Percentage in each state answering Yes to, “If you knew for sure you would not get caught, would you commit murder for any reason?”

[Map showing state percentages with varying shades indicating the percentage of people answering Yes or No.]

- **YES**
- **NO**
Religious affiliation of U.S. Supreme Court justices, 1789-2010

Total number of justices of each denomination

- Protestant
- Catholic
- Jewish
- No religion
- Eastern Orthodox, Mormon, Muslim, others
1880 1884 1888 1960 1968 2000
1876 1916 1976 2004
Preferences in Political Mapping
(Measuring, Modeling, and Visualization)

Andrew Gelman
Department of Statistics and Department of Political Science
Columbia University

17 Mar 2016
Average economic and social ideology scores in each state
Average economic and social ideology scores among Bush voters (red) and Gore voters (blue) in each state.
Jimmy Carter Republicans and George W. Bush Democrats

Non-Monotonic Age Curve in 2008

Republican Vote

Age
Richer voters favor the Republicans, but richer states favor the Democrats.

Hierarchical logistic regression: predict your vote given your income and your state ("varying-intercept model")
Red state, blue state, rich state, poor state

- Richer voters favor the Republicans, but
- Richer states favor the Democrats
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- Richer *voters* favor the Republicans, *but*
- Richer *states* favor the Democrats
- Hierarchical logistic regression: predict your vote given your income and your state ("varying-intercept model")
Varying-intercept model, then model criticism, then varying-slope model

In any given state, the estimates would not be statistically significant!
3-way interactions!

1980

1984

1988

1992

1996

2000
Adding another factor: The inference...
... and the refutation!

- **Criticisms from the blogger “Daily Kos”:**
  - **Criticisms of the inferences:**
    "While Gelman claims only the under-$20K white demo went for Obama, the results were far different. Per the exit poll — real voters — Obama won all whites: 54–45 percent for those making under $50K, and 51–47% for those making over $50K. ... New Hampshire is solidly Blue unlike Gelman’s maps, 58–40 — one of the most obvious misses in Gelman's analysis. . . ."
  - **Criticisms of the method:**
    "Gelman inexplicably avoids using exit poll data — while exit polls have their own margin of errors and sample composition problems, they sure as heck beat anything done over the telephone."
  - **Traditional statistical “conservatism” will be no defense here!**
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I don’t like these colors
Did you vote for McCain in 2008?

Income categories: < $20,000, $20-40,000, $40-75,000, $75-150,000, > $150,000

- All voters
- White
- Black
- Hispanic
- Other races

When a category represents less than 1% of the voters in a state, the state is left blank.
A graph we made to study and criticize our inferences

2008 election: McCain share of the two-party vote in each income category within each state among all voters (gray) and just non-Hispanic whites (orange)
Replication using data from 2004

2004 election: Bush share of the two-party vote in each income category within each state among all voters (gray) and just non-Hispanic whites (orange)
Splitting the 2004 data into 2 parts
Ethnicity/religion, income, and school vouchers:
The raw data: