# Who Listens to Whom? Assessing Inequalities in Representation

Jeffrey Lax \*
Department of Political Science
Columbia University
jrl2124@columbia.edu

Justin Phillips
Department of Political Science
Columbia University
jhp2121@columbia.edu

Adam Zelizer
Department of Political Science
Columbia University
apz2002@columbia.edu

August 23, 2016

#### **Abstract**

Recent work in political science has demonstrated that policy outcomes at the national level are often more responsive to the preferences of the affluent than to the preferences of middle- or lower-income Americans. We expand upon this research by evaluating hypotheses that representational inequality varies by lawmaker type. In particular, we examine differential responsiveness as a function of lawmaker wealth and partisanship. Our empirical analysis focuses on a series of roll-call votes (just under 40) from the past eight legislative sessions. These include some of the most important economic, social, and foreign policy votes cast by members of Congress during this period of time. We estimate constituent preferences by income for each state using national-level survey data and advances in multilevel regression and poststratification (MRP). Our analysis advances the growing literature on the political economy of inequality by developing a more complete understanding of the dimensions, causes, and dynamics—both micro and macro—of differential representation.

<sup>\*</sup>This project is funded by a grant from the Russell Sage Foundation.

### 1 Introduction

While decades of research in political science has documented a strong link between public preferences and government policy (Page and Shapiro 1983; Stimson, MacKuen, and Erikson 1995; Erikson, Wright, and McIver 1993; Lax and Phillips 2012), scholars have recently focused on whose preferences are most influential and when. Some of this new work has demonstrated that policy outcomes tend to be more responsive to the preferences of the affluent than to the preferences of middle- or lower-income Americans (Jacobs and Page 2004; Bartels 2008; Gilens 2012). As economic inequality continues to rise, the prospect of a vicious cycle emerges in which the disproportionate influence of the affluent leads to policies that exacerbate economic inequality and further increase the inequality of influence.

We investigate the claim of unequal representation in national policymaking, doing so in new way. Rather than looking at system level outcomes as most existing studies do, we consider the responsiveness of members of Congress, comparing the roll call votes of individual senators to the preferences of their constituents across a variety of income categories. We also connect and distinguish between partisan responsiveness and differential responsiveness by income level.

We focus on a series of roll-call votes (39 in total) from eight prior legislative sessions. These include some of the most important economic, social, and foreign policy votes cast by members of Congress during this period of time. Our sample of votes includes healthcare reform, President Obamas stimulus bill, an extension of the Bush tax cuts on capital gains, the Federal Marriage Amendment, and a vote to withdraw American military personnel from Iraq.

To estimate public opinion we will rely upon multi-level regression and poststratification (MRP). This technique, first presented by Gelman and Little (1997), uses national surveys and advances in Bayesian statistics and multilevel modeling to generate opinion estimates by demographic-geographic subgroups. MRP has been shown to produce accurate estimates of public opinion by state and by congressional district. Here, because of the importance of accurately estimating preferences across incomes groups, we developed a more nuanced MRP that allows for the effects of income on opinion to differ across states, effectively incorporating the finding of Gelman

et al. (2007) that the impact of income on political preferences differs across states. The survey data we employ come from the Cooperative Congressional Election Study (CCES), the National Annenberg Election Survey, and a variety of other reputable polling firms (e.g., Gallup, Pew, etc.). The surveys ask respondents how they would vote on a variety of salient pieces of legislation if they were a member of Congress or how they would like their member of Congress to vote. By using policy-specific survey questions, we are able to place our measures of public opinion and roll call votes on a common metric, avoiding problems of inference that arise when scholars employ aggregate liberalism or other indirect measures of preferences (Achen 1978; Matsusaka 2001). We explain in a later section why it is important to focus on dyadic representation in this way as part of a larger aggregate analysis, rather than only treating responsiveness as an aggregate phenomenon.

