

THE 2008 PRESIDENTIAL ELECTION: DERIVING A SPATIAL  
PORTRAIT OF “OPENNESS” IN AMERICA

THESIS

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## **CHAPTER I**

### **INTRODUCTION**

Once every four years, our nation is given the chance to elect a President. Most of these elections involve a muddled set of issues, a short-sighted outlook, partisan rhetoric, and the continuation of the policies of the past. The 2008 Presidential election was different. A passionate electorate from both sides rallied their troops for a fight to the end, while ideologically distinct candidates helped polarize results thus providing a unique opportunity to examine differences in the electorate.

The candidates in this presidential election presented a unique opportunity to examine voting characteristics. Ending his second term in office, President Bush was not able to run again, nor had Vice President Cheney decided to enter the race, the first time since 1952 neither the incumbent President or Vice President were running for election. With this backdrop Americans set out to elect a new President, to fill a void from a batch of candidates that was distilled down to their respective party's nominees: Senators John McCain and Barack Obama.

The candidates' views could hardly have been more different, nor their vision of the future more varied. In the end, one party's champion was elected and the other party's was not. This study is not an attempt to examine why the outcome occurred; instead we want to view whether the 2008 presidential electoral map provides an opportunity to produce a more revealing spatial portrait of the country. By examining the



election results and demographics at the county level, we may determine if significant geographic, social, cultural, economic, religious, and other variables were correlated with the vote counts for a particular candidate. Through this examination we hope to develop an “openness to change continuum,” a scale denoting the acceptance of the electorate to diverse views and ideas -as presented through analysis of the varied characteristics of the electorate measured at the county level.

The study area consisted of all the counties in the continental United States, the largest administrative division of most states in United States. This scale of analysis provides meaningful aggregated data for over 3,100 counties “at the finest spatial scale at which both electoral returns and a variety of demographic and contextual variables are readily available” (Wing and Walker, 2008). Geographers have long realized that county-level electoral data offer important analytical opportunities, for unlike most available individual-level survey data, county-level election returns provide temporally and spatially exhaustive coverage at a relatively fine-grained geographical scale” (Murauskas, Archer, and Shelly, 1988). The aggregated data on over 3,100 counties in the lower 48 states provide the opportunity to examine a vast geographic area with established variables in conjunction with fresh electoral data in order to gain a broader perspective of the social and cultural mosaic of our country.

Numerous variables and their hypothesized relationship to the dependent variable - the percentage vote for now President Obama – were analyzed in the context of both the election and as indicators of openness to change (Table 1). Five conceptual categories captured different dimensions tied to the openness to change of the population. These conceptual categories include several representative variables related to the openness to

change of a county. These variables were analyzed with stepwise regression in order to gauge the relative importance of each. The first conceptual category characteristic of the openness to change continuum was the *Demographic Characteristics*. Characteristics analyzed included population age groups, median age, sex, number of inhabitants, population density and population growth between 2000 and 2007. The second category was the *Cultural Makeup* of the county. Variables included percentages black, Hispanic, white non-Hispanic, and rates of religious adherence for Catholics, Evangelical Christians, Judaism, and Mainline Christians.

The third conceptual category attempting to capture the openness to change counties was *Social Characteristics*, with variables including Average Household Size, Percent Married, Single Parents, Families, Average Family Size, Number of Housing units, Percent Attending College, and Percent not graduating from High School. The fourth conceptual category of the openness to change continuum was *Economic Considerations*, including the variables Percent Unemployed in 2008, Poverty Rates, Median Household Income, Percent Vacant Housing Units, and Percent Renter Occupied Housing Units. The fifth category of the openness to change continuum was *Geographic Characteristics*, with variables including 2003 Rural / Urban Continuum Code, 2003 Urban Influence Code, and Areal Size of County. Several of the variables were obtained from 2000 Census data. Although there was an eight-year time lag between the Census and the election, we believe that this was not a serious shortcoming in that the relative spatial differences of the variables did not change noticeably. Also there was indeed some reason to believe that there might be a time lag in the effect of some of these variables.

## **The Openness to Change Continuum**

### **Philosophical**

- Resistance to Change-----→ Openness to Change
- Persistent Attachment to Traditional Views -----→ Acceptance of New Ideas and Values

### **Demographic Characteristics**

- Young vibrant populace -----→ Older Established Citizens

### **Cultural Makeup**

- Homogenous Populace -----→ Ethnically Diverse Populace
- Larger Families -----→ Single Adults and Fewer Children

### **Social Characteristics**

- Traditional Marriage -----→ Cohabitation
- Functional Education -----→ Higher University Degrees

### **Economic Considerations**

- Traditional Blue Collar Economy -----→ Export-based Globally Connected Economy

### **Geographic Characteristics**

- Geographic Isolation -----→ Accessibility

**Figure 1. The Openness to Change Continuum: A Conceptual Model to help explain different places across America**

The study now proceeds to analyze our data in two ways. In the first section we probe the electoral geography of the 2008 Presidential Race. In the second section we try to understand the spatial mosaic of the U. S. portrayed with these data. Specifically we look at what might be described as a geographic snapshot of socio-cultural America.

Indeed, the electoral results can perhaps be viewed as a surrogate for the socio-cultural openness to change of America, the campaign embodiment of the concept carried through the Obama campaign slogan “ Yes, we can!”, that is, a continuum from resistance to change to the acceptance of change, persistent attachment to traditional views of American life and family to acceptance of new ideas, geographic isolation to accessibility, homogenous populace to ethnically and racially diverse, functional education to higher university education attainment, and traditional marriage living arrangements to cohabitation. Finally in the fourth chapter of this thesis we summarize the conclusions of the study and discuss the implications of the analysis on future research possibilities.

**Table 1.**

***Independent Variables*** – Variables tested against the dependent variable, the percentage vote for Obama

<b><i>Conceptual Category And Variable Name</i></b>	<b><i>Operational Definition</i></b>	<b><i>Hypothesized Association</i></b>
<i>Demographic</i>		
MedianAge	Median age of the population	Neg.
50 and up	Percent population age 50 and older	Neg.
18-29YearsOld	Percent population between 18 and 29 yrs. old, 2000	Pos.
Female	Percent population female, 2000	Pos.
Pop_2007	Estimated population in 2007	Pos.
PopChng	Population change from 2000 to 2007	Pos..
Pop07_SQMI	Population Per Square Mile, 2007	Pos.
<i>Cultural</i>		
Hispanic	Percent population identified as Asian alone, 2000	Neg.
Black	Percent population identified as Black, 2000	Pos..
White	Percent population identified as Non-Hispanic White, 2000	Neg.
Catholics	Rate of Catholic adherence per 1,000 population	Pos.
Evangelicals	Rate of Evangelical Christian adherence per 1,000 population	Neg.
Jewish	Rate of Jewish adherence per 1,000 population	Pos.
Mainline	Rate of mainline Christian adherence per 1,000 population	Pos.

**Table 1 - Continued.**

***Independent Variables*** – Variables tested against the dependent variable, the percentage vote for Obama

*Social*

Ave_HH_Sz	Average Household Size in 2000	Pos.
Married	Percentage of married households, 2000	Neg.
Single_Parents	Percentage of single parent households, 2000	Pos.
Families	Percentage of family households, 2000	Neg.
Ave_Fam_Sz	Average Family size in 2000	Pos.
HSE_Units	Total number of housing units, 2000	Pos.
UnderHighSchool	Percentage of population with less than high school education, 2000	Neg.
AttendedCollege	Percentage of population having attended college, 2000	Pos.

