An Ecological Examination of North Carolina's Amendment One Vote to Ban Same Sex Marriage

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Introduction

On May 8th, 2012, North Carolina voters overwhelmingly (61%) passed a state amendment that constitutionalized the definition of marriage as exclusively between one man and one woman. With the passage of the amendment, no other domestic family arrangement is entitled to legal recognition and benefits of spouses and their dependents. As with the majority of states passing similar constitutional amendments, the legal action did not change the non-existent marital rights of same-sex couples who were already prohibited from marriage, but was a protective measure against future efforts to legalizing gay marriage. With the passage of Amendment One ballot measure, the only way same sex marriage will ever be legally recognized in the state of North Carolina is passage of another referendum to strike down the recently passed amendment or passing federal legislation that supersedes the state's ability to regulate marriage (Humes 2011).

Whereas only eight counties did not have a majority of voters supporting the amendment, the range of support for the amendment varied from 21% of votes in
Orange County to 88% of the votes in Graham County. Although there were no exit polls administered for the 2008 North Carolina May primary election that included Amendment One, the media speculated that the vote in favor of the amendment was driven by religious, rural, older, less educated, and non-White populations.

Media Analysis of N.C. Amendment One Vote

Media sources unquestionably pigeon-holed Amendment One as the “Gay Marriage Ban” instead of incorporating the effects the amendment would have for both heterosexual and same-sex domestic partnerships. For instance, in January, WRAL news released their first article regarding the amendment titled “Campaign to Reject Gay Marriage Vote Begins” (Robertson 2012). After the election, CBS released an article titled, “North Carolina passes amendment banning same-sex marriage.” Few media outlets addressed the full story of how the amendment would impact both heterosexual and same-sex domestic partnerships. In 2006 Arizona defeated a similar referendum, because the debate was framed to include the impact of the resolution on unmarried, heterosexual, senior citizens and the impact of the amendment on their property rights and living arrangements (Egan and Sherrill 2006).

Overall, there was very little media analysis of the actual North Carolina vote. Without exit polls, there is no way of knowing the demographics of individuals who supported the amendment. Nevertheless, we found a few interesting suggestions about how the vote transpired among North Carolina voters. The Blaze website posted an article that linked to a widely circulated map that visualized the correlations between percent of 25 years or older county residents with bachelor's or higher degrees and the vote for the amendment, suggesting counties with the most educated population were more like to have voted against the measure (Holt, 2012). The same article also commented on an unsubstantiated statistic being circulated on the blogosphere that African Americans were twice as likely to vote for the amendment. A Politico article published after the May election reported "Public Policy Polling projected 60-65% of African-Americans would vote in favor of the ban" (Williams 2012).

Regarding the race factor in understanding the amendment vote, Lyttle (2012) from the Charlotte Observer wrote, "Many African American churches took strong positions in favor of Amendment One, putting them at odds with the rest of the traditional Democratic Party base." Gordon (2012) reported in the Charlotte Observer that predominantly African-American neighborhoods voted 2 to 1 in support of Amendment One. In his article he wrote of the racial divide, "While the NAACP campaigned hard against the amendment, many Black voters continued to see same-sex marriage not as a civil rights issue, but as a lifestyle choice with which they don't agree." We questioned this assertion and did an analysis of Mecklenburg election results (not shown in this paper) and found a weak and non-significant correlation (r=.135) between percent of registered Black voters and percent of votes for the amendment among the 195
Mecklenburg precincts. In fact, of the 8 precincts with 90 percent and above Black registered voters, all 8 precincts reported more votes against the amendment.

Age and geography were also considered by the news media as important determining factors in the North Carolina vote. Waggoner (2012) with the Associated Press wrote an article published widely in North Carolina newspapers and the Huffington Post, stating "Older voters, who tend to be more reliable voters, were expected to back the amendment." She also noted that N.C. House Speaker Tillis predicted the amendment would be overturned in the future when today's younger populace matures and comes into political power. CNN also reported that the amendment was supported widely in rural areas (Sutton, Ariosto, Steinhauser and Marrapodi 2012). The Charlotte Observer echoed the age and geographical divides "...Amendment One also revealed generational and urban-rural divisions in the state" and "Returns on Tuesday night showed the issue winning in rural counties, as expected. It was losing in places like Buncombe, Guilford and Wake counties, in the more urban areas; and in Orange and Watauga counties, populated by large numbers of younger voters" (Lyttle 2012).

History of Same Sex Marriage Bans in the United States

In 1998, Alaska became the first state to pass an amendment banning same-sex marriage. Nevada and Nebraska followed suit in 2000. From 2004-2008, another 26 states adjusted their constitutions to define marriage. On May 8, 2012, North Carolina became the 30th state banning legal recognition of same-sex unions. Of the states seeking input from citizens on the legislation affecting a minority population, the range of votes for this discriminatory action has varied from 52% (California in 2008 and South Dakota in 2006) to 86% (Mississippi 2004). Southern states historically pass same-sex marriage bans by a much larger margin than their counterparts (Hume 2011; Burnett and Salka 2009).

As of May 2012, only one state successfully voted against banning same-sex marriage. In 2006 Arizona voters opposed Proposition 107 banning same-sex marriage with 52% of the votes. However, a mere 2 years later, Arizona voters passed Proposition 102, repealing Proposition 107, and banning same-sex marriage with 56% of the vote. The initial proposition would have eliminated the domestic partnership status of heterosexual and same-sex partnerships alike, however the 2008 proposition focused only on same-sex unions (Vance 2008). The November 2012 general election finally saw a reversal of the voting trend to ban same sex marriage with Maine, Maryland and Washington residents voting to allow same sex marriage in their states.
Methods

Past studies have found community characteristics explain variation in support for same-sex marriage bans among counties (e.g., Burnett and Salka 2009; Fleischman and Moyer, 2009). North Carolina has 100 counties divided among coastal, piedmont and mountainous regions. Counties demark geographic boundaries that connect people to a layer of community bound by different budgetary allotments, regulations, taxes and heritage. Fleischmann and Moyer (2009) found county characteristics had a significant and profound effect in their analysis of same-sex marriage bans across 22 states as did Burnett and Salka's (2009) examination of the 7 states in 2006 that passed legislation prohibiting same-sex marriage.

Data for this study was compiled from the most recent years (2010 and 2011) of the U.S. Census Bureau including the American Community Survey (ACS), North Carolina May 8, 2012 election results, and the 2010 U.S. Congregational Membership Data. Although our analysis does not explain individual patterns of voting on the referendum, as much of the media speculated on, the county-level data provides an environmental context that surrounds voters (e.g., Smith et al., 2006). We look at demographic factors that differ among counties in regards to differences in age structure, urbanisms, race, religion and education to explain the variation in support for Amendment One among the 100 North Carolina counties.

Race

Recent national polls are mixed regarding racial/ethnic differences of support for same-sex marriage at the individual level. An ABC News/Washington Post poll shows Blacks slightly less (7%) likely to support legalization of gay marriage than their White counterparts, but among Non-Whites, they are twice as likely to support than oppose legalization of same-sex marriage (Cohen 2012; Hartfield, 2012; WP Politics 2012). The most recent Pew Foundation (2012) poll on gay marriage found similar results with Whites 9% (Whites 48% and Blacks 39%) more likely to support gay marriage than their Black counterparts.

At the organizational level, controlling for racial composition of counties in marriage amendment studies has yielded inconsistent results. Fleischman and Moyer (2009) found a greater number of Black residents in a county increased support for banning same-sex marriage. Smith et al. (2006) found greater density of African American residents in a county decreased support for anti-gay marriage bans. Burnett and Salka (2009) found inconsistent results in using county rates of Black populations in their analysis of seven states that passed anti-gay marriage legislation. Among the seven counties, the race variable was both significant and insignificantly related as well as inversely and directly correlated. Burnett and Salka (2009) explain the mixed result are
due to a state’s minority composition in regards to other ethnic groups. For our study, we included the census measure of percent Black Residents for each county.

Religion

Protestants are more supportive of banning same-sex marriage, especially among individuals with strong ties to a religious organization (Olson et al., 2006). Stepan-Norris and Southworth (2007) find Protestants vote more conservatively on political issues. In their analysis of neighborhood churches influences in the political process they note "churches provided networks, institutional resources, and physical space where similarly situated congregants could meet, establish contacts, and discuss political issues" (Stepan-Norris and Southworth 2007:368). Finlay et al. (2003) also found religious affiliation and attendance matters in opinions on civil rights for homosexuals. The more a person attends religious services, the more likely he or she is to acquire an anti-gay bias (Barth et al., 2009; Egan and Sherrill, 2006; Fisher et. al, 1994; Finlay et al. 2003; Olson et al., 2006).