We employ our estimates of opinion in two ways to assess democratic responsiveness. First, we examine the strength of association between the preferences of different income groups and Senators' roll call votes. To the extent that policymakers respond more to the preferences of their higher-income constituents (as found in Gilens 2012), we expect higher-income groups' preferences to be better predictors of roll call votes than the preferences of lower-income groups, net of the various control variables we include in our analyses. Second, we consider congruence, that is, the matching of policy to the majority preferences within each income category. In particular, we focus on those policy areas where there is disagreement across income groups. If senators are more responsive to their wealthy constituents, we should observe a higher rate of congruence for the top income groups. There is an important advantage to analyzing congruence with data like these—the high correlation between preferences across income categories can make it hard to identify the unique impact of preferences at different income levels (due to multicollinearity among the preferences of all three groups in a single regression model). Our congruence analysis compensates for this. Even given uncertainty in estimating exact opinion levels, estimates of what the majority wants are more robust, and should yield starker differences in income group policy success.

In addition, we will also document the extent to which the quality of representation received

by the lower and middle classes varies across issue areas. Are these voters better represented on social or economic matters? Are elected officials making predictable tradeoffs across income groups and issues areas? That is, are they choosing to represent the affluent when it comes to most policy decisions, but deferring to lower- and middle-income voters under certain circumstances? Furthermore, since we have preferences and policy (i.e., votes) on a common metric, we can evaluate hypotheses that representational inequality varies by lawmaker type. Existing work, because of either the particular preference measures employed (Bartels 2008) or the outcomes studied (Gilens 2012), has been unable to consider this sort of variation. Though we only begin to do so here, we can, for example, interrogate the frequently offered hypothesis that representational inequality stems in part from the fact that politician themselves tend to be more affluent than the average voter, and thus are simply pursuing the interests with which they are familiar. Another possibility is that increased Republican power at the Federal level drives increased attention to the wealthy. To evaluate this hypothesis, we consider whether Republican lawmakers are more likely than their Democratic counterparts to follow the wishes of wealthier constituents.

As part of this project, we also compare differential responsiveness by income to another potential pathology in representation—the tendency of lawmakers to respond more to the opinions of their co-partisans than to the opinions of the median voter. Recent empirical work has found that senators more heavily weight the preferences for their partisan base when casting roll call votes on the confirmation of nominees to the Supreme Court (Kastellec et al. 2015). We extend this existing work by considering differences in responsiveness to partisan subconstituencies across a range of issues and placing this in the context of varying responsiveness across economic class. We also explore the possibility that what looks like asymmetric responsiveness by income, may in fact be, partisan responsiveness or a symmetries in responsiveness across parties, as in Krimmell et al (forthcoming). To facilitate this analysis we not only estimate state-level public opinion by income groups, but also (separately) by partisanship, generating estimates of support for each roll call vote by a senator's Democratic, Independents, and Republican constituents.

In studying differential responsiveness, the preferences estimates we generate provide im-

portant new descriptive statistics about subnational public opinion. These estimates tell us how much the opinions of the wealthily differ from those of the middle- and lower-classes at the state level and whether these differences. Our estimates also answer questions about which issues areas have the largest class-based differences and the states in which differences are largest. Our estimates also tell us the corresponding information about state-level differences in opinion between Democrats and Republicans, placing class and partisan differences in context. Therefore we can also discuss on which dimension conflict occurs.

Overall, our investigation will advance the growing literature on the political economy of inequality by developing a more complete understanding of the dimensions, causes, and dynamics—both micro and macro—of differential representation. By identifying alternative sources of representational inequality, our findings could be of practical use to reformers within and outside of government. Finally, as part of this project, we will further develop the statistical tools and methods for studying responsiveness and generate a unique set of opinion estimates for both states and congressional districts, making all of these available for future work.

# 2 Methodology & Data

To estimate state public opinion by income groups and by partisan identification we will rely upon multi-level regression and poststratification (MRP). This technique, first presented by Gelman and Little (1997), uses national surveys and advances in Bayesian statistics and multilevel modeling to generate opinion estimates by demographic-geographic subgroups. MRP has been shown to produce accurate estimates of public opinion by state and by congressional district (Park, Gelman, and Bafumi 2006, Lax and Phillips 2009a, 2013, Rodden and Warshaw 2012), using a relatively small number of survey respondents—as few as contained in a single (moderately-sized) national poll—and fairly simple demographic-geographic models of preferences (Lax and Phillips 2009a). Indeed, MRP has emerged as the new "gold standard for estimating constituency preferences from national surveys" (Selb and Munzert 2011, p. 455).

MRP proceeds in two stages. In the first stage, a multilevel model of individual survey response is estimated, with opinion modeled as a function of a respondent's demographic and ge-

ographic characteristics. The state of the respondents is used to estimate state-level effects, which themselves are modeled using additional state-level predictors such as aggregate demographics. Residents from a particular state yield information on how responses within that state vary from others after controlling for demographics. All individuals in the survey, no matter their location, yield information about demographic patterns which can be applied to all state estimates. The second step of MRP is poststratification: the opinion estimates for each demographic-geographic respondent type are weighted (poststratified) by the percentages of each type in the actual population of each state. This allows us to estimate the percentage of respondents within each state by income category and partisanship who have a particular issue position or policy preference.

[Note: for this draft, we are using preliminary estimates from a reduced MRP model, based on party, state, and income. We will update the numbers as possible for the presentation, but do not expect drastic differences.]

In stage one, we model survey response (i.e., whether a respondent supports a given policy proposal) as a function of a respondent's race and gender combination (males and females divided into three racial categories—black, Hispanic, white, and other), age (18-29, 30-39, 40-49, 50-59, 60-69, and 70+), education (less than a high school education, high school graduate, some college, college graduate, and post-graduate education), partisan affiliation (Democrat, Independent, or Republican), income category, state, and interactions between state and income category.

Income effects occur as follows. There are 14 to 16 income categories, depending on the poll. We allow for random effects by category. There is a linear trend across these based on the midpoint of each category. We also take the square root of this midpoint for an additional trend variable, in case the trend is not linear. We allow both these continuous trend variables to vary by state.

As a state level predictor, we use DPSP which stands for demographically purged state predictor. This measure was created by Lax and Phillips (2013) and is based upon their work estimating state-level policy preferences across a wide range of issues (see Lax and Phillips 2012). In essence, DPSP is the average liberal/conservative shift in state-level public opinion, after con-

trolling for a variety of demographic predictors. Because DPSP was estimated across a wide set of policies it is a good default for state level intercept shifts when using MRP to predict opinion on a given issue.

With the results of this modeling stage, we then estimate opinion for each of our demographicgeographic respondent types. We do, however, face a complication that is not present in most applications of MRP. Typically, researchers poststratify their estimates using population frequencies from the Census "5-Percent Public Use Microdata Samples" or the American Community Survey. Unfortunately, these data do not include partisan identification. Thus, using standard MRP one can estimate the level of support for, say, President Obama's health care reform among middle-income college-educated black females aged 18-29 in California, but one cannot estimate the level of support among Republican, Independent or Democratic individuals of the same type. Fortunately, a recent paper by Kastellec et al (2015) presents a solution to this dilemma, using the Census data as a starting point. Their approach involves using an additional stage of MRP to generate a new poststratification file that includes party. We begin by collecting data on individual survey responses about partisan identification (i.e. whether a respondent is a Democrat, Republican, or an Independent) across multiple points in time spanning the years of our public opinion surveys. We then model partisanship as a function of demographic and geographic variables. Specifically, we treat partisanship as a response variable and apply standard MRP to estimate the distribution of partisanship across the full set of "demographic-geographic types" from above. We then have an estimate of the proportion of Democrats, Independents, and Republicans among, say, income-category-3 (30 to 40K) college-educated black females aged 30-45 in California.

We then break down our estimates by state quintile, forming five equally sized groups within each state, broken down by income, so that we can look at the opinion of the "rich" (top quintile), "poor" (bottom quintile), or middle (middle quintile).

The survey data that we rely upon to generate our estimates of constituent opinion come from the comment content portion of Cooperative Congressional Election Survey (CCES), the National Annenberg Election Survey, and a variety of other reputable polling firms such as Gallup

and Pew.

From these surveys, we have identified questions that ask respondents their preferences on roll call votes that were actually taken by members of Congress. For example, in 2012, one such questions asked respondents whether they would support a plan to extend Bush era tax cuts for incomes below \$200,000; another asked whether the Affordable Care Act should be repealed. The survey data employed ask respondents how they would vote on these issues if they were a member of Congress. Across the surveys with which we are working, we have identified 39 such questions. These include some of the most important economic, social, and foreign policy votes cast by members of Congress during the past four legislative sessions. Our sample of votes includes healthcare reform, President Obamas stimulus bill, an extension of the Bush tax cuts on capital gains, the Federal Marriage Amendment, and a vote to withdraw American military personnel from Iraq.

Table 1 provides a list of the 39 issues/roll call votes for which we measure constituent preferences. For each, we measure the share (of those with an opinion) who favor a "yes" vote (note that a separate MRP model is estimated for each issue). We generate measures of preferences by income quintile and by party (Republicans, Democrats, and Independents) in each state.

# 3 Dimensions of Conflict: Opinion by Class & Party

We begin with a discussion of our opinion estimates—how much does state-level public opinion differ as a function of economic class and political party? As has prior research (see Gilens 2012), we find a strong correlation between the policy preferences held by the upper and lower economic classes. The average correlation (within a state) between the preferences of the top and bottom income quintiles is a whopping 0.82 (the range is .743 (Virginia) to .867 (Iowa)). On most policy questions, upper and lower-income individuals have similar preferences: across all 39 of the issues in our study, the average distance between the preferences of the top and bottom quintile is approximately 8 percentage points. The states with the lowest correlation between rich and poor opinion are VA, GA, TX, MD, NJ; the states with the highest correlation are WY, SD, ND, VT, IA.

This does not mean, however, that there are not instances of disagreement. In our opinion estimates, we find that the top and bottom quintiles prefer different policy choices (i.e., are on opposite sides of the 50% opinion threshold) approximately 19% of the time. This occurs most frequently on economic issues, especially free trade and taxation. When compared to their high-income counterparts, members of the lowest quintile are much less likely to support expanding free trade agreements and much more likely to support progressive forms of taxation. Lower income voters are also more likely to support social safety net programs, such as programs to expand access to healthcare. We also observe some disagreement in social policy, where members of the highest income quintile are more likely to support gay and lesbian rights as well as abortion rights. We can observe these patterns in Figure 1, which plots the difference in opinion between high and low income earners (averaged across all states) by issue.

There is also variation across states in terms of the size of class-based differences in opinion. Figure 2 plots mean differences by state, for all issues (the leftmost panel) and for different subsets of issues (economic, social, and defense/foreign policy). The overall mean difference ranges from a high of 9.4 percentage points in Virginia to a low of 7.3 percentage points in North Dakota. Figure 3 maps the mean difference by state across all 39 policies. Here we observe a distinct pattern—public opinion in southern states appears to be more polarized by class by than it is elsewhere. Opinion is least polarized by class in the states that fall in the northern Rockies. This geographic pattern suggests that racial diversity may be a key predictor of class-based opinion polarization. Indeed, this is what we observe in Figure 7, which uncovers a strong correlation between the share of a state's population that is black and the average size of the opinion difference between high and low-income individuals.

How do differences in opinion by income quintiles compare to partisan differences on the same set of issues? Unsurprisingly, partisan opinion polarization is much higher. The average state-level distance between the preferences of Democrats and Republicans is approximately 40 percentage points. Thus, while the top and bottom income quintile agree on many issues, self-identified Democrats and Republicans do not (at least on the issues studied here). We find that

the Democrats and Republicans disagree 67% of the time. This means that on the types of salient issues we study here, a senator's Democratic and Republican constituents are likely to pressure her to cast very different votes—she have will often have to decide which group to prioritize. Additionally, it is important to note that differences by income are small but vary more by state than differences by party vary by state, even though difference by party are larger than average.

Figure 4 shows the difference in opinion between self-identified Democrats and Republicans (averaged across states) by issue. The greatest partisan polarization is present on defense and social policy issues, where the average state-level gap between Democratic and Republic opinion is 59 and 52 percentage points respectively. Partisan polarization is lowest on economic issues, where the gap is approximately 30 points. Figure 5 plots mean differences in partisan polarization by state, for all issues (the leftmost panel) and for different subsets of issues (economic, social, and defense/foreign policy). There are not large differences across states—the range goes from a high of approximately 40.7 percentage points (Texas) to a low of 39.6 (New York) In other words, we observe high amounts of partisan polarization of opinion across all states. Unlike with class-based opinion polarization, the extent of state-level partisan polarization does not appear to be a function of the racial heterogeneity of a state (Figure 7 suggests a weak positive correlation between partisan polarization and the share of the population that is black).

