

# RELIGION, POVERTY AND POLITICS- AND THEIR EFFECTS ON WOMEN'S REPRODUCTIVE RIGHTS (& HEALTH OUTCOMES)

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Economics and Maternal-Child Health**

# PRESENTER DISCLOSURES

**Richard M. Kimball**

**(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:**

Other:

UNPAID - Secretary of the Board of Directors for the Truth About Nursing Advocacy Organization

UNPAID - Vice-President of Sigma Theta Tau Nursing Honors Society local chapter Gamma Sigma at the University of New Mexico.

“No relationships to disclose”



## RESEARCH AIMS

- Research Question: How do the chosen state level social determinants of health affect the maternal-child reproductive health outcomes of IMR, abortion rates, and teen birth rates?
- Hypothesis: Poorer economic indicators, higher religiosity & voting more conservatively are associated with poorer maternal-child reproductive health outcomes.



# SOCIAL DETERMINANTS OF HEALTH

“...economic and social conditions that influence the health of people and communities. These conditions are shaped by the amount of **money**, **power**, and **resources** that people have, all of which are influenced by **policy choices**.”-CDC, 2013

- Determine the root causes of negative health outcomes



# PUBLIC HEALTH, POLICY, & POLITICS

## Social Justice Advocacy

- Disparities/Inequalities exist in US/World
- Policymakers often distanced/removed/uninterested
- Goal:
  - Need more efficient use of public funds
  - Need for better health outcomes



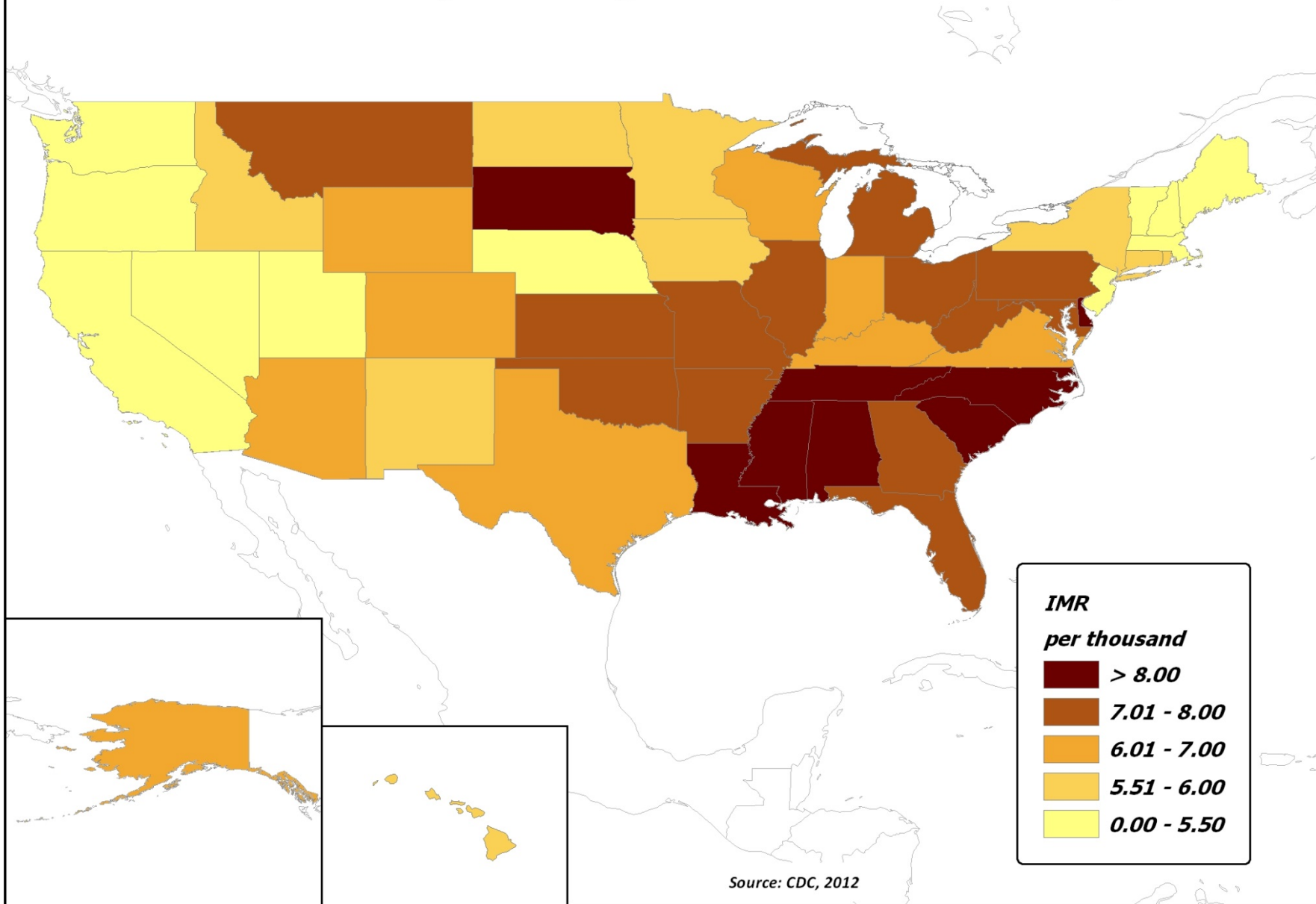
# INFANT MORTALITY RATE

US 2008 = 6.6 infant deaths per 1,000 live births in first year of life

- Best in world = 2.2 Japan
- 34<sup>th</sup> in world - behind all developed countries (OECD) –except Mexico, Turkey & Chile
- US Disparities among states
  - Lowest Rate = 3.9 New Hampshire
  - Highest Rate = 10.0 Mississippi



# Infant Mortality Rate (per thousand births): 2008



Source: CDC, 2012

# TEEN BIRTH RATE

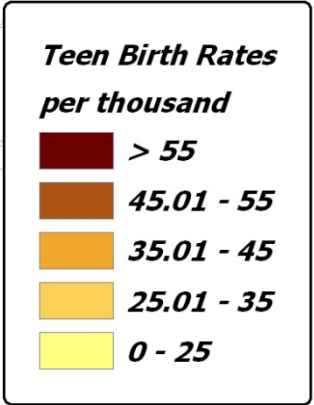
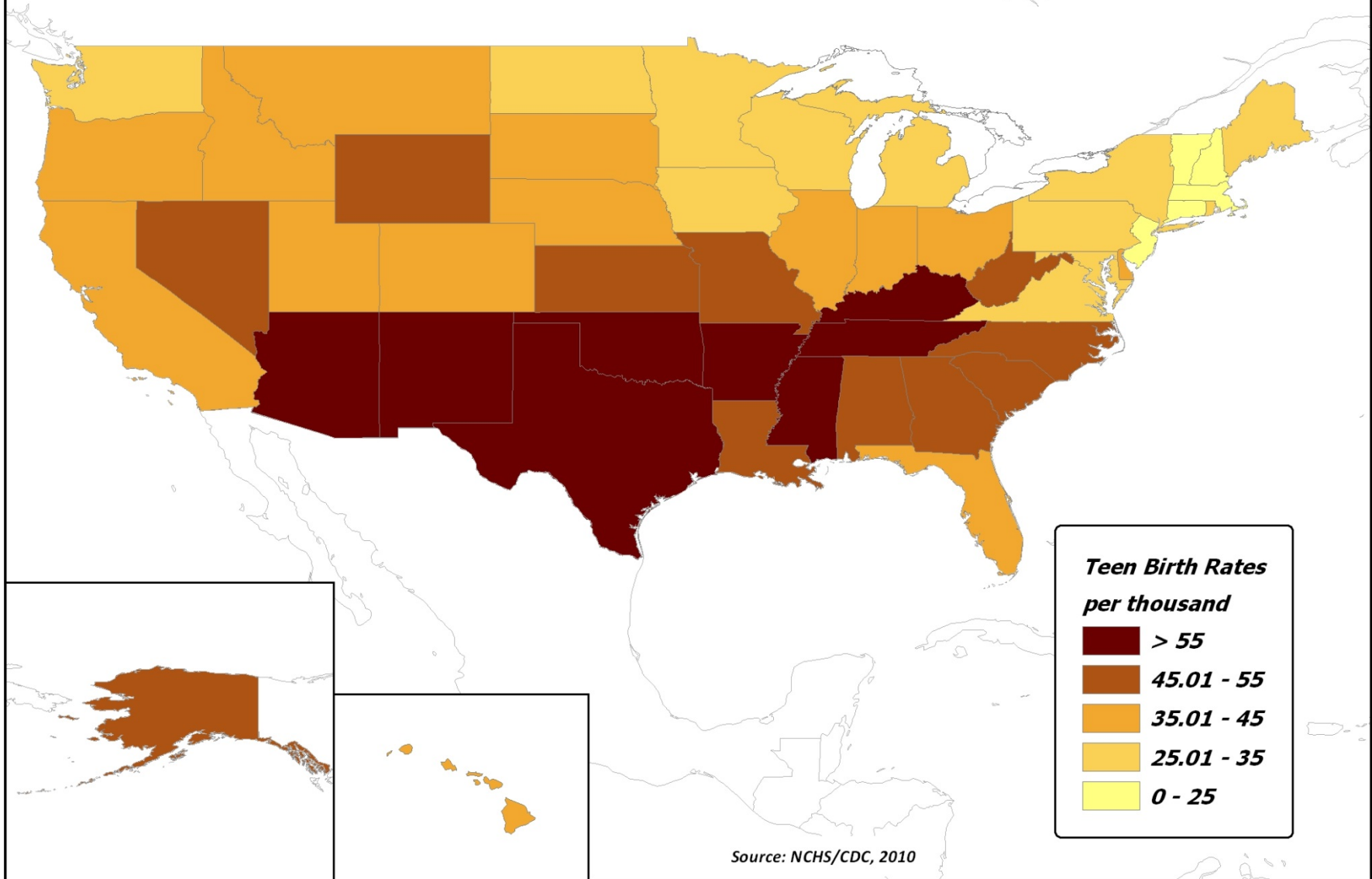
US 2008 = 41.5 per 1,000 teens

- Greater rates than teens in:
  - Russia 1.25x
  - Canada 2.5x
  - Germany 4x
  - Switzerland 10x
- US Disparities among states
  - Lowest Rate = 19.8 New Hampshire
  - Highest Rate = 65.7 Mississippi





# Teen Birth Rates: 2008



Source: NCHS/CDC, 2010

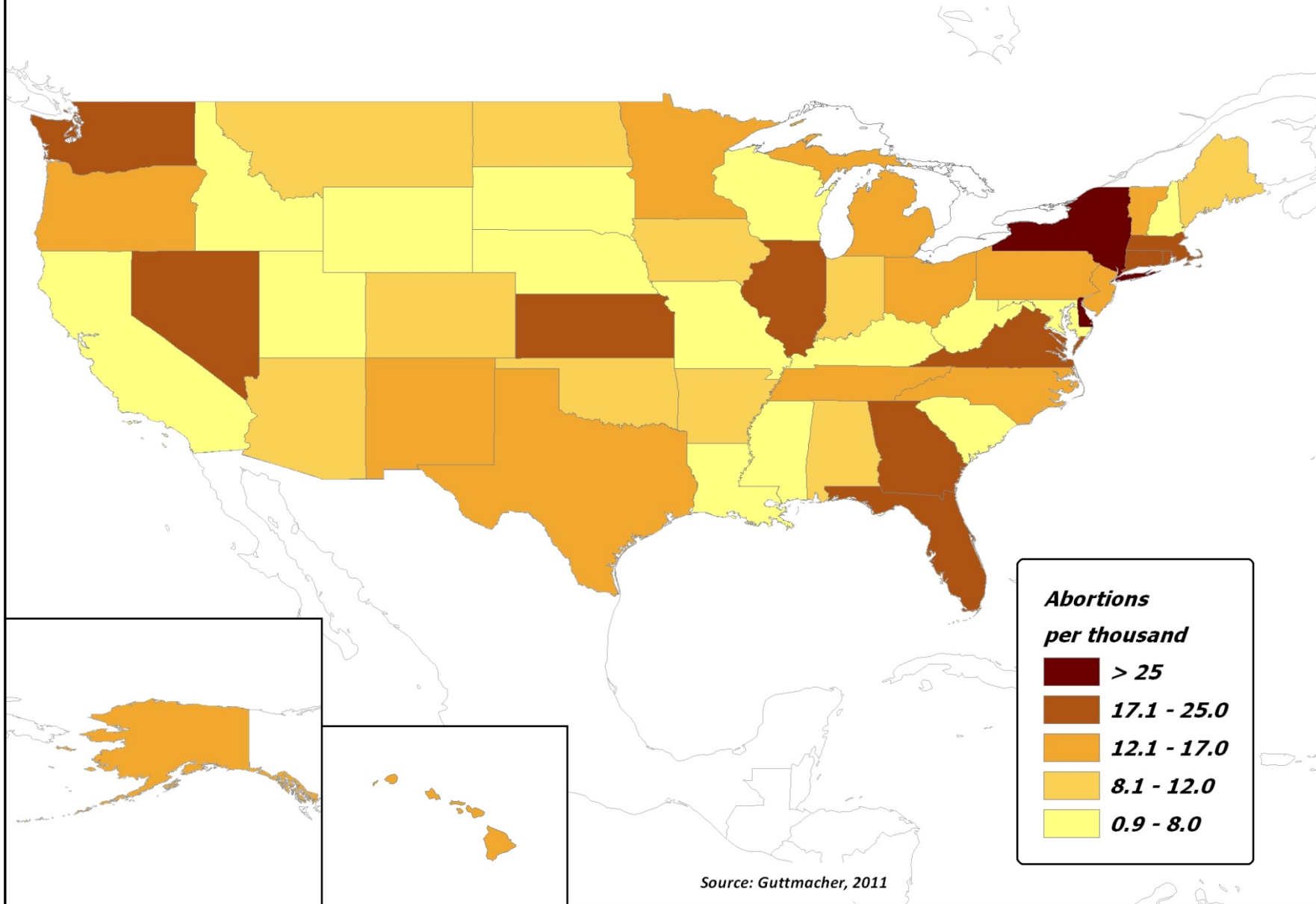
# ABORTION RATES

US 2008 = 19.6 abortions per 1,000 women aged 15–44

- International Rates:
  - Germany = 7
  - Denmark = 15
  - UK = 23
  
- US Disparities among states
  - Lowest Rate = 0.9 Wyoming
  - Highest Rate = 40 Delaware
  - Rates vary widely from state to state - access issues & limiting legislation



# Abortions per thousand (15 - 44 years old): 2008



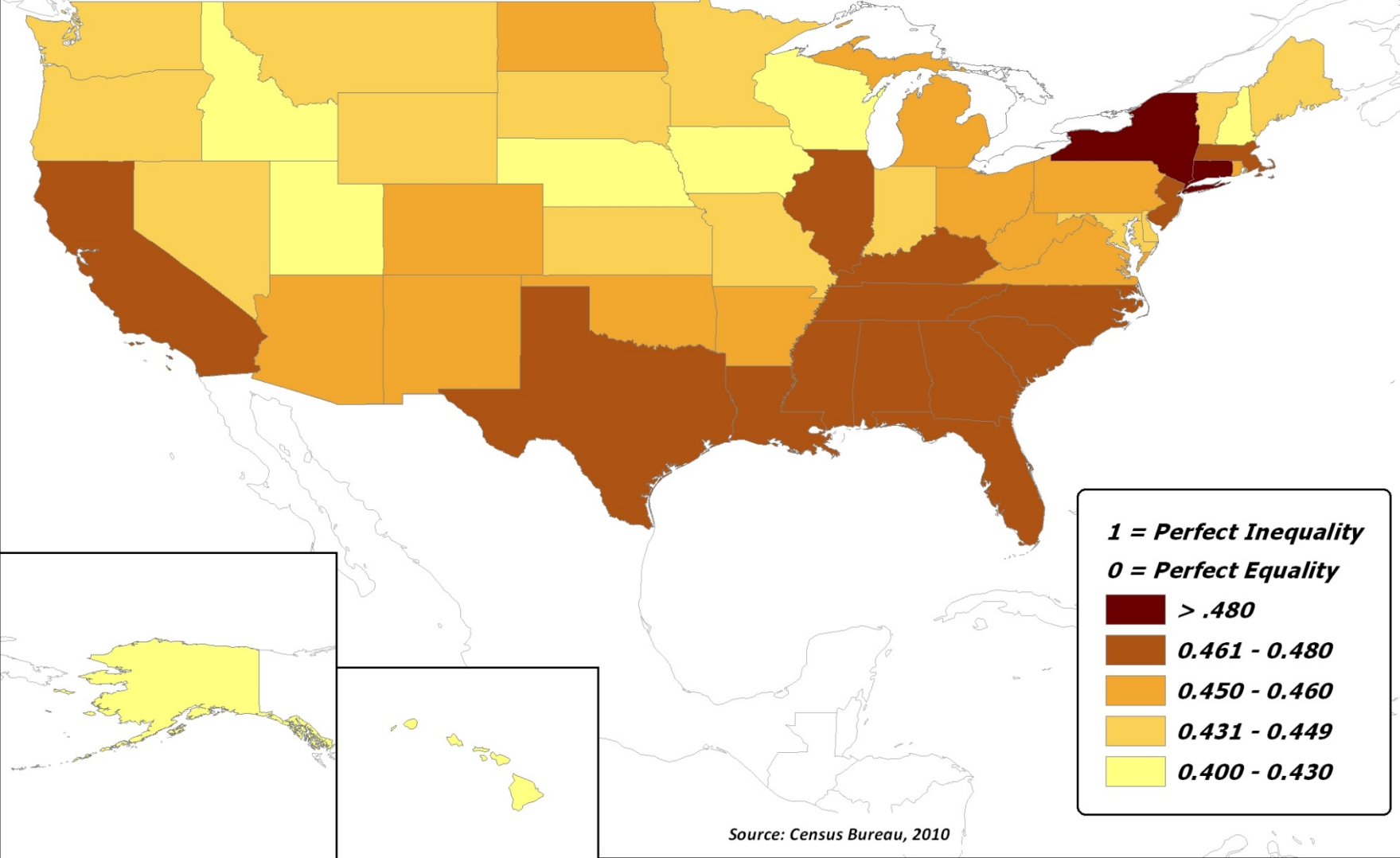
# GINI COEFFICIENT = INCOME DISPARITIES

US 2008 = 0.38 (1.0=inequality; 0=equality)

- 3<sup>rd</sup> highest income Inequality in 27 OECD
  - Lowest = 0.25 Denmark/Norway
  - Highest = 0.50 Chile
- US Disparities among states
  - Lowest = 0.41 Alaska
  - Highest = 0.51 New York



# GINI (income inequality): 2008



Source: Census Bureau, 2010

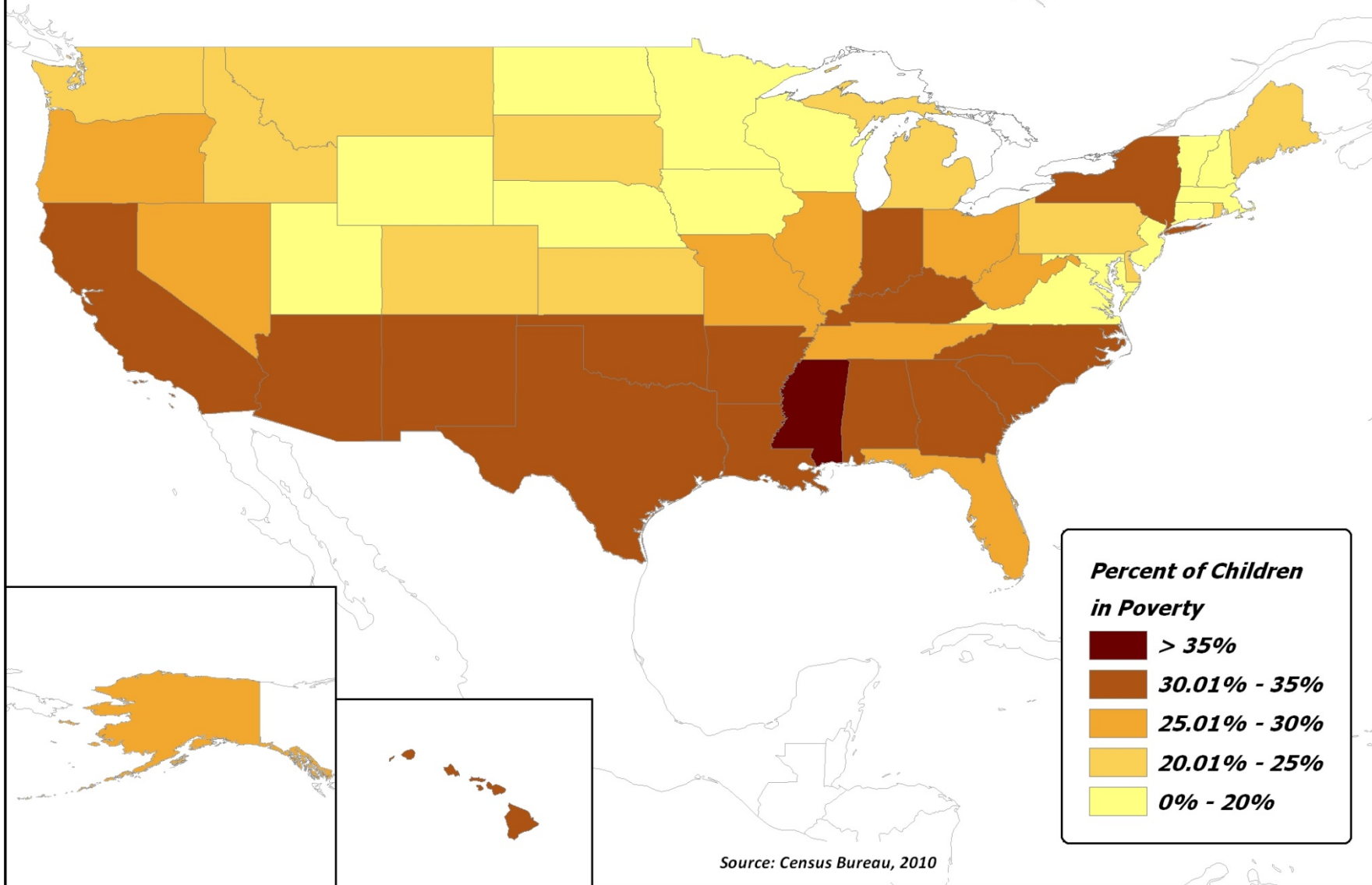
# CHILD POVERTY

US = 21.6% - one of highest child poverty rates among developed countries – OECD

- Lowest = 3.7% Denmark
- Highest = 26.6% Israel
  - (OECD, 2008)
- US Disparities among states
  - Lowest = 11.9% New Hampshire
  - Highest = 41.7% Mississippi



