;F</td>
<td>0.44, 771.67, 0.00</td>
<td>0.39, 96.34, 0.00</td>
</tr>
</tbody>
</table>

Note: Regression analyses used.

Same Sex Marriage: percentage of “yes” votes for same sex marriage (question 1

Education-ME: percentage of “yes” votes for Maine Question 2.

***p<0.00, **p<0.01, *p<0.05, +p<0.10

**Conclusion**

The findings do not support our hypothesis that voters voting in churches are less likely to support same-sex marriage than voters voting in other locations. Instead, those who vote in churches were significantly more likely to support same-sex marriage than those voting in other locations. It may be that those voting in churches were primed to think about religions’ views toward same-sex marriages but were put off by those religious images. That is, as society has become more liberal on the issue and many conservative religions have dug their heels in to fight against marriages, voters react to their negative views about religions role in the debate. Of course, this is just speculation and further analysis, preferably at the individual level, is needed. Additionally, those voting in schools and miscellaneous locations were more supportive of same-sex marriages than are those voting in community buildings. The take away from this is that there was significant variation in election results based on the type of voting location.

Second, the results offered more support for our hypothesis that voters voting in schools were more supportive of education than those voting at other locations. The difference of means tests find voters voting in schools were more supportive of the bond issue and although not statistically significant, those voting in schools were more supportive of the bond issue, even after controlling for ideology of precinct voters.

These findings suggest that states allowing mail-in voting may have fairer elections. By not forcing voters to go to a location that primes them to vote in a particular way, mail-in voting may result in electoral outcomes that more accurately reflect voter preferences. In some situations the difference may be large. Precincts with church voting locations gave 10% more votes for same-sex marriage than did precincts where voters voted in community buildings.

Although we found considerable evidence of priming effect, we also found that it is difficult to predict the exact effects. We hypothesized that precincts with church voting locations are less supportive of same-sex marriages, but they were more supportive while precincts where voters cast votes in community buildings were the least supportive. This suggests that the priming effects may be hard a priori to predict.

**References**


20. Pew Research Center (2013) In Gay Marriage Debate, Both Supports and Opponents see Legal Recognition as “Inevitable”.


26. Rabinowitz v, Anderson Case No. 06-81117 Civ.