Finally, Figure 8 plots, by issue, class-based opinion polarization against party-based polarization. This figure demonstrates that there are unique patterns by issue type. For example, even a cursory glance at this figure shows that economic issues largely lie near the upper left-hand quadrant, indicating that opinion on these issues tends to be relatively more polarized by class than by party. On the other hand, social issues often fall in the lower right-hand quadrant, indicating they tend to experience relatively more party polarization as opposed to economic polarization.

While at this point we have separately analyzed opinion by class and by party, we hope (in a future iteration of the paper) to consider the interaction between the two. That is, to make comparisons between the opinions of high-income and low-income Democrats and high-income and low-income Republicans. Doing so should help further our understanding of the ways in which

opinion varies across the geography of the United States and ot pride important information about the interaction of class and party in American politics.

#### 3.1 Differential Responsiveness

Now that we have our opinion estimates we can evaluate the responsiveness of lawmakers to public opinion.<sup>1</sup> We proceed by first considering the relationship between the preferences of different income groups and the roll call votes cast by their senators. Because preferences across income quintiles are so highly correlated, we cannot included the preferences of all (or even) several groups in regression models at the same time. Instead we estimate simple bivariate regressions in which we include the preferences of one group at a time—low-income constituents (the bottom quintile), middle-income constituents, or high-income constituents (the top quintile)—and then compare the coefficients on our measure of preferences across models. If senators tend to listen more to the wealthy, then the coefficient on opinion should be largest in the model that estimates the relationship between wealthy opinion and roll call voting. While this analysis is less than ideal, it is virtually identical the approach used in recent work by Gilens (2012).

The results of these regressions are reported in Table 2. As one can clearly see, public opinion is a statistically meaningful predictor of senatorial roll call voting in each model. However, as we anticipated, the size of the coefficient on opinion increases as one moves from lower to higher income groups. Indeed, the coefficient for the top quintile is twice as large as that of the bottom quintile (0.35 vs. 0.17).

A second approach to analyzing our data is to look not just at responsiveness (i.e., the correlation between opinion and roll call votes), but also to consider congruence, that is, whether a group actually gets the vote that it desires from its senator. We report the results of this analysis in Table 3. If the opinions of the well-to-do mater more, we should expect to observe the members of the highest quintile prevailing more frequently. The top row of the table is the share of the time (across all issues) that the top ands bottom quintiles get their desired vote. Each does so a majority of the time, with the top quintile prevailing slightly more frequently (of course one might

<sup>&</sup>lt;sup>1</sup>Data on the votes cast by senators will be obtained from Congressional Quarterly.

not expect to observe much of a difference here, since on most of the issues in our study members of the top and bottom quintile share similar preferences). Recognizing this, we conduct the same basic analysis, but this time focus only on those issues where the top and bottom quintile (in a given state) disagree. The results of this analysis are reported in the bottom row of the table. Here we observe a bigger difference in success across income quintiles. When there is disagreement, the top quintile prevails over the lowest income quintile nearly 60% of the time. This result is again consistent with a world in which the opinions of the well-to-do carry more weight with elected officials than do the opinions of lower-income individuals.

Importantly, our data enable us to look more closely at roll call voting behavior for those issue on which low and high-income constituents have different preferences. In doing so, make a few observations. First, despite the general tendency for senators to side with their more well-to-do constituents, it is rarely the case that senators (on any given roll call vote) do so overwhelmingly. There is typically a mix of senators who vote in the way preferred by the top quintile while others vote in the way preferred by the bottom quintile. Second, the few times in our data when we observe senators voting overwhelming against the preferences of low-income constituents are free trade agreements (i.e.., legislation to extend NAFTA and to create adopt a U.S.-Korea free trade pact). Other than this, we don't (at this point) observe consistent patterns across types of issues—i.e., it is not that the poor are consistently "losing" on economic issues, but doing well on social issues (for example). Finally, the only instance in which we observe senators overwhelmingly siding with their lower income constituents over their wealthier ones is on a roll call vote for a foreclosure assistance program following the 2008 financial collapse.