*Economic*

Vacant	Percentage of housing units vacant, 2000	Pos.
Renter_Occ	Percentage of housing units occupied by renters, 2000	Neg.
Income	Median Household Income, 2000	Pos.
Poverty rate	Percentage of population in poverty, 2000	Pos.
Unemployment	Percentage of population unemployed in 2008	Pos.

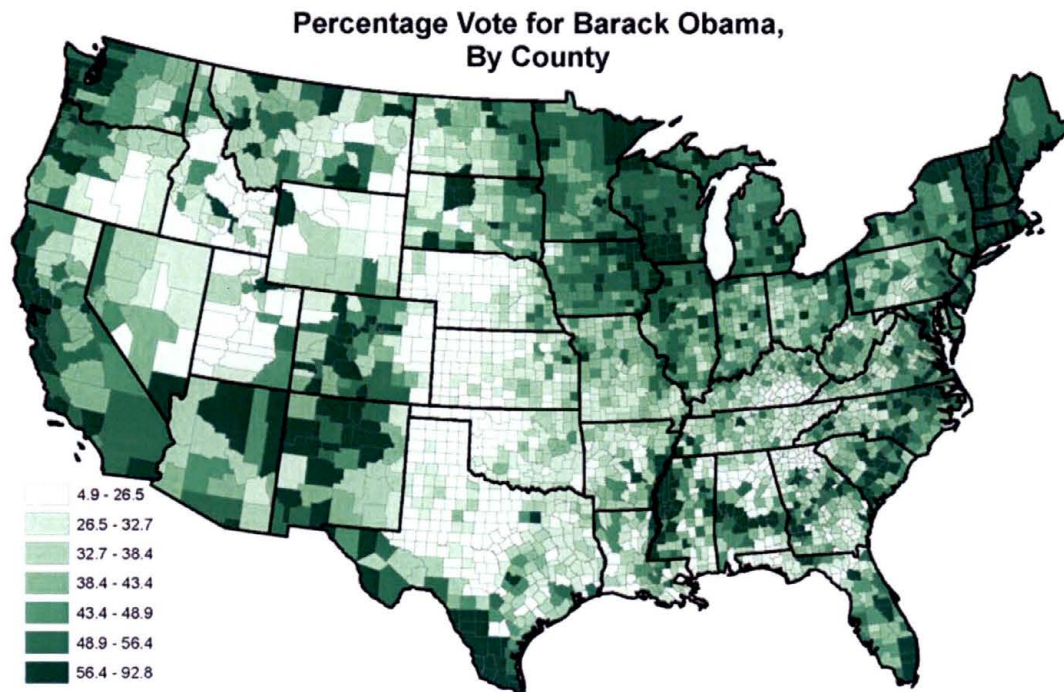
*Geographic*

Areal Size of County	Area of county in square miles	Neg.
Rural Urban Code	2003 Rural-Urban Continuum Code	Pos.
Urban Influence	2003 Urban Influence Code	Pos.

## **CHAPTER II**

### **UNDERSTANDING THE 2008 PRESIDENTIAL ELECTION**

The map of the 2008 U.S. presidential election results shows distinct variation in voting patterns across the country (Figure 2). Generally pro-Obama counties were found in urban centers, the cotton belt of the rural South, portions of the states bordering Mexico, the Atlantic and Pacific coastal areas, areas bordering the Mississippi River south of Memphis, Tennessee, the rust belt manufacturing areas of North Central and the highly urbanized Northeastern U.S. Areas that were not pro-Obama include the Great Plains farm belt, the Mormon enclave of Utah, Idaho, and nearby Intermontane West counties, and portions of the southern U.S. roughly bisected by Interstates 20 and 85.



**Figure 2. 2008 Presidential Election - Percent Vote for Barack Obama, by County**

### **Methods and Variables Entering the Equation**

Data for this study were obtained from the United States Census Bureau / ESRI (demographic variables), the United States Department of Agriculture-Economic Research Service (rural/urban continuum), and the New York Times (election results). Maps were produced using ArcGIS 9.3.1, symbolized using a single hue green, seven quantile sequential color scheme derived from [colorbrewer2.org](http://colorbrewer2.org), and projected using an Albers Equal Area projection.

The stepwise regression analysis of the 2008 presidential election results, the dependent variable, yielded seven explanatory variables with statistical significance at the 0.01 level of confidence. Those seven variables in order of introduction into the stepwise regression are: Percentage of Married Households, Evangelicals, Unemployment Rate,

Median Household Income, Catholics, Areal Size of County, and Percentage White Non-Hispanic. What follows is a breakdown of the analysis of each of these associated variables.

**Table 2.**  
*Summary of Correlation and Stepwise Regression Statistics in the  
Analysis of the "Percentage Vote for Obama"*

Independent Variables	Simple <i>r</i>	Multiple <i>R</i>	<i>R</i> Squared	Standardized Beta Coefficient	<i>T</i>
Percent Married Households	-.597	.598	.357	-.515	-36.313
Evangelical Christians	-.436	.728	.529	-.319	-24.192
Unemployment Rate	.298	.750	.562	.239	20.352
Median Household Income	.138	.781	.610	.223	17.727
Catholics	.292	.792	.627	.154	12.510
Areal Size of County	-.044	.798	.636	-.112	-10.081
Percent White Non-Hispanic	-.389	.802	.644	-.116	-8.324

Notes: The variables are listed in order of entry into the stepwise equation. The level of confidence for all variables is 0.01.

### Household Type

The key variable associated with the results of the election was if a household consisted of a married couple. Originally there were six types of households analyzed: Married without Children, Married with Children, Single Females, Single Males, Single Females with Children, and finally Single Males with Children. These six categories were then grouped based on similar characteristics, with the highest explanatory power provided by grouping married couples regardless of whether they had children or not. The Married variable was created by combining the Married without Children and the Married with Children variables.

The overall power of the Percent Married Households variable was surprising, with a simple negative correlation of nearly -0.60 with the vote for Obama. Some



political interpretation, however, perhaps sheds some light here. The importance of married voters in elections has been documented as the “marriage gap” as early as the 1972 presidential election, with married voters voting 15 percent more Republican than non-married couples (Weisberg, 1987). From 1972 through the 1984 election married voters were at a minimum 8 percent more likely to be Republican than Democrat, and voting differences “partly reflects the differing racial bases of the parties and partly reflects the income differences in their supporting coalitions” (Weisberg, 1987). These results reflect the Republican party’s strong values and marriage platforms, and proves Fineman’s (1986) argument that appealing to the “marriage gap” voters with family issues instead of the traditional racial and income issues would increase the “marriage gap” division among voters.

### **Evangelical Christians**

Evangelical Christians rates of adherence per 10,000 population was the second most telling independent variable in the regression analysis. The Evangelical variable was negatively related to the vote for Obama, and increased the explanation or  $R^2$ , from 0.357 to 0.529. The rise of fundamentalist Christians began in the 1980 elections, the differential between the parties expanded from 33 percent Democratic/63 percent Republican in 1980, reaching a peak of 21 percent for Kerry versus 78 percent for Bush in 2004. Given the statement that white Evangelical Christians have become a formidable force in American politics and an important group within the Republican’s base, it is understandable that this variable would have a negative relationship with the

vote for Obama (Campbell, 2006). Historically, religious affiliation has been the most important factor in the relationship between religion and politics (Smidt, et al., 2010).