# Percent of Children in Poverty: 2008



# RELIGIOSITY AS SOCIAL DETERMINANT

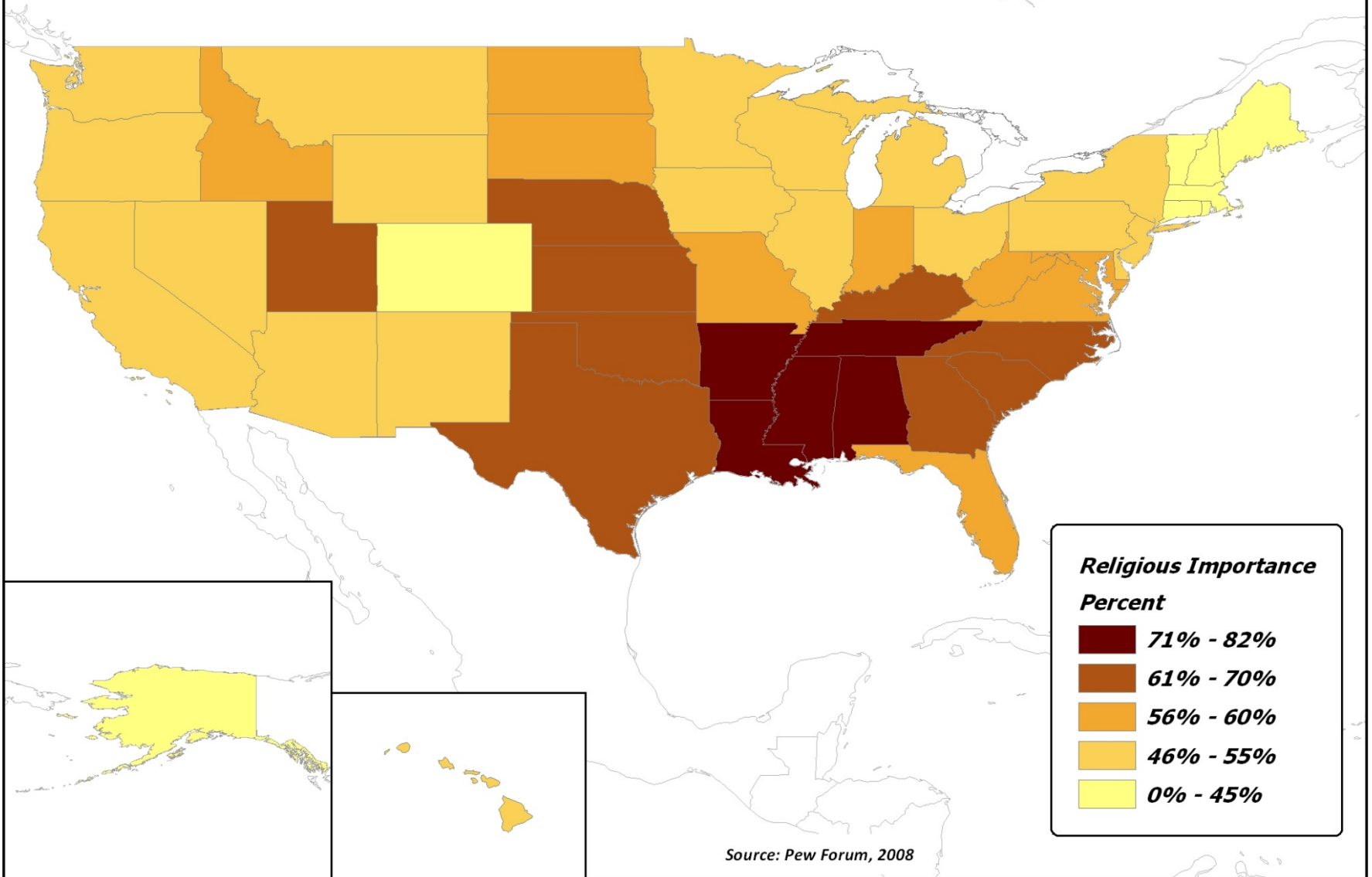
US = 59% - Religion is “very important”

- Highest among developed countries = 65% Turkey
- Lowest = 11% France
  - (Pew Forum, 2002)
- US Disparities among states
  - Lowest = 36% New Hampshire
  - Highest = 82% Mississippi
    - (Pew Forum, 2008)