Figure 10 presents one last cut at the data. Here we again focus only on instances of disagreement between low and high-income quintiles. The x-axis is the percent of time that a senator votes in accord with the preferences of the low-income quintile, while the y-axis measures the percent of the time that the same senator votes in accord with the preferences of the high-income quintile. Senators listed in red are Republicans and those listed in blue are Democrats. Even a cursory glance at the figure shows that Republican senators tend to fall near the top left-hand

region of the graph and Democrats near the lower right-hand side. This indicates that Republicans (at least among the issues we consider here) side with the wealthy over the poor more frequently than do Democrats. Indeed, when the rich and poor disagree the democrats side with the rich 44% of the time, while the Republicans side with the rich 74%. Putting this another way, Democrats are giving the poor a slight edge, the Republicans are giving the rich a big edge. It is suggestive evidence that our finding of unequal representation is being largely driven by the behavior of Republican lawmakers. Of course, more work needs to be done to explore this possibility.

Interestingly, it appears that much of the time when Republicans are voting against low-income constituents, they are actually siding with their state co-partisans. On those issues where rich and poor opinion differs, Republicans vote 92% of the time in a manner that is congruent with the opinion of their home state party median. In essence, Republicans (when siding with the rich) are still engaged in an understandable form of responsiveness. When there is disagreement between rich and poor, Republicans only vote against their fellow partisans 7.5% of the time–4.7% to vote with the rich and 2.8% to vote with the poor. When Democrats break with their party, which occurs only 17.4% of the time, they do so to vote with the rich 12.7% of the time and poor 4.7% of the time. So, to be sure, when partisan constituency voting is not occurring, the rich are beating the poor two to one in influence. But this is a small percent of votes.

#### 3.2 Conclusion & Discusion

In this paper, we investigate the claim the government tends to be more responsive to the preferences of the affluent than to the preferences of middle- or lower-income Americans. However, rather than looking at system level outcomes as most existing studies do, we consider the responsiveness of individual senators to the preferences of their constituents across income quintiles, matching issue-specific public opinion to corresponding roll call votes.

In doing so, we produce a set of state-level opinion estimates that provide important new descriptive statistics about subnational preferences. These estimates tell us that opinion polarization by income is not as common as one might expect. In most instances, the top and bottom quintile have similar policy preferences. Indeed, cross the 29 issues we study here, the average

distance between the preferences of the top and bottom quintile is approximately 9 percentage points. Differences by income category appear to be greatest for questions of economic policy. Opinion differences by class are much smaller than opinion polarization along partisan lines. We find that the average state-level difference between the preferences of Democrats and Republicans is approximately 43 percentage points. Partisan opinion polarization appears to be greatest for social policy and defense issues.

Using our opinion estimates for state income quintiles, we examine the strength of association between the preferences of different income groups and senators roll call votes. We also consider whether high or low-income quintiles are more likely to get their way on roll call voting. Though our analysis is preliminary, we find evidence consistent with the presence of representation inequality in national policymaking. First, in responsiveness models, the size of the coefficient on opinion increases as one moves from lower to higher income groups, with the coefficient for the top quintile being over twice as large as that for the bottom quintile. Furthermore, when we consider the congruence between opinion and roll call voting, we find a similar pattern. When there is disagreement between the top and bottom quintile in terms of the preferred policy, the top quintile prevails over the lowest income quintile nearly 60% of the time. These results are consistent with other recent work that takes a sightly different approach to studying differential responsiveness. Finally, a further exploration of these results suggests that this inequality in representation is largely being driven by Republican lawmakers.

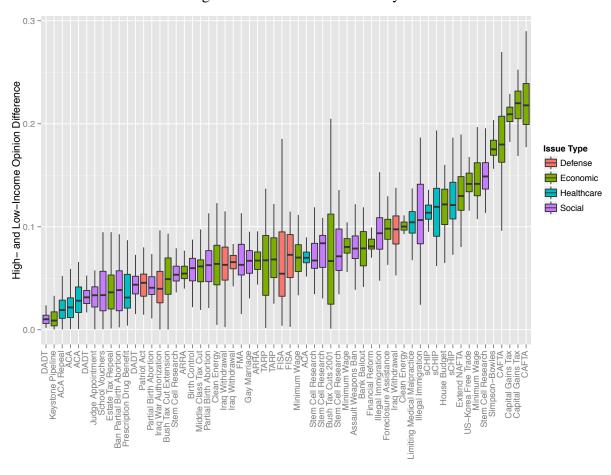


Figure 1: Income Polarization by Issue

*Note:* This figure shows the difference in opinion between high and low income earners (averaged across states) by issue.

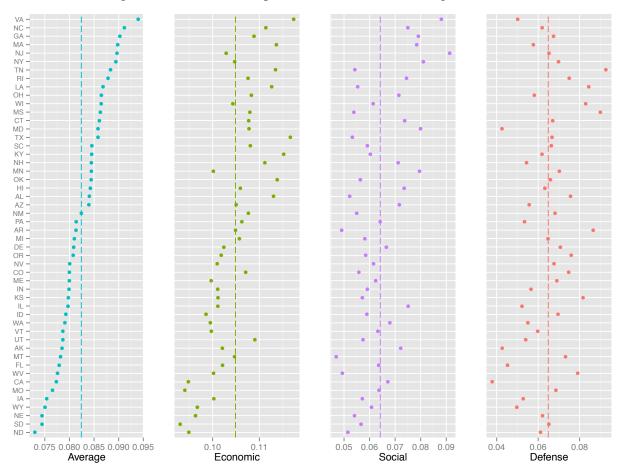


Figure 2: Class-Based Opinion Polarization, Ranking the States

*Note:* This graph shows the average difference in opinion between the top and bottom income quintile for each state. The leftmost panel is the average difference in opinion across all 29 roll call votes we study. Each of the subsequent panels considers only a subset of issues.

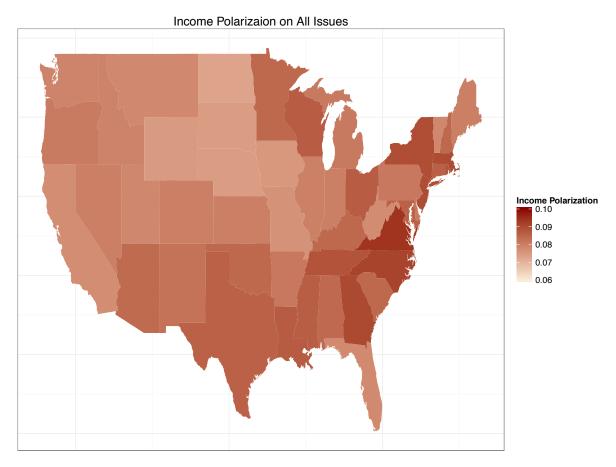


Figure 3: Map of State Income Polarization

*Note:* This map shows the average difference in opinion between the top and bottom income quintile across all issues.

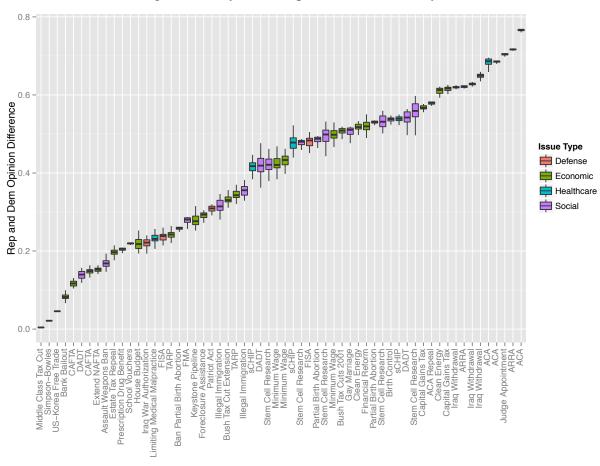


Figure 4: Party-Based Opinion Polarization by Issue

*Note:* This figure shows the difference in opinion between self-identified Democrats and Republicans (averaged across states) by issue.

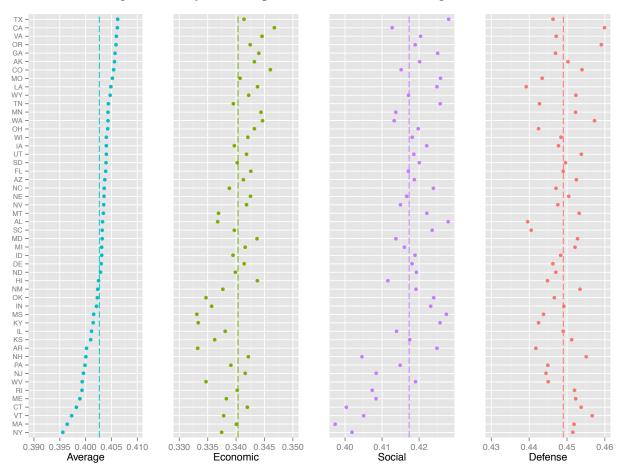


Figure 5: Party-Based Opinion Polarization, Ranking the States

*Note:* This graph shows the average difference in opinion between self-identified Democrats and Republicans for each state. The leftmost panel is the average difference in opinion across all 39 roll call votes we study. Each of the subsequent panels considers only a subset of issues.

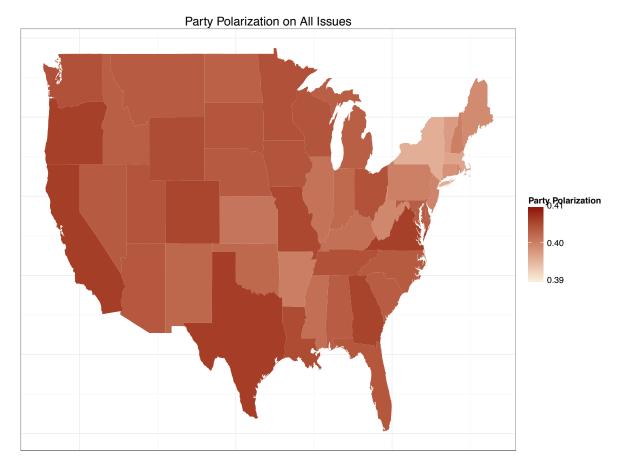


Figure 6: Map of State Party Polarization

*Note:* This map shows the average difference in opinion between the top and bottom income quintile across all issues.

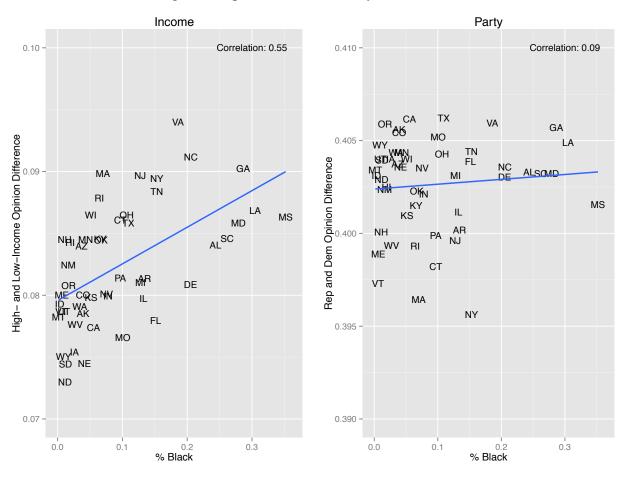


Figure 7: Opinion Polarization by Percent Black

*Note:* This graph on the left shows the correlation between the share of a state's population that black (the x-axis) and the state's average difference in opinion between the top and bottom income quintile. The graph on the right os the correlation between partisan differences and race.

Partisan and Income Polarization by Issue CAFTA Capital Gains Tax Capital Gains Tax 0.20 CAFTA Simpson-Bowles Opinion Difference by Income Stem Cell Research
Minimum Wage US-Korea Free Trade Extend NAFTA sCHIP House Budget sCHIP sCHIP **Limiting Medical