Rich State, Poor State, Red State, Blue State: What's the Matter with Connecticut

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

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- Income and voting: understanding aggregate and individual patterns
- Multilevel modeling and graphical display
- Some politics and some psychology
- Collaborators

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Democrats and Republicans, rich and poor

- I never said all Democrats are saloon-keepers. What I said is that all saloon-keepers are Democrats. — Horace Greeley, 1860
- Pat doesn't have a mink coat. But she does have a respectable Republican cloth coat. — Richard Nixon, 1952
- Like upscale areas everywhere, from Silicon Valley to Chicago's North Shore to suburban Connecticut, Montgomery County supported the Democratic ticket in last year's presidential election, by a margin of 63 percent to 34 percent. — David Brooks, 2001
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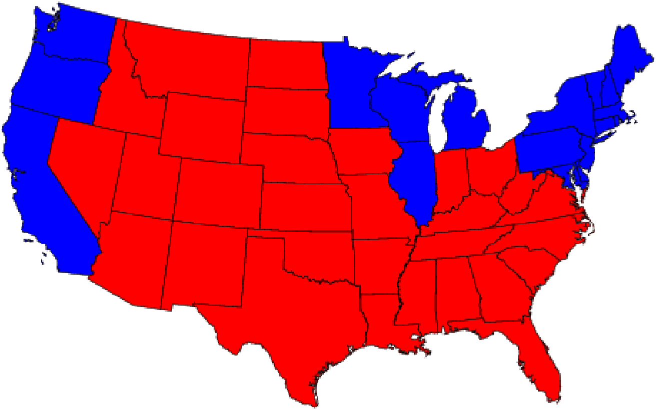

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- Rich *states* go for the Democrats, but rich *voters* go for the Republicans. How do we understand this?
- Why all the fuss since 2000?
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Richer states now support the Democrats

- In each presidential election year, run linear regression:
  - y = state vote share for the Republican
  - x = average income in the state
- Display time series of estimates ± standard errors (the "secret weapon")
- Quantitative version of looking at a series of red/blue maps
- Also do separate analyses for South, non-South

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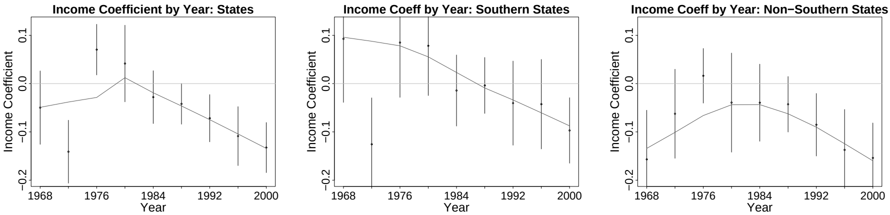

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- Each election year, logistic regression on individual voters:
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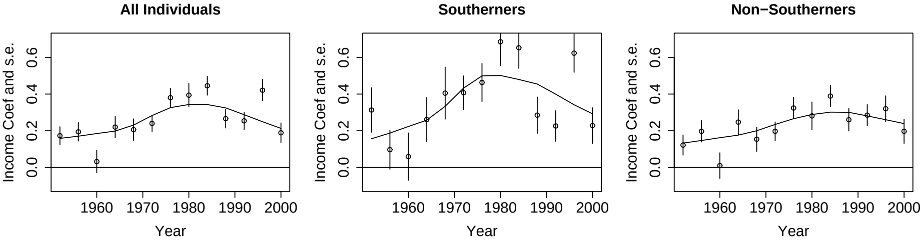

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Richer counties support the Republicans in some states and the Democrats in others

- Within each state, estimate regression on county data:
  - y = county vote share for the Republican
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- Varying-intercept, varying-slope model:
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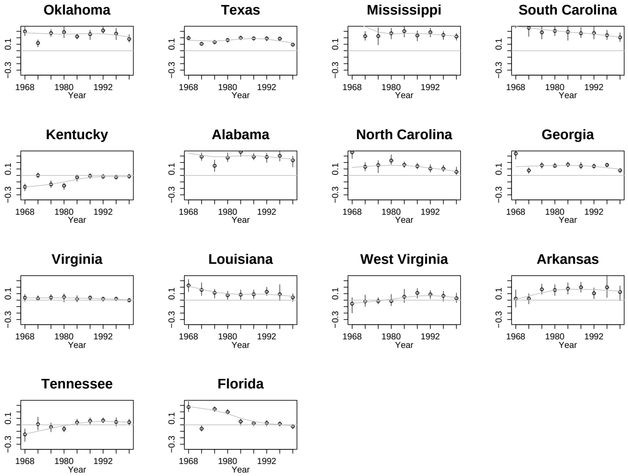
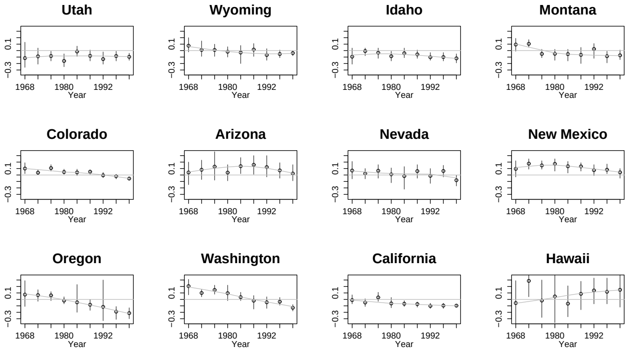
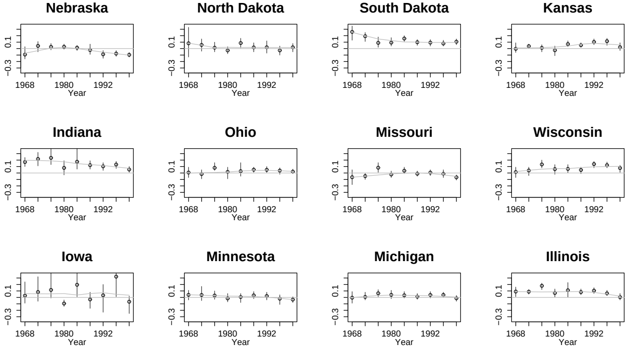
Coef of county-level income on county-level vote: South



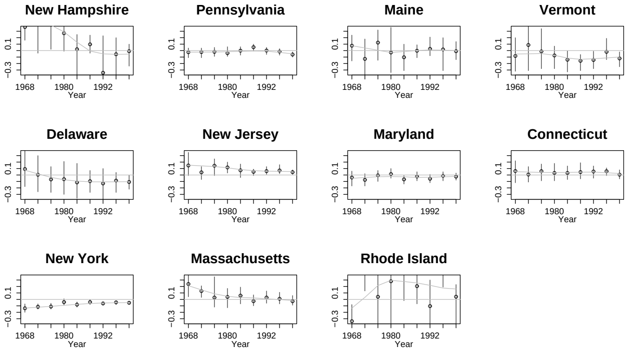
Coef of county-level income on county-level vote: West



Coef of county-level income on county-level vote: Midwest



Coef of county-level income on county-level vote:Northeast



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- In "media-center" states of New York, California, Maryland, and Virginia, richer counties slightly support the *Democrats*
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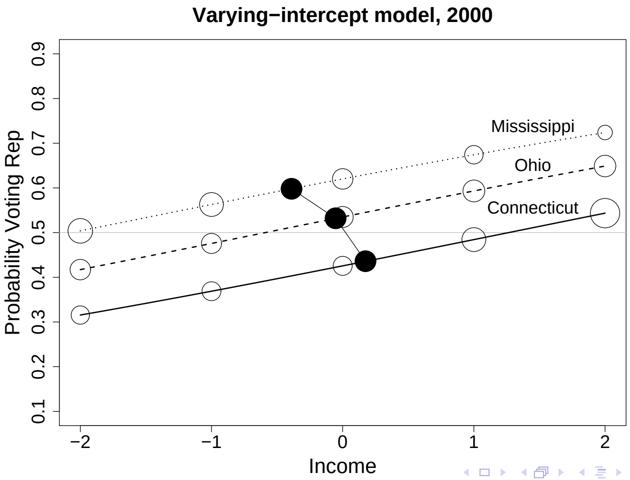

How do income/voting patterns vary by state

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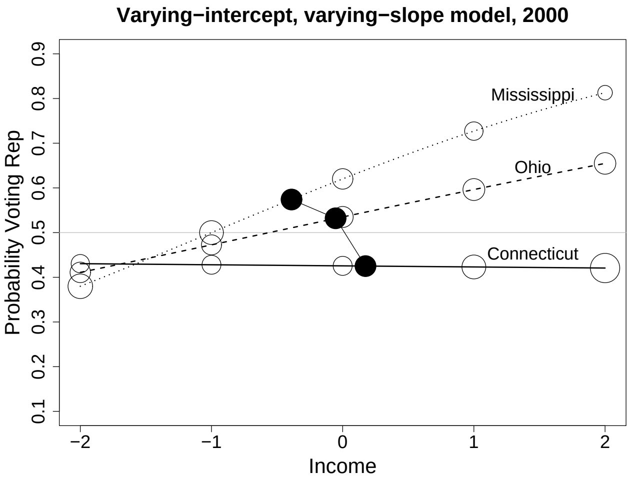
Income matters more in "red America" than in "blue America"



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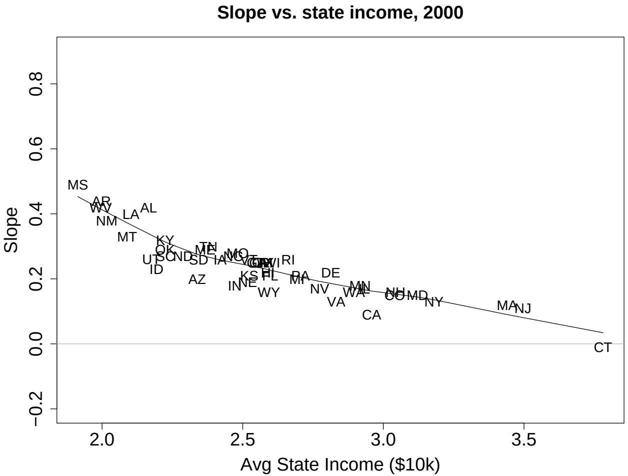

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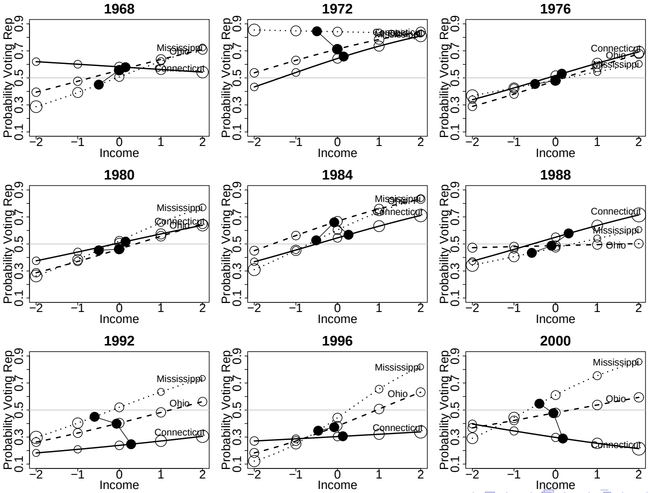
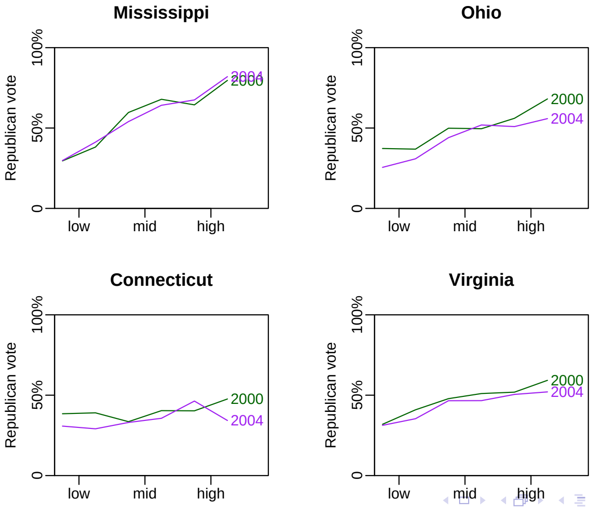


Income and vote preference from exit polls



Understanding the differences between states

- Richer states support the Democrats—even though, within any given state, richer voters tend to support the Republicans.
- The slope within a state is strongest in poor, rural, Republican-leaning "red" states and weakest in rich, urban, Democrat-leaning "blue" states.
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Presidential election results in 2000 and 2006

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  - Model a continuous outcome $y = 1, 2, 3$
  - Logistic regression comparing each party to the other two
  - Ordered logit, estimating cutpoints
- Data issues

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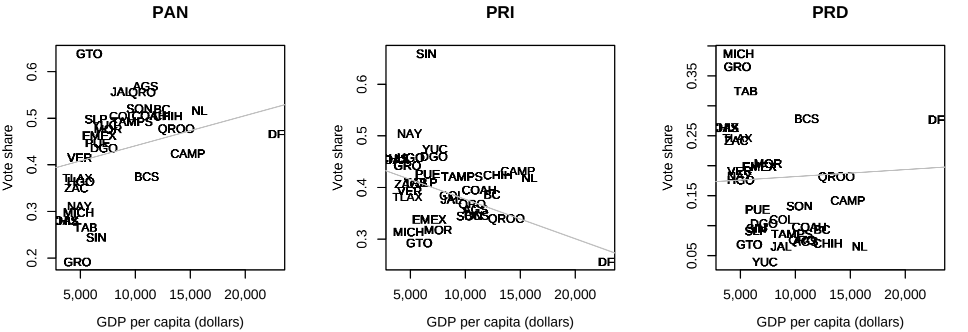
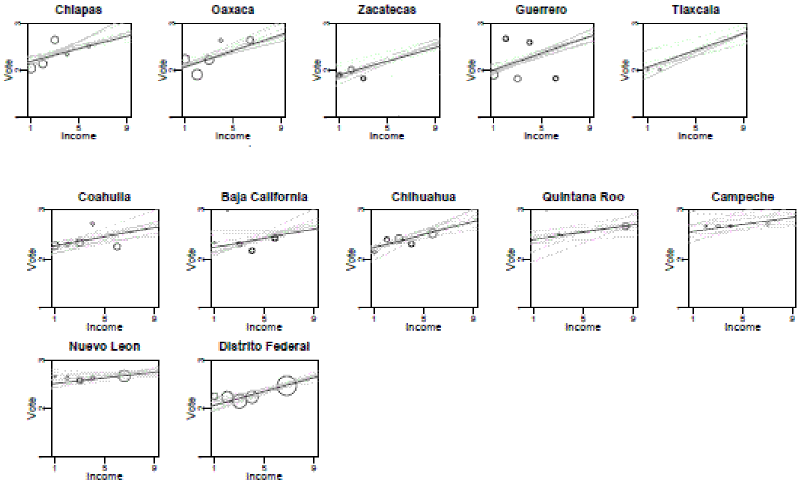
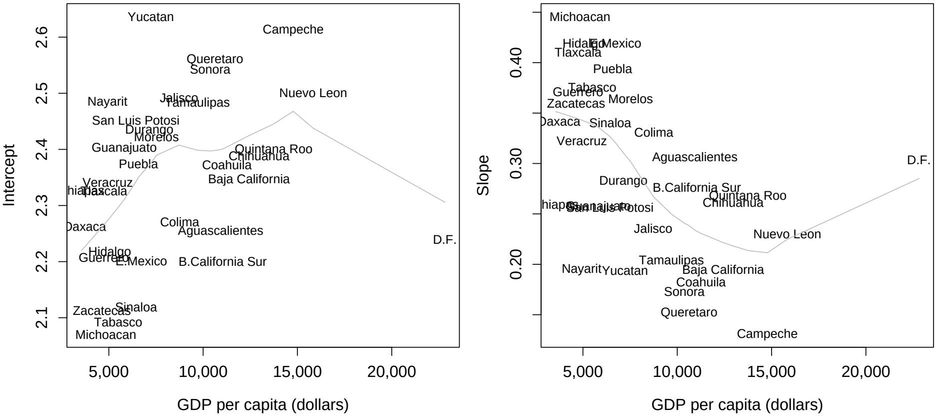
State vote vs. state GDP



Data and fitted lines within poor and rich states



Estimated intercepts and slopes vs. state GDP



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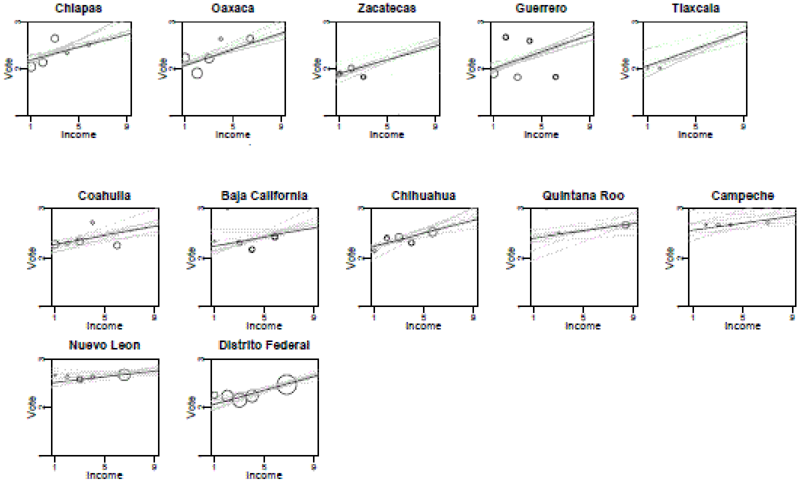

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