### **Unemployment**

The unemployment rate was positively related to the vote for Obama and entered the equation third, increasing the overall explanation from 0.529 to 0.562. The relationship between the economy and the President (or in this case the outgoing President's political party) is perhaps best explained by Nadeau and Lewis-Beck (2001):

The Presidential office is viewed as the command post of the economy, irrespective of whether the president actually has sufficient control of Congress to implement his or her economic plan. The president is simply regarded as the CEO of the public economy. However, if the president, because of the constitutional constraints on service and succession, is unable to run again, then the psychology of the economic vote is rather different. Voters find it easy to praise (or blame) a candidate who is currently president and now completing the economic mandate of his or her first term. They look at the record. In contrast, voters find it hard to judge the economic program of a new candidate for the incumbent party. Nothing has been delivered since he or she has never held the White House. In this case, classic economic voting is much weaker.

Given this rationale, the perceived failings of Bush's economic policy along with the downturn of the economy resulting from the September 2008 economic collapse and the

rising unemployment rates had a positive impact on the Obama vote. Although McCain represented a new candidate for the incumbent party, he was viewed as a continuation of Bush administration's economic policies.

### **Household Income**

The Household Income variable was positively related to the vote for Obama, and after accounting for the first three variables raised the overall explanation 0.048, somewhat unexpected results in light of past elections. Counties with higher household incomes appear to have voted Democratic during the 2008 election. Traditionally Democrats have received the lower income vote while the Republicans have received the higher income vote. The Democrats advantage among lower income voters indeed expanded from 51 percent in 1980 to 59 percent in 1992 to 73 percent in 2008. Through the ranks of the middle class, the vote is relatively split between the parties. According to a Pew Center study there has been a decline in upper income votes for the Republican party. Voters in the fifth income quintile identifying themselves as Republicans have dropped 7 percent from 2004 to 2008, and by June 2009 35 percent of the group identified themselves as independents versus 32 percent Republicans. Also noted are the higher levels of both voter registration and even higher percentages reporting they actually voted among those with higher incomes (Caralay, 2009). In examining these results it appears that the Democratic party is perhaps making a rapid gain among those with higher incomes, and also gaining their greater participation at the polls. In addition, quite instructive here is that income became an important explainer after controlling for

the first three variables, accounting for the counties percentages of married families, evangelical believers and unemployment.

### **Catholics**

Entering fifth into the equation is the Catholic rate of adherence per 10,000 population, positively related to the vote for Obama, and raising the overall explanation to 0.627. Traditionally Catholics have been a strong Democratic voting bloc (Caraley, 2009), tracing back to the 1928 election when New York Democratic governor Al Smith ran as the first Catholic Presidential nominee. This strong support, and accompanying attention to a Catholic Presidential nominee peaked during the 1960 Presidential election, with President Kennedy taking 80 percent of the Catholic vote. The subsequent decline was observed in the 2004 election, when Kerry, the third Catholic party nominee, obtained 47 percent of the Catholic vote. The rise of Obama within the Catholic voting community is therefore quite pronounced, his 54 percent take of the Catholic vote was even higher than Kerry's take just four years earlier (Caraley, 2009). Interestingly, Kennedy was a controversial candidate, and objectionable to many mainstream Americans not only because he was young, but also because he was from Irish-American and Catholic stock.

### **Areal Size of County**

The areal size of a county was negatively associated with the vote for Obama and entered the equation sixth, be it with a powerful standardized Beta Coefficient. At the state level, the traditional white southern Democratic base has eroded into a Republican

stronghold over the last eight Presidential elections. Growth in the Democratic power base in the northeast and pacific coast states has offset the Republican advantage, leading to a balanced, but polarized electorate, with primarily Democratic coasts and a mostly Republican center (Caraley, 2009). Tying large area counties to this framework provides insight into the urban/rural divide. We hypothesize that the areal size of the county is somewhat similar in construct to the northeast/southern division of votes. The areal expanse of western counties, lower population density, and more rural setting are more indicative of traditional conservative values than the less expansive, densely populated counties of the eastern and particularly northeastern states.

States belonging to a particular transitional portion of the country, home of relatively moderate sized counties, are the states of North Carolina, Virginia, and Indiana. These three states switched their voting at the state level in this election from the Republican to the Democratic party, from their previous Reagan era pro-Republican base. In the North Carolina and Virginia cases, these states could perhaps be at the transitional boundary for the expansion of the northeast corridor southward. These two states have experienced both rapid growth and rapid transition from traditional agrarian economies to the high tech corridors of the Research Triangle in North Carolina, and the expansion of government contractors and workers in the Virginia suburbs of the DC metropolitan area.

### **Percentage White Non-Hispanic**

After accounting for almost 64 percent of the statistical variance with the first six variables, the percent white Non-Hispanic entered the equation with approximately one more percent explanation of the election independent of the other significant explainers.

In as much as can be said about our nation's evolution, there remains a myriad of possible spoken or unspoken reasons why this variable is negatively correlated with the vote for President Obama. The Black community championed Obama with 95 percent of the vote, Whites to a lesser extent championed McCain. The rise of the Black democratic voting bloc has been ongoing since 1932, Carter received 82 percent in 1980, and Gore received 90 percent in 2000 (Caraley, 2009). As the first Black presidential candidate, would one expect any less support?

### **CHAPTER III**

#### **THE OPENNESS TO CHANGE CONTINUUM: UNDERSTANDING THE SPATIAL MOSAIC OF THE U.S. PORTRAYED BY THE 2008 ELECTION**

##### **How the Electoral Map Portrays the Openness to Change Continuum**

Inherent in our understanding of an openness to change continuum are several key concepts of the Second Demographic Transition. This description of social change has evolved through the work of several demographers attempting to explain the dip in birth rates and resultant very low levels of fertility in Europe the past couple of decades (Lesthaeghe and Van de Kaa, 1986). Several of the ideas embedded in the Second Demographic Transition are critical to our study. Practices of the Second Demographic Transition include new living arrangements, cohabitation, substantial postponement of marriage and parenthood, an increase in the share of births to unmarried couples, prolonged education, more stable income, increased consumerism associated with self-expressive orientations, finding a more suitable companion and realizing a more fulfilled partnership, keeping an eye on the future, and the like (Lesthaeghe and Neidert, 2006).

Practices of the Second Demographic Transition dovetail well with other characteristics to help establish the openness to change continuum. The seven previously discussed variables elucidate the overall openness to change, the willingness of the

population represented at the county-level to adopt, enact, embrace, and otherwise seek out an egalitarian world view. This “openness” is exemplified by higher order needs of self-actualization, individualistic and expressive orientations, and the need for recognition and Inglehart’s post materialistic political orientations (Inglehart, 1970, 1990). Also to be considered are geographical aspects of this change, the spread of ideas to nearby communities, and the possible future that these changes hold. In other words, the openness to change continuum is the county-level embodiment of change towards the societal constructs represented in the Second Demographic Transition.

The openness to change continuum represents a county-level glimpse into the previously defined state-level study of the Second Demographic Transition. By analyzing the country through the lens of the Second Demographic Transition building on the work of Lesthaeghe, Van de Kaa, and others and perhaps updating the results to coincide with, in our view, the more polarized 2008 election, we believe that we have developed a perhaps more appropriate scale to observe our country’s adoption of the newer trends as well as our resistance to change.