The Pew Forum on Religion & Public Life poll numbers in July 2012, regarding attitudes toward Gay marriage (The Pew Forum, 2012), shows a shift toward increasing support for same sex marriage among all religious backgrounds. Since 2000, those who are religiously unaffiliated, Catholics and White Mainline Protestants show the most support (over 50%) while Black Protestants and White Evangelical Protestant show the least support.

We test to see if these individual religious factors are also true at a larger aggregate level. To critically analyze religious influence, we used data from the U.S. Congregational Membership to consider the number of congregations and rates of adherence per 1000 residents for Evangelical, Mainline and Black Protestants. Our initial correlation analysis provided interesting results. The number of congregations in a county had no significant impact on Amendment One votes. The Rates of Evangelical Protestant adherence had the greatest impact on percent of votes for the amendment among NC counties (r=.440). Findings were the greater the presence of Evangelical Protestants in a county, the greater the overall support for Amendment One. Interestingly, the greater number of Mainline Protestant in a county, the less support for Amendment One (r=-.270). Rates of adherence for Black Protestants did not significantly correlate to votes for Amendment One among the counties (r=.054). Based on our initial analysis, we used the county rate (per 1000) of Evangelical Protestants as a possible explanation of support for the amendment.
Education

Education is a salient factor for most studies analyzing attitudes toward gays (e.g., Barth et al 2009; Egan and Sherrill, 2006; Smith et al., 2006). We conducted a preliminary correlational analysis of multiple educational measures including enrollment of college students and rates of advanced degrees per county. We created a unique variable measuring the presence of “mega-colleges” in a county. We defined a mega-college as a Public or Private University with more than 6,000 students. Six out of eight of the counties that voted against Amendment One are host to one of North Carolina’s largest colleges. In 2004, Michigan’s proposal banning same-sex marriage passed by 59% of the votes. Of Michigan’s 83 counties, only 2 voted against the amendment, Washtenaw County, where the University of Michigan is located, and Ingham County, home of the Michigan State. In 2008, Arizona’s same-sex ban passed with only one county opposing the Amendment; Pima County home to the University of Arizona. In 2004, Oregon voters passed a measure banning same-sex marriage in which Benton County was one of two opposing counties, not surprisingly Oregon State University is located in Benton County (CNN 2004).

All measures of educational influences were highly correlated with votes for Amendment One. Counties with more institutions of higher education, mega colleges, more residents currently attending college and higher overall populations of college educated residents, were significantly less likely to support the amendment. For our final analysis we used a common and robust measure of percent of county residents, 25 years of age and older, with bachelor's or greater degrees, to analyze votes on Amendment One. Like Fleischmann and Moyer's (2009) county level analysis of public referendums on same-sex bans, we expected to find similar county-level results for North Carolina that the percent of county residents with college degrees will inversely impact support for Amendment One.
Age and Rural Demographics

As previously discussed, the post Amendment One election media analysis highlighted a potential rural/urban split in support of the referendum. Burnett and Salka (2009) found controlling for the rural/urbanism of a county was a significant factor for some states in understanding support for amendments banning same-sex marriage. In our analysis we used a measure of percent of rural county residents.

In general, younger voters (under 30) are less supportive of same sex marriage ban amendments (Egan and Sherrill, 2006). Burnett and Salka (2009) found age population
characteristics were not a significant factor in explaining support for anti-gay marriage amendments for all seven states in their analysis, but for two states (Colorado and South Dakota), the higher the proportion of 18 to 34 year olds, the less support for banning gay marriage. We used county percentage of 18-24 year old residents as our age measure.

Analysis and Hypotheses

We provide descriptive univariate information for the measures used in our study. Using percent of votes in favor of Amendment One for each of the 100 Counties as our dependent variable, we provide OLS regression results to show the cumulative strength of these measures in explaining county variance in votes for Amendment One. To take in account the differences in population sizes among the counties, percentages and rates (per 1000) are used for the measures.

Based on our previous discussion of demographical influences, we expected to find the following relationships between county characteristics and support for Amendment One.

H1: Counties with greater densities of higher educated population will show less support for Amendment One.

H2: Percent of Black residents in a county will impact the votes on Amendment One.

H3: Counties with larger rates of Evangelical Protestants will have greater support for Amendment One.

H4: Counties with larger proportion of voters under 25 will show less support for Amendment One.

H5: Counties with greater rural populations will show more support for Amendment One.
# Findings

## Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Measure</th>
<th>N</th>
<th>Range</th>
<th>Minimum with County Identifier</th>
<th>Maximum with County Identifier</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of County Votes for Amendment One</td>
<td>100</td>
<td>67.802</td>
<td>Orange</td>
<td>88.859</td>
<td>69.877</td>
<td>11.39</td>
</tr>
<tr>
<td>Percent of County Residents Between ages 18 to 24</td>
<td>100</td>
<td>25.86</td>
<td>Cherokee</td>
<td>31.70</td>
<td>8.92</td>
<td>3.55</td>
</tr>
<tr>
<td>Percent Black Residents</td>
<td>100</td>
<td>61.8</td>
<td>Graham</td>
<td>62.20</td>
<td>20.93</td>
<td>16.50</td>
</tr>
<tr>
<td>Evangelical Protestant Rates of adherence per 1,000 Population (2010)</td>
<td>100</td>
<td>710.06</td>
<td>Hyde</td>
<td>767.55</td>
<td>298.715</td>
<td>115.02</td>
</tr>
<tr>
<td>Percent Rural Population</td>
<td>100</td>
<td>98.93</td>
<td>Mecklenburg</td>
<td>100(a)</td>
<td>61.20</td>
<td>28.17</td>
</tr>
<tr>
<td>Percent of Population with Bachelor's Degree or Higher</td>
<td>100</td>
<td>46.2</td>
<td>Anson</td>
<td>54.6</td>
<td>19.08</td>
<td>8.76</td>
</tr>
</tbody>
</table>

(a) 14 Counties with 100% rural population: Alleghany, Cherokee, Clay, Gates, Graham, Greene, Hyde, Jones, Pamlico, Perquimans, Swain, Tyrrell, Warren, Yancey

Table One shows the range of support for amendment one varied from a low of 21% of votes in Orange County to a high of 88% of county votes in Graham County. Watauga County’s population is skewed toward a younger adult population with the presence of mid-sized university (Appalachian State University) in a relatively rural county. Bertie County has the largest percent of Black residents, while Clay County has the most Evangelical Protestant adherents. The most urban North Carolina county (as measured by the least percent rural population) is Mecklenburg County. As noted earlier Orange county reported the least amount of votes for Amendment One, but also has the distinction of having the greatest number of county residents with a bachelor’s or graduate degree. Anson County has the least amount of county residents with college degrees.
OLS Results

Table 2 displays the results of two OLS regression models in explaining the variation in percentage of votes for Amendment One among North Carolina counties. Without the education measure (Model 1) around 37% of the variance in votes for the amendment among NC counties was explained by the measures of age, percent rural population and Evangelical Protestant adherences. The significant measures responded as expected, the higher rates of Evangelicals in counties and the larger percentage of rural populations, the greater the overall support for Amendment One. Counties with larger younger adult populations were less likely to support the amendment. The measure of race did not significantly contribute to the regression model.

The second model adds the educational measure, percent of county residents with a Bachelor’s or greater degree, into the regression equation. Education is an important factor in distinguishing support for Amendment One among North Carolina counties as seen by the increase of 48% in the overall explained variance of votes for Amendment One among the counties. In Model 2, all independent variables, except percent of 18-24 year old residents, significantly contributed to the explanation of variance in votes for Amendment One among counties. The measure of Evangelical adherences performed in the same direction as Model 1 (greater Evangelical rates generates more overall support for Amendment One). Controlling for education showed that a greater percent of Black residents and rural residents in a county decreased support for the amendment. The greater the overall educational attainment in counties also diminished support for the amendment. With such a high r-square value in Model 2, we ran multicollinearity diagnostics and found all tolerance and VIF values were well within acceptable levels.

Using Model 2 standardized regression coefficients as an indicator of which explanatory variables had the greatest and weakest impacts on percentage of votes for Amendment One among NC counties, the measure for percent of college degrees had the greatest overall impact on the amendment vote while percentage of age had the least impact (not significant). The next salient factor was the measure of racial composition in a county, followed by the measure of rural populations. Factors that were identified in the post-election news analysis as important (i.e., religion, rural populations, young adults and Black populations), were found significantly weaker factors compared to education. Percent Black and age were both significant and insignificant across the models. Percent rural population was inversely and directly correlated to the amendment vote across models.
### Table 2: OLS Regression. Dependent Variable: Percentage of Votes for Amendment One.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
<td>Unstandardized Coefficients</td>
<td>Standardized Coefficients</td>
</tr>
<tr>
<td>Percent Ages 18-24 Year Olds</td>
<td>-637* (272)</td>
<td>-.200</td>
<td>.003 (.136)</td>
<td>.001</td>
</tr>
<tr>
<td>Percent Blacks</td>
<td>.002 (.058)</td>
<td>.004</td>
<td>-.249*** (.032)</td>
<td>-.363</td>
</tr>
<tr>
<td>Rate of Evangelical Adherences per 1,000</td>
<td>.035*** (.009)</td>
<td>.351</td>
<td>.012** (.004)</td>
<td>.117</td>
</tr>
<tr>
<td>Population percent Rural</td>
<td>.143*** (.034)</td>
<td>.354</td>
<td>-.065*** (.020)</td>
<td>-.161</td>
</tr>
<tr>
<td>Percent Population with BA Degrees or Above</td>
<td></td>
<td></td>
<td>-1.294*** (.073)</td>
<td>-.998</td>
</tr>
<tr>
<td>Constant</td>
<td>56.452</td>
<td></td>
<td>100.287</td>
<td></td>
</tr>
<tr>
<td>F Statistic</td>
<td>15.474***</td>
<td></td>
<td>115.409***</td>
<td></td>
</tr>
<tr>
<td>Adjusted Rsquare</td>
<td>.369</td>
<td></td>
<td>.852</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05; **p<.01; ***p<.001

### Conclusions

Despite increase in public support for gay rights (Brewer and Wilcox, 2005), when asked to vote on specific referendums to enshrine marriage as permissible only between one man and one woman, state referendums were always publically supported as of May 2012 (with the only exception being Arizona’s temporary failure to pass their anti-gay marriage amendment in 2006, but two years later passing such a ban in
2008). This was also the case for North Carolina on May 8, 2012 when the majority of voters (61%) passed Amendment One prohibiting any legal recognition to alternative family arrangements other than one woman and one man.

We noticed a large variance (67% range) in support of the amendment among North Carolina counties. Out of 100 North Carolina counties, only eight counties reported a majority vote against the amendment. Based on previous county level studies (i.e., Burnett and Salka 2009; Fleischman and Moyer, 2009), we speculated that counties with less college educated residents, more older residents, more Evangelicals and greater rural areas, were hypothesized to have supported the Amendment. The percentage of Black residents in a county had mixed results in past studies and we did not predict a direction for this study. Our study tested these hypotheses and reports the following findings.

H1 SUPPORTED: Counties with greater densities of higher educated populations showed less support for the Amendment One.

H2 INCONCLUSIVE: Greater percentages of Black residents in a county did not significantly explain variance in the support for Amendment One among counties until controlling for education which showed a greater percentage of Black residents decreased support for Amendment.

H3 SUPPORTED: Counties with larger rates of Evangelical Protestants showed greater support for Amendment One.

H4 INCONCLUSIVE: Counties with larger proportion of voters under 25 showed less support for Amendment One until controlling for education attainment when the variable seemed irrelevant.

H5 MIXED: Greater rural populations led to more support for Amendment One until controlling for education and then exhibited a weaker inverse explanation of variance in county support for Amendment One.

Our analysis shows very predictable voting patterns emerged at the county level regarding the North Carolina amendment vote on May 8, 2012. Our study highlights the importance of community context in understanding the passage of Amendment One in North Carolina. What stands out from our analysis is the presence of a more highly educated population matters the most in determining votes against the amendment. We found mixed support for our hypotheses that greater concentrations of Black and older populations were more supportive of banning same sex marriage. Urban populations supported the amendment less until controlling for education when a weaker measure showed urban areas with more support for the amendment. The greater presence of an Evangelical population in a county consistently increases support for the amendment.
As with any study, there are limitations to our findings. By only analyzing one state at one time period, the extent that we can generalize to other states passing similar amendments is unclear and we were unable to determine causality. Other studies (e.g., Levernier and Barilla, 2006) have shown that regional differences are important in understanding a state's voting behavior. North Carolina's location in the south and its late adoption of such amendment (compared to three-fifths of other states) as well as the time, in 2012, in which attitudes are changing swiftly, all make North Carolina unique from other states. In the November 2012 general elections, three states, Maine, Maryland and Washington, actually voted to legalize same sex marriage. We did not attempt to explain individual voting preferences, but have demonstrated important environmental factors that influenced county voters.

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