# Percent Stating Religion is "Very Important": 2007



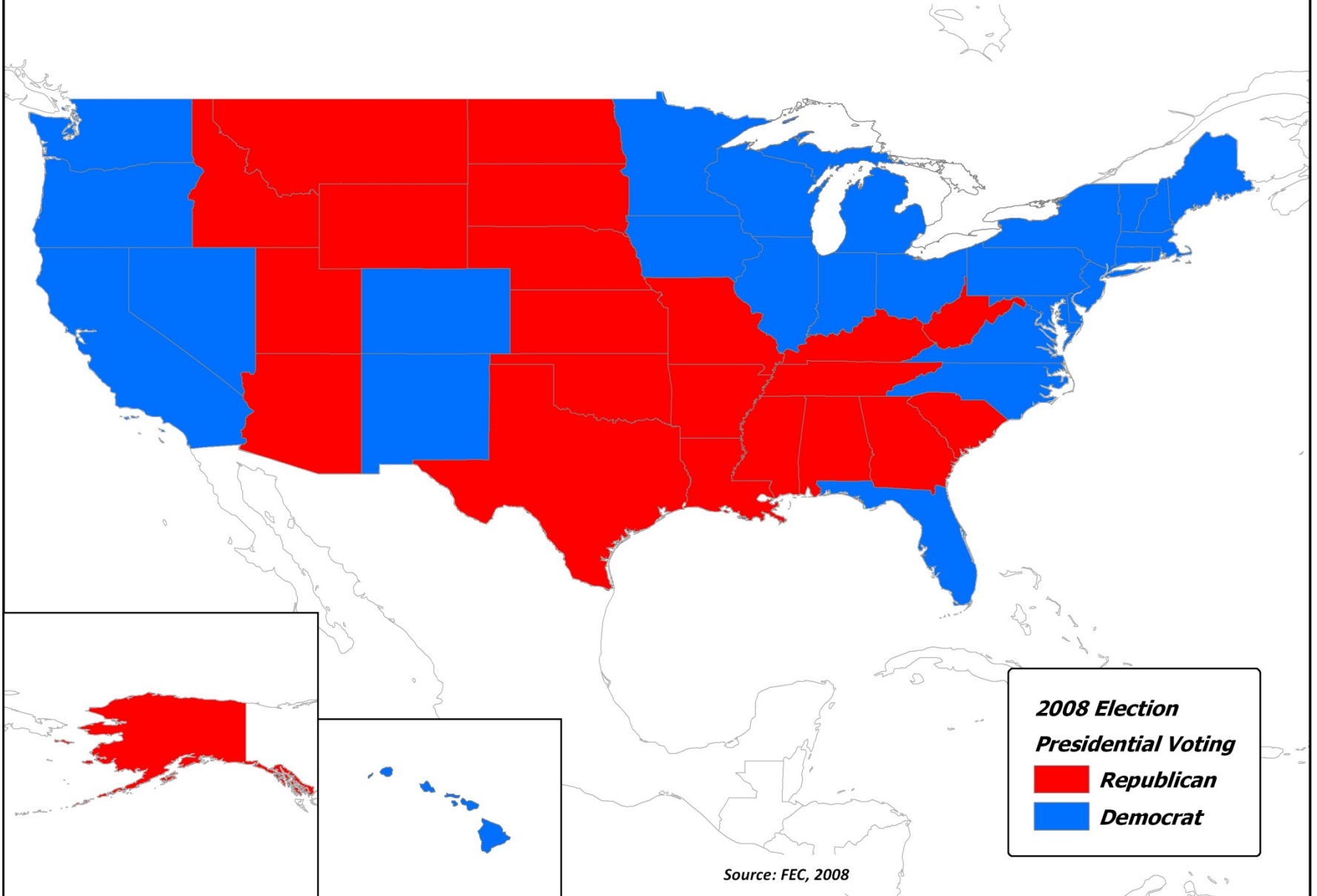
# POLITICS AS SOCIAL DETERMINANT

Politics in US = Republicans vs. Democrats

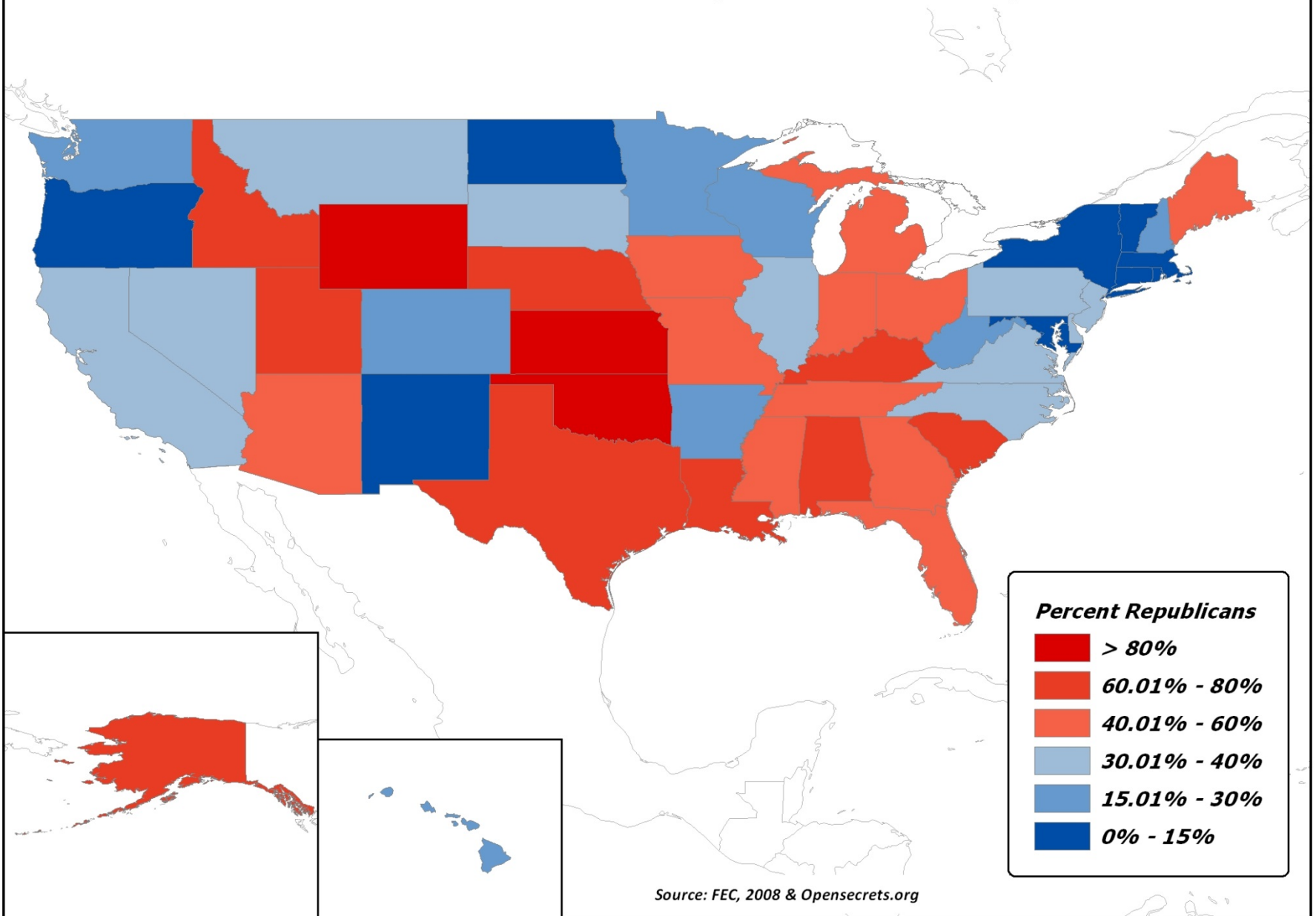
- Conservative vs. Progressive values
  - Percent of Republicans in State Congressional Delegations
  - Red/Blue States in 2008 Presidential Election
- US Differences among states
  - Lowest % = 0% Vermont (MA, CT, RI, NM, ND = 0%)
  - Highest % = 100% Wyoming
  - 28 Blue States vs. 22 Red States
    - (FEC, 2008)



# Presidential Election Results: 2008



# Percent Republicans in State Congressional Delegations: 2008



Source: FEC, 2008 & Opensecrets.org

# HOW DO STATES COMPARE?

	IMR		Teen Birth		Abortion		GINI		Child Poverty		Religiosity		% Republicans Congress	2008 Election
	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	%	%	R/B
<b>New Hampshire</b>	<b>1</b>	<b>3.9</b>	<b>1</b>	<b>19.8</b>	<b>20</b>	<b>12.3</b>	<b>3</b>	<b>0.42</b>	<b>1</b>	<b>11.9%</b>	<b>1</b>	<b>36%</b>	<b>25%</b>	<b>Blue</b>
<b>California</b>	<b>5</b>	<b>5.1</b>	<b>22</b>	<b>38.4</b>	<b>46</b>	<b>27.6</b>	<b>45</b>	<b>0.47</b>	<b>37</b>	<b>30.3%</b>	<b>14</b>	<b>48%</b>	<b>35%</b>	<b>Blue</b>
<b>Massachusetts</b>	<b>4</b>	<b>5.0</b>	<b>2</b>	<b>20.1</b>	<b>35</b>	<b>18.3</b>	<b>44</b>	<b>0.47</b>	<b>10</b>	<b>19.1%</b>	<b>9</b>	<b>40%</b>	<b>0%</b>	<b>Blue</b>
<b>New Mexico</b>	<b>13</b>	<b>5.6</b>	<b>49</b>	<b>64.1</b>	<b>27</b>	<b>15.5</b>	<b>32</b>	<b>0.46</b>	<b>49</b>	<b>34.9%</b>	<b>21</b>	<b>53%</b>	<b>0%</b>	<b>Blue</b>
<b>Utah</b>	<b>3</b>	<b>4.7</b>	<b>18</b>	<b>35.1</b>	<b>8</b>	<b>6.7</b>	<b>2</b>	<b>0.41</b>	<b>13</b>	<b>19.7%</b>	<b>39</b>	<b>66%</b>	<b>80%</b>	<b>Red</b>
<b>Texas</b>	<b>22</b>	<b>6.2</b>	<b>48</b>	<b>63.4</b>	<b>30</b>	<b>16.5</b>	<b>46</b>	<b>0.48</b>	<b>47</b>	<b>34.2%</b>	<b>40</b>	<b>67%</b>	<b>65%</b>	<b>Red</b>
<b>Mississippi</b>	<b>50</b>	<b>10.0</b>	<b>50</b>	<b>65.7</b>	<b>2</b>	<b>4.6</b>	<b>48</b>	<b>0.48</b>	<b>50</b>	<b>41.7%</b>	<b>50</b>	<b>82%</b>	<b>50%</b>	<b>Red</b>



# CORRELATION RESULTS

Health Outcomes	GINI	Child Poverty	Religiosity	% Republicans Congress	2008 Election
IMR	<b>0.38</b>	<b>0.47</b>	<b>0.70</b>	<b>0.32</b>	<b>0.39</b>
Teen Births	<b>0.21*</b>	<b>0.80</b>	<b>0.70</b>	<b>0.49</b>	<b>0.59</b>
Abortion	<b>0.34</b>	<b>-0.0075*</b>	<b>-0.25*</b>	<b>-0.40</b>	<b>-0.57</b>

Cohen, effect sizes = 0.1 small, 0.3 medium, 0.5 large

\*NOT SS

IMR = SS positively correlate with GINI, Child Poverty, Religiosity, % Republicans, & Election '08

Teen Births = SS positively correlate with Child Poverty, Religiosity, % Republicans, & Election '08

Abortion = SS positively correlate with GINI & SS negatively correlate with % Republicans & Election '08



# REGRESSION RESULTS

IMR	$\beta$ Coef.	SE	t	p-value	95% Conf.	Interval	R <sup>2</sup> =0.52
<b>Religion</b>	<b>0.07</b>	<b>0.02</b>	<b>3.79</b>	<b>0.00</b>	<b>0.04</b>	<b>0.11</b>	
<b>GINI</b>	<b>11.76</b>	<b>8.33</b>	<b>1.41</b>	<b>0.17</b>	<b>-5.03</b>	<b>28.55</b>	
<b>Child Poverty</b>	<b>0.0033</b>	<b>.030</b>	<b>0.11</b>	<b>0.91</b>	<b>-.056</b>	<b>.063</b>	
<b>Election '08</b>	<b>0.03</b>	<b>0.38</b>	<b>0.08</b>	<b>0.94</b>	<b>-0.74</b>	<b>0.79</b>	
<b>% Republicans</b>	<b>0.19</b>	<b>0.72</b>	<b>0.27</b>	<b>0.79</b>	<b>-1.25</b>	<b>1.64</b>	
<b>Intercept</b>	<b>-2.96</b>	<b>3.44</b>	<b>-0.86</b>	<b>0.40</b>	<b>-9.89</b>	<b>3.98</b>	

Teen Birth Rates	$\beta$ Coef.	SE	t	p-value	95% Conf.	Interval	R <sup>2</sup> =0.80
<b>Religion</b>	<b>0.19</b>	<b>0.12</b>	<b>1.64</b>	<b>0.11</b>	<b>-0.04</b>	<b>0.43</b>	
<b>GINI</b>	<b>-70.20</b>	<b>50.24</b>	<b>-1.4</b>	<b>0.17</b>	<b>-171.44</b>	<b>31.05</b>	
<b>Child Poverty</b>	<b>1.33</b>	<b>.18</b>	<b>7.45</b>	<b>0.00</b>	<b>.97</b>	<b>1.69</b>	
<b>Election '08</b>	<b>7.43</b>	<b>2.08</b>	<b>3.58</b>	<b>0.00</b>	<b>3.25</b>	<b>11.61</b>	
<b>% Republicans</b>	<b>4.70</b>	<b>4.32</b>	<b>1.09</b>	<b>0.28</b>	<b>-4.00</b>	<b>13.41</b>	
<b>Intercept</b>	<b>24.24</b>	<b>20.74</b>	<b>1.17</b>	<b>0.25</b>	<b>-17.57</b>	<b>66.04</b>	



Abortion Rates	$\beta$ Coef.	SE	t	p-value	95% Conf.	Interval	R <sup>2</sup> =0.44
Religion	-0.09	0.13	-0.67	0.51	-0.36	0.18	
<b>GINI</b>	<b>145.55</b>	<b>57.10</b>	<b>2.55</b>	<b>0.01</b>	<b>30.48</b>	<b>260.62</b>	
Child Poverty	.11	.20	0.55	0.58	-0.30	0.52	
<b>Election '08</b>	<b>-9.15</b>	<b>2.60</b>	<b>-3.52</b>	<b>0.00</b>	<b>-14.38</b>	<b>-3.91</b>	
% Republicans	0.75	4.91	0.15	0.88	-9.14	10.64	
Intercept	-44.23	23.58	-1.88	0.07	-91.74	3.29	





# INTERPRETING THE RESULTS: IMR

- As Religion scores increase by 1%, IMR is predicted to increase by 0.074 per 1,000 (or 1.1% at the mean).
  - That is a predicted **2.2 per 1,000 increase** in IMR from the least religious to the most religious states.
  - 52% of the variance in IMR among the states explained by the model.

State	Religion	IMR
New Hampshire	36% Least	3.9 Lowest
Mississippi	82% Most	10.0 Highest



# TEEN BIRTHS

- As child poverty rates increase by 1%, the teen birth rate is predicted to increase by 1.33/1,000
  - That is a predicted **39.3 per 1,000 increase** in teen births from the lowest to highest child poverty states.
- Voting “Red” in the ‘08 Presidential election, predicts a **7.4 per 1,000 increase** in teen births
  - 80% of the variance in teen births explained by model.

State	Election ‘08	Child Poverty	Teen Birth Rate
New Hampshire	Blue	11.9% Lowest	19.8/1,000 Lowest
New Mexico	Blue	34.9%	64.1/1,000
Mississippi	Red	41.7% Highest	65.7/1,000 Highest

# ABORTION

- For those states **voting “Red”** in the ‘08 Presidential election, **predicts a 9.2 per 1,000 decrease in abortions**

State	Election '08	Abortion
Delaware	Blue	40/1,000 Highest
Wyoming	Red	0.9/1,000 Lowest

- As GINI increases by 0.01, abortion is predicted to increase by 1.46 per 1,000.
  - That is a predicted **14.6 per 1,000 increase in abortion from the lowest to highest income inequality**
  - 44% of the variance in abortion explained by the model.

State	GINI	Abortion
Alaska	.41 Lowest	12/1,000
New York	.51 Highest	37.1/1,000



# CONCLUSIONS

## **Economic:**

- Greater child poverty rates are associated with higher teen birth rates
- Greater income inequality is associated with higher teen birth rates

## **Political:**

- Conservative “RED” voting patterns are associated with higher teen births & lower abortion rates

## **Religion:**

- Greater “religiosity” is associated with higher IMR



# SPECIAL THANKS

## GIS Mapping and Contributor

- Michael Wissner, M.S.
  - M.S. Geography and Environmental Systems, University of Maryland, Baltimore County
  - RPCV Peru '05-07
  - Fellow Alumni – Sargent Shriver Peace Worker



# 2008 RED VS. BLUE STATES

Factors	Blue State	Red State	Significance
	<b>Health Factors</b>		
<b>IMR</b>	<b>6.21</b>	<b>7.23</b>	<b>p=0.006</b>
<b>% Low Birth Wt.</b>	<b>7.8%</b>	<b>8.2%</b>	<b>Not SS</b>
<b>Teen Pregnancy</b>	<b>35.0</b>	<b>49.5</b>	<b>p&lt;0.0000</b>
<b>Abortion Rate</b>	<b>16.2</b>	<b>9.6</b>	<b>P=0.0001</b>
<b>Life Expectancy</b>	<b>79.1 years</b>	<b>77.5 years</b>	<b>p=0.0002</b>
	<b>Social Factors</b>		
<b>Obesity Rate</b>	<b>29.9%</b>	<b>32.3%</b>	<b>p=0.04</b>
<b>Disability Rate</b>	<b>10.0%</b>	<b>12.0%</b>	<b>p=0.0003</b>
<b>Suicide Rate</b>	<b>12.1</b>	<b>14.8</b>	<b>p=0.008</b>
<b>Firearm Death Rate</b>	<b>8.8</b>	<b>13.8</b>	<b>p&lt;0.0000</b>
<b>MVA Death Rate</b>	<b>11.3</b>	<b>18.6</b>	<b>p&lt;0.0000</b>
<b>Violent Crime Rate</b>	<b>394</b>	<b>424</b>	<b>Not SS</b>
<b>Incarceration Rate</b>	<b>359</b>	<b>477</b>	<b>p=0.003</b>



# 2008 RED VS. BLUE STATES

Factors	Blue State	Red State	Significance
	<b>Economic Factors</b>		
<b>GINI</b>	<b>45</b>	<b>45</b>	<b>Not SS</b>
<b>Poverty Rate &lt;18</b>	<b>23.7%</b>	<b>27.6%</b>	<b>p=0.02</b>
<b>Poverty Rate 18-64</b>	<b>16.5%</b>	<b>18.8%</b>	<b>p=0.03</b>
<b>Poverty Rate &gt;64</b>	<b>12.6%</b>	<b>13.6%</b>	<b>Not SS</b>
<b>Poverty Rate All</b>	<b>17.8%</b>	<b>20.4%</b>	<b>p=0.03</b>
<b>Median Income</b>	<b>\$55,523</b>	<b>\$46,701</b>	<b>p=0.0001</b>
<b>Business friendly</b>	<b>4.98</b>	<b>5.61</b>	<b>p=0.03</b>
<b>Per Capita HC \$</b>	<b>\$7,259</b>	<b>\$6,603</b>	<b>p=0.01</b>
	<b>Demographic Factors</b>		
<b>Religion</b>	<b>50.2%</b>	<b>62.5%</b>	<b>p&lt;0.0000</b>
<b>Population Density</b>	<b>297</b>	<b>64.6</b>	<b>p=0.001</b>
<b>Avg Household Size</b>	<b>2.5</b>	<b>2.5</b>	<b>Not SS</b>
<b>White, NH%</b>	<b>69.5%</b>	<b>73.8%</b>	<b>Not SS</b>
<b>Population &gt;65 %</b>	<b>13.60%</b>	<b>12.90%</b>	<b>Not SS</b>