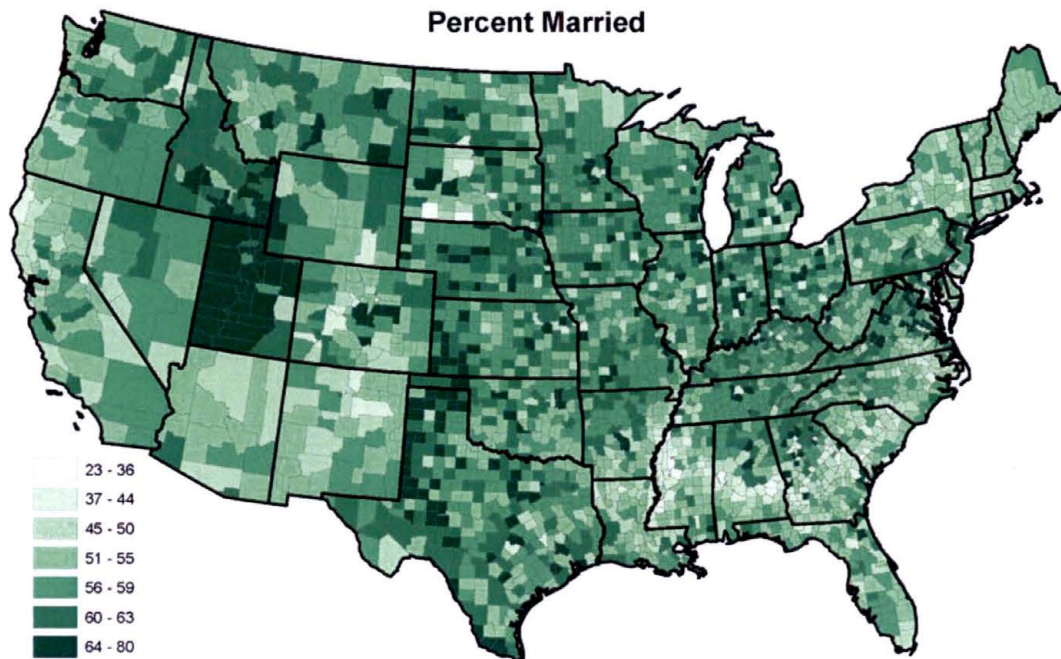
To interpret a continuum from these electoral results it is necessary to select variables which best approximate those characteristics relative to our openness to change continuum. As many aspects of the continuum are societal, our use of election results might tempt one to believe that the openness to change of an area might be easily determined to be a representation of political liberalness of an area. We do not believe this to be the case, but rather that the different patterns of county-level characteristics show the regional variability of these places “amenability to change”. The use of the word change now has political connotations of its own, be that as it may, we believe that



change helps identify openness to change. As a bridge to affirming our openness to change continuum, we will examine the socio-economic patterns of American counties and how the 2008 electoral results used as a surrogate for the openness to change continuum can reveal a spatial portrait of the U.S.

### **Marriage and the Openness to Change Continuum**

The spatial portrait of marriage reflects the openness to change continuum (Figure 3). The map of marriage rates shows the importance of the state of Utah, the agrarian Midwest and Southern High Plains, and most suburban counties. In the case of Utah, effects of the Mormon culture are apparent, marriage and the family have always been stressed. In the agrarian areas farming, family, and marriage go hand in hand, while the suburban populace is the picture of picket fences, family cookouts, and starter homes for newlyweds. These particular counties are on the traditional end of the openness continuum, their higher rates of marriage are in line with the more traditional family portrait. In sharp contrast are the lower marriage rates in the Northeast and the black belt of the South. These areas differ in their fundamental cultures. The black belt counties of the South is made up of rural African-Americans who maintain lower marriage rates, while the northeast tends to marry later in life once professionals establish themselves in the workforce and then desire to marry.



**Figure 3. Percent Married of Adult Population, by County**

Earlier research has found distinct variations in the spatial patterns of percent married by county across the country. In regards to marriage and cohabitation patterns Lesthaeghe and Nidert (2006) found three distinct groups of states in the Second Demographic Transition. Group 1, *Early marriage and little cohabitation*. A large part of the South fits into this picture, with states ranging from West Virginia, Tennessee, Kentucky, and the Carolinas to Alabama, Mississippi, Oklahoma, Arkansas, and Texas. But also Utah and Idaho in the West have less than a quarter of white non-Hispanic women never married in the age group considered, in combination with less than five percent of households headed by cohabiters. Group 2, *Very late first marriage and moderate levels of cohabitation* consists of several Northeastern states – New York, Massachusetts, Rhode Island, New Jersey, Connecticut – as well as California. Group 3 *High levels of cohabitation with moderate proportions of never-married women 25-29*

consists of the rest of New England, and also Alaska and Nevada. The states in group three have a higher proportion of younger adults in a union (either marriage or cohabitation) than states in Group 2 (Lesthaeghe and Neidert, 2006).

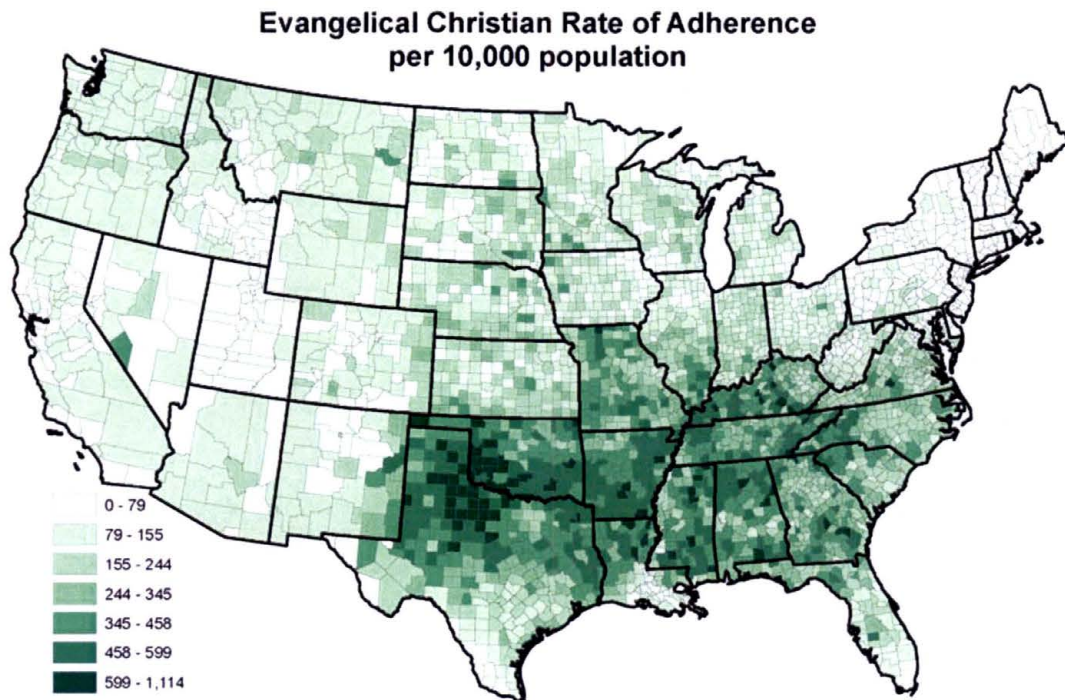
Given that our actual variable is “percent married”, it appears that our map best points out those areas more traditionally entrenched in marriage than the counties undergoing the Second Demographic Transition. Given the overall picture at a state level, we believe that group 1, “Bible Belt” states, represent (with the exception of North Carolina) traditional marriage areas belonging on the lower end of the openness continuum. Group 2 areas (the urban northeast states and California) appear to be the farthest along the continuum, while group 3 states are in transition towards group 2 areas exhibiting more openness to change. These regional patterns were further substantiated when looking at postponement of fertility, with the states of Massachusetts, New Jersey, New York, Connecticut, Rhode Island and California representing the vanguard of fertility postponement (Lesthaeghe and Neidert, 2006).

The percent of adults in a county who are married provides a reasonable approximation of family type and living arrangements. Counties with a greater prevalence of households with married couples tend to be more the traditional American model. Counties more open to change tend to have more single head of households and more open living arrangements. The Second Demographic Transition “posited that new living arrangements, and cohabitation (premarital or postmarital) in particular, were not solely the outcomes of changing socioeconomic conditions or rising female employment, but equally the expression of secular and anti-authoritarian sentiments of better-educated men and women who held an egalitarian world view, place greater emphasis on

Maslow's (1954) "higher order needs" ... and had stronger "postmaterialistic" political orientations. Furthermore, the Second Demographic Transition would also be characterized by substantial postponement of both marriage and parenthood, and by an increase in the share of births to unmarried couples (Lesthaeghe and Neidert, 2006).

### **Religion and the Openness to Change Continuum**

The spatial portrait of Evangelicals plays an important role in the definition of the openness to change continuum (Figure 4). Their strong presence in the Deep and Border (Upland) South contrasts with less prevalence in practically all the rest of the country. Particularly apparent is the clustering of counties in the High Southern Plains, rural non-coastal South, and Appalachia. In these counties adherents are generally pro-life, by definition pro-religion, and are classically defined as part of the Bible Belt. They are usually regarded as the Americans who hold on longer to traditional beliefs, and are less inclined to social change, and are more nationalistic rather than internationalist. They fall on the lower end of the openness to change continuum as I have conceptualized it.



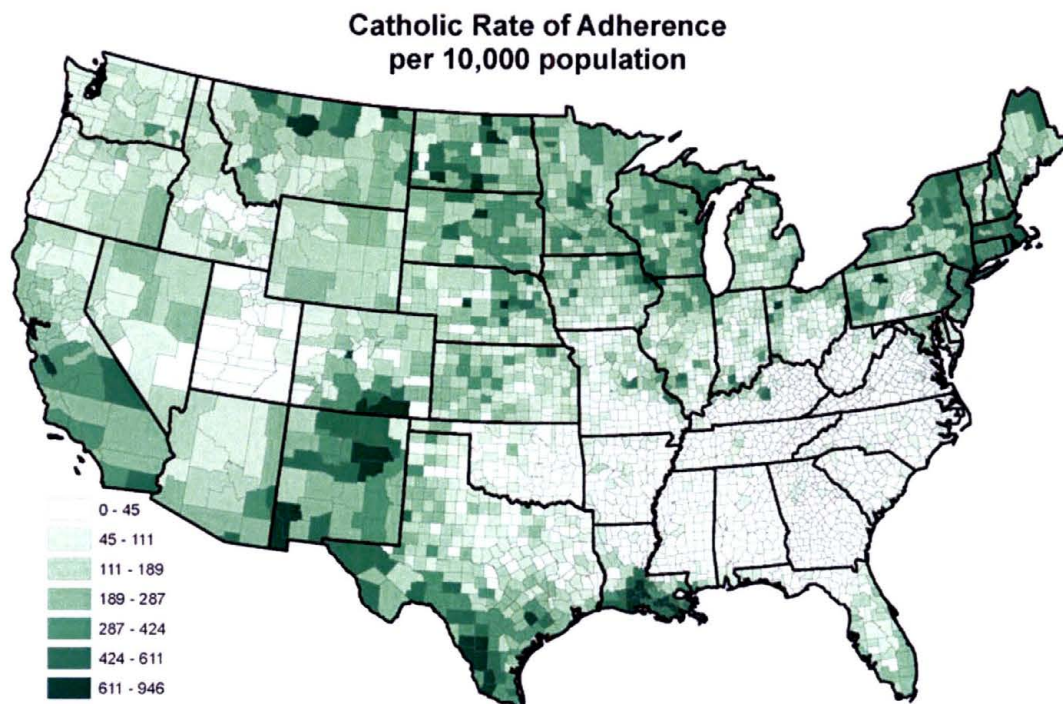
**Figure 4. Evangelical Christian Rate of Adherence per 10,000 population**

As Lesthaeghe and Neidert (2006) have shown, the Second Demographic Transition is clearly negatively correlated with high proportions being Evangelical Christians and with voting for conservative Republican candidates in past presidential elections, specifically those of Goldwater, Nixon, and George W. Bush. They state that many states within America's "Bible Belt," which do not or only weakly exhibit the manifestations of the second demographic transition, tend to have more widespread poverty and low education, more common teenage childbearing, young single-mother families, and high divorce rates.

The spatial portrait of Catholicism is best described as geographically peripheral and generally related to immigration (Figure 5). The northern portions of the country are higher in concentrations of European Catholic immigrants, the Cajun portions of Louisiana are strongholds of French Catholic influence, and the Southwestern border



region and interior reflect Catholic migration from Mexico and South America. The openness continuum is well described by historical migrations. The openness to change of immigrants reflects their willingness and ability to adapt to change, to seek out a different culture from their own, and to adopt the ideals of the openness to change continuum.

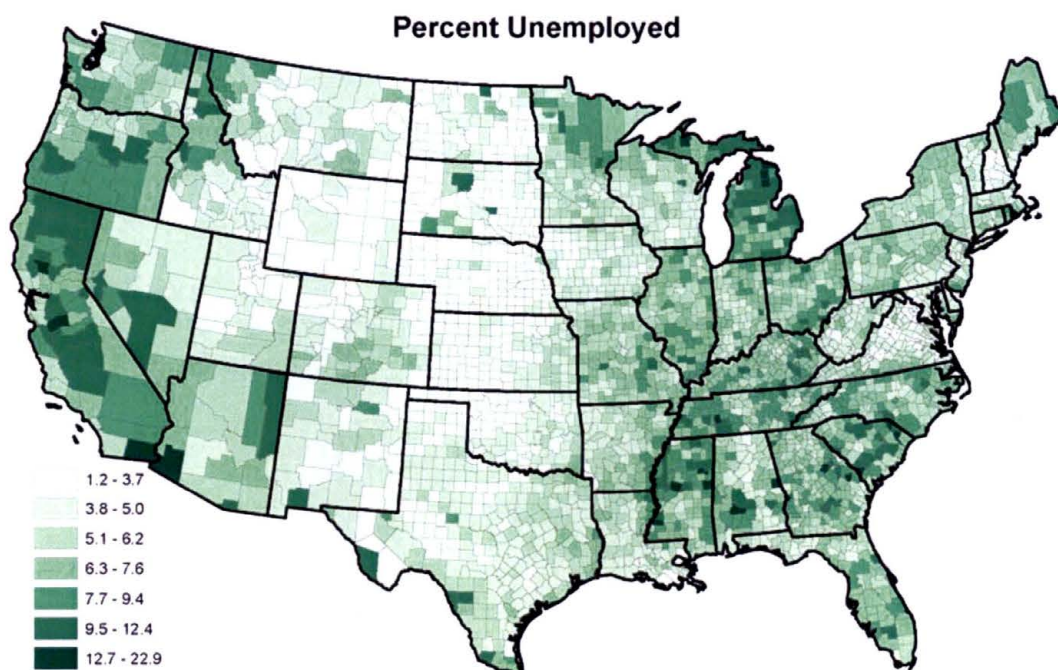


**Figure 5. Catholic Rate of Adherence per 10,000 population**

Also of note is that the Second Demographic Transition correlates positively with high proportions of Catholic populations (many not practicing) (Lesthaeghe and Neidert, 2006). We believe there is a possible duality amongst the Catholic vote, with strict adherents leaning more pro-Republican based on the church's opinions on abortion, a more "Evangelical" Catholic perhaps, versus the Second Demographic Transition's non-practicing or CEO (Christmas and Easter Only) Catholics noted above.

### Unemployment / Income and the Openness to Change Continuum

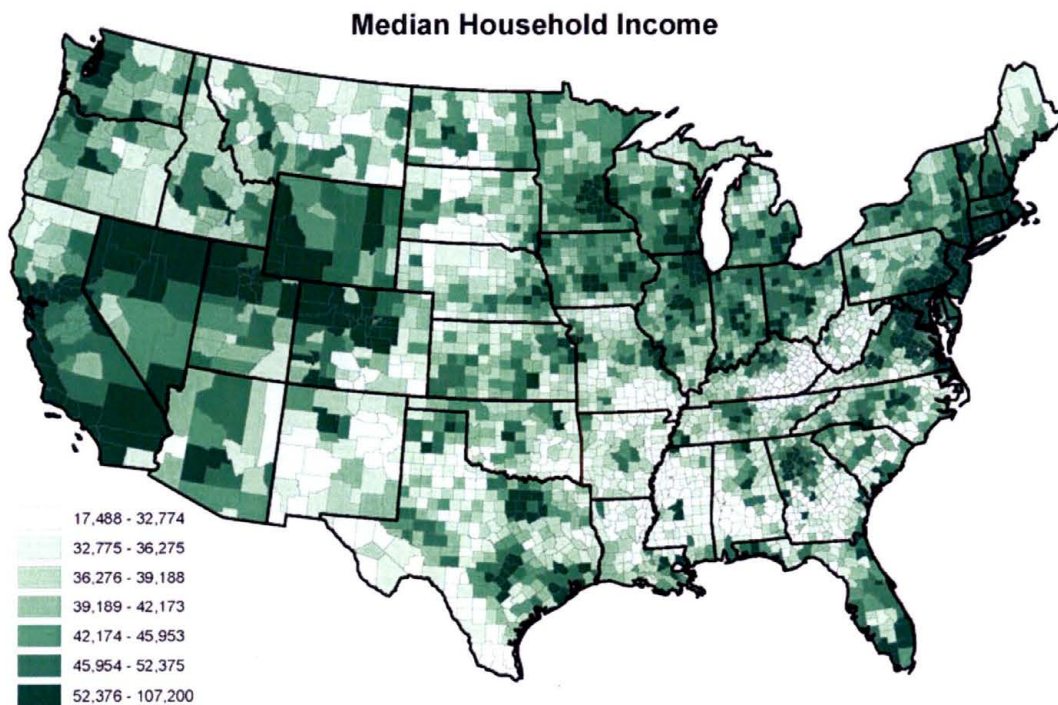
The U.S. county map of Unemployment reveals a definite spatial pattern with regards to the openness to change continuum (Figure 6). One of the first observations is the Midwestern Rust Belt. Slow to adapt to the changing economy and world view of trans-global versus national trade, the region is now in transition to a dynamic post-industrial economy: high unemployment prevails! Also apparent are the states of California, Arizona, and portions of Nevada and Florida, areas hard hit by the recent housing crisis. Other areas include the traditionally underemployed rural South. Finally, the sparsely settled agrarian midsection of the country is nearly fully employed. The farm appears somewhat non-changing employment-wise now, no matter if the economy is good or bad, farmers need to grow food for people to eat.



**Figure 6. Percent Unemployed by County - 2008**



The household income map presents a definite spatial portrait with regards to the openness continuum, being that income generally depicts the urbanization of America (Figure 7). Income is generally higher in cities, and people who seek the diversity of cities, higher paying jobs, and cultural amenities flock there. Of particular note are the Dallas, Chicago, Detroit, Atlanta, and Minneapolis–St. Paul areas as well as the conurbation stretching from Boston to Washington, D.C. These areas sometimes contain a slightly poorer core, and a richer periphery, generated by the white flight to the suburbs. The relationship of income to the openness continuum is varied, in that the populace wants the urban openness to change with its variety of experiences, but reside in more conservative suburbia.



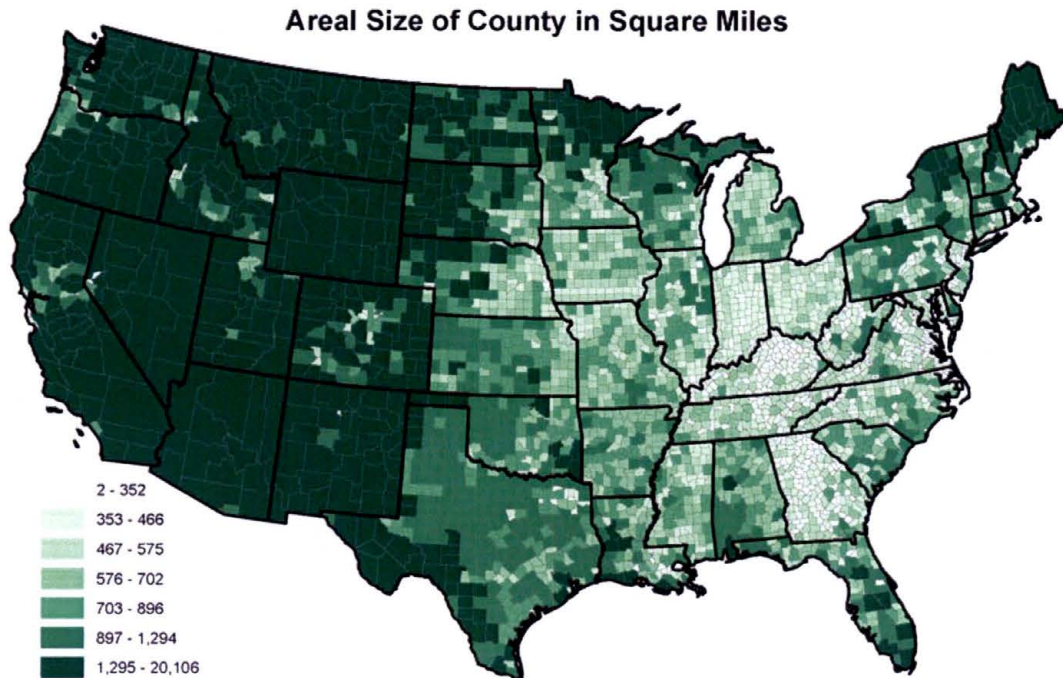
**Figure 7. Median Household Income by County**



In examining the Second Demographic Transition and income Lesthaeghe states “that the second demographic transition factor is strongly correlated with being a wealthier state, with disposable household incomes above the US average, and with being highly urbanized and high percentages of the population living in metropolitan areas” (Lesthaeghe and Neidert, 2006). This describes places higher on the openness continuum in our study, with higher income counties more correlated with openness to change, particularly in the northeast corridor.

### **Areal Size of the County and the Openness to Change Continuum**

The Areal Size map is an interesting byproduct of the historical settlement of America, with notable exceptions in the northeast in Maine and the Adirondacks in New York (Figure 8). One could conceive that the spatial portrait is partially based on the settlement periods of the states from east to west, and that counties tended to be larger in more recent settlement areas. These counties negative relation to openness to change is both scalar and social. The areas are spatially large, and essentially rural and sometimes remote. If there are pockets of urbanization in an expanse of area, the urban influence most likely will be diluted. An effect of distance decay on their development is indeed possible with this variable acting in part as a surrogate of remoteness and isolation, especially for larger counties outside the Pacific Coastal region.



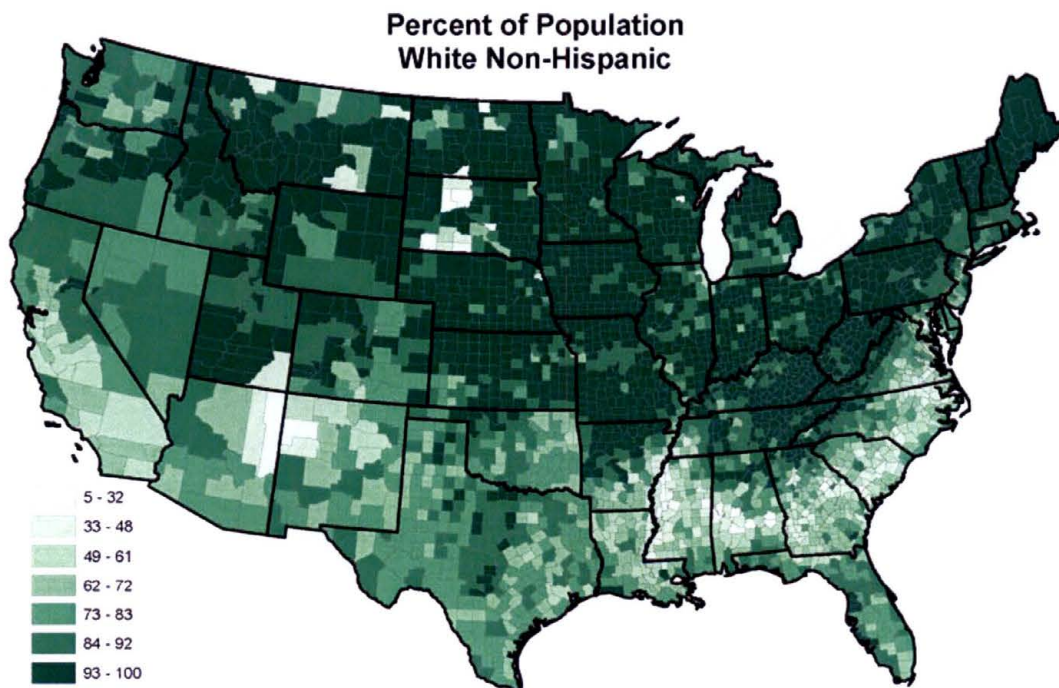
**Figure 8. Areal Size of U.S. Counties in Square Miles**

The Second Demographic Transition model perhaps relates in part to the areal size of the county through the postponement indicators of both marriage and parenthood among white non-Hispanics, higher incidences of abortion, the nonconventional household types based on cohabitation, and low overall fertility levels – the very essence of the emergence of the Second Demographic Transition. States that are resistant to the Second Demographic Transition characteristics include the Dakotas, Nebraska, Kansas, Iowa, Wyoming, Idaho, and Utah. These states in particular exhibit the characteristics of few teenage mothers and low nonmarital fertility.

### **Non-Hispanic Whites and the Openness to Change Continuum**

The white non-Hispanic population variable is an artifact of census data which tries to isolate a meaningful sub-population, mainly the white “mainstream” population

alternately referred to colloquially as the “Anglo” or “Anglo-Germanic” segment of the U.S. population (Figure 9). The percent of “Anglos” in particular counties can be particularly telling in characterizing where those counties sit on the openness continuum. Such counties are more traditional and less “open”. It is interesting that this variable has a significant simple negative correlation ( $-0.389$ ) with our openness map (the 2008 percent vote for Obama), and despite entering the stepwise regression last, is still meaningful after controlling for six other important variables: percent Anglo-Germanic in a county, in and of itself, makes a difference!



**Figure 9. Percent of Population White Non-Hispanic**

The Second Demographic Transition and the percentage of the population white non-Hispanic is perhaps best viewed through its converse form, the percentage of population non “Anglo”. Through this lens, the racial diversity of an area can be divulged providing a glimpse into the social acceptance of an area to outsiders of varied

racial, ethnic, and national backgrounds, the true melting pot ideal of our society as a whole.

The continuum reflects the idea of diversity, both cultural and racial, therefore it is not surprising that the percentage white non-Hispanic is negatively associated with the continuum. The spatial portrait presents an interesting picture of the country. The coasts are generally less homogenous with regards to whites (Anglo-Germanic peoples) than the interior, and generally this can be explained by historic immigration paths. The interior, particularly the rural sections are generally enclaves of agrarian white settlement, lacking the diversity that might encourage more openness to change.

## **CHAPTER IV**

### **DISCUSSION AND CONCLUSION**

#### **Variables that did not Enter into the Equation**

As with most research, there were expected results and unexpected results. Certain variables and categories of variables did not present themselves in the equation with the strength hypothesized prior to the statistical analysis.

In the “demographic” category, the age composition of the county’s population did not enter into the equation. The strongest simple correlations prior to stepwise regression were obtained by combining the 18-21 and 22-29 age groups into one variable (young adults), and also combining the over 50 age group into another. It was postulated that counties with more older residents would possibly have a negative association with “openness”, and the younger age group would be positively associated. These relationships were born out, but only weakly. Could age be a factor, or a possible factor, in the future? Possibly, but current immigration trends are possibly diluting the effects of baby boomers aging in society.

Of the “social” characteristics of counties it was postulated that family size would be of importance, given that family values issues are so important to Americans and were thoroughly discussed during the campaign. While “family size” did not prove to be significant, instead the greatest explanatory value came from the “Married” variable,

which entered the equation first as the variable with the greatest statistical significance. With the economic variables there were not many surprises: the poverty rate was not statistically significant enough for inclusion, although the variable generally provides insight into the plight of an area and indeed has some intercorrelation with other variables.

Overall the data generally exhibit low to moderate levels of intercorrelation, with two particular exceptions (Table 3). The moderately correlated variables were Evangelicals with regards to both Median Household Income (0.342) and Catholics (0.383). In the case of the religious variables, it is possible that the overall religiousness of a county is perhaps adding to the intercorrelation between the variables. The high correlation between Married Households and White Non-Hispanic (-0.582) could possibly be the result of higher marriage rates in predominantly white non-Hispanic counties. Indeed, the White Non-Hispanic variable would have played a more significant role in this analysis if the Married Households variable was not included.

**Table 3.**  
*Correlation Matrix*

<i>Variable</i>	Married	Evangelical	Unemployment Rate	Median Household Income	Catholic	County Area	White Non-Hispanic
Married Households	1.000	-0.211	0.051	-0.279	0.053	-0.113	-0.582
Evangelical Christians	-0.211	1.000	0.121	0.342	0.383	0.194	0.204
Unemployment Rate	0.051	0.121	1.000	0.227	0.149	0.061	0.175
Median Household Income	-0.279	0.342	0.227	1.000	-0.067	0.119	0.108
Catholics	0.053	0.383	0.149	-0.067	1.000	-0.067	-0.010
Areal Size of County	-0.113	0.194	0.061	0.119	-0.067	1.000	0.127
White Non-Hispanic	-0.582	0.204	0.175	0.108	-0.010	0.127	1.000

The lack of importance of geographic dimensions, as defined in this study, was the most surprising of all. Prior to the analysis, it was postulated that the “Urban Influence” and “Rural-Urban Continuum” codes would provide statistically important explanation that would help define the continuum. This was not the case; in general perhaps those characteristics that make up an area’s ruralness or urbanness are already included in the other variables used to describe the openness to change continuum. Perhaps a better specified geographic operational variable would have lent more explanation.

### **Discussion of Results**

The less-changing landscapes of America represent more “closed” areas, areas that are perhaps not adapting to changing trends found in the Second Demographic Transition world. These communities perhaps are as much stuck in time as they are stuck

in place, representing a bygone era of American history, a Cleaveresque persona of place and time. The variables included in this representation include “Percent Married”, relating to the family unit picture of the white picket fence, 2.5 children, and church on Sunday (and perhaps Wednesday) as portrayed by the “Evangelical” variable. The “County” area variable also plays into this county persona, the grandiose view of manifest destiny, the landed gentry, the measure of a person’s worth not by their accomplishments, but by how much of the Earth they actually possess. The “White/Anglo” variable also plays into this view, if you are not White, you are different, and therefore possibly less trustworthy. This is not to denote bigotry, but rather a perceived mistrust of change and cultural differences, akin to the saying “I like America as it is, or as I am...”

On the flip side there are the open, perhaps ever changing areas of the country. Not open based on area, but open based on the ability of the populace to embrace the differences that make our society what it is, a cultural melting pot of humanity. The variables denoting this are “Unemployment Rate”, the unemployed evoking change by wanting the established party removed from the Presidential office, ready to embrace the change brought about by a new person at the helm. Another variable truly denoting change is “Household Income”. In recent elections this variable has been synonymous with the Republican party; the switch to the Democratic side denotes a serious change in the political preferences of wealthier Americans. Another variable included is the “Catholic” variable, Catholics being a traditional ally of the Democratic party, and generally concentrated in urban areas. Although positively identified with an “openness”



continuum and contributing to the vote for Obama, one might be hesitant to infer that their vote is an important agent of change, but rather maintaining the status quo.

In defining the openness to change continuum, it is sometimes easier to ascertain the negatively associated variables and their implications, as the positive end of the spectrum contains urban environment made up of two distinct types of people – those that were born there, and those that migrated there. It is not inconceivable that the migrant population possibly dilutes the openness to change of an area until they embrace their new-found urban environments. The most dramatic examples of openness to change are the cosmopolitan cities of New York, Chicago, and San Francisco. These places are most closely following the low birth rate, late marriage and other trends of Europe, where the Second Demographic Transition is indeed more firmly established. The examples of closed areas can be found in numerous small town counties, and perhaps overlooked by their urban counterparts both now and in the future.

## **Conclusion**

With all of these factors in mind, it seems that the Second Demographic Transition is a suitable explainer for the openness to change continuum, reflecting an evolving socioeconomic trend that roughly equates to the “change” metaphor used throughout the election. The adoption of Second Demographic Transition behavior and trends play an important part in the diffusion of new ideas across the county map of the U.S. Over time one can view the emergence of areas where an Second Demographic Transition cohort is adopting the “European way” as it were, as opposed to counties more

steeped in the “traditional” views of American family and religion which are not transitioning.

Is the openness to change continuum an effective explanation of the Second Demographic Transition through the lens of the 2008 Presidential election? Perhaps, while steeped in the Second Demographic Transition, it appears that the national portrait produced with the openness to change continuum by combining our seven key election variables perhaps provides a better view of the transition of counties from traditional Americana to the more Eurocentric. We believe the map provides a provocative portrait of counties and regions, some more geographically isolated or remote. These areas remain tied to tradition, and are therefore less culturally similar to East and West coast counties. Change occurs both slowly and fast, however it perhaps can be better understood within the context of the openness to change continuum which has allowed the conceptual insight into a county’s evolution toward openness.

## REFERENCES

- Campbell, D. 2006. Religious “Threat” in Contemporary Presidential Elections. *The Journal of Politics* 68:1. 104-115.
- Caraley, D. 2009. Three Trends Over Eight Presidential Elections, 1980-2008: Toward the Emergence of a Democratic Majority Realignment? *Political Science Quarterly* 124:3. 423-442.
- Colorbrewer: Color Advice for Cartography. Available from <http://colorbrewer2.org/>. Accessed 16 February 2010.
- Fineman, H. 1986. Family Affairs: The Next Political Battleground? *Newsweek*. 17 February.
- Inglehart, R. 1970. *The Silent Revolution*. Princeton University Press.
- , 1990. *Culture Shift in Advanced Industrial Society*. Princeton University Press.
- Lesthaeghe, R. and Neidert, L. 2006. The Second Demographic Transition in the United States: Exception or Textbook Example? *Population and Development Review* 32:4. 669-698.
- Lesthaeghe, R. and van de Kaa, D. J. 1986. Twee Demografische Transitie's? (Two Demographic transitions?). *Bevolking: Groei en Krimp (Population: Growth and Decline)*. Van Loghum Slaterus.
- Maslow, A. 1954. *Motivation and Personality*. Harper and Row.
- Murauskas, G., Archer, J., and Shelly, F. 1988. Metropolitan, Nonmetropolitan, and Sectional Variations in Voting Behavior in Recent Presidential Elections. *Western Political Quarterly* 41(1). 63-84.
- McGrew Jr, J. and Monroe, C. *An Introduction to Statistical Problem Solving in Geography 2<sup>nd</sup> Edition*. 2000. McGraw-Hill Higher Education.
- Miller, G. 2005. Methodology, Statistics, and Voting Error: An Exploration of 2000 Presidential Election Data in Two States. *The Policy Studies Journal* 33:1. 1-13

- Nadeau, R., and Lewis-Beck, M. National Economic Voting in U. S. Presidential Elections. *The Journal of Politics* 63:1. 159-181.
- Smidt, C., et al. *The Disappearing God Gap? Religion in the 2008 Presidential Election*. 2010. Oxford University Press.
- Weisberg, H. 1987. The Demographics of a New Voting Gap - Marital Differences in American Voting. *Public Opinion Quarterly* 51. 335-343.
- Wing, I, and Walker, J. 2008. The Geographic Dimensions of Electoral Polarization in the 2004 U.S. Presidential Vote. Boston University. Available at [http://swws1.bu.edu/isw/papers/the\\_2004\\_election.pdf](http://swws1.bu.edu/isw/papers/the_2004_election.pdf). Last accessed 16 February 2009.

## **VITA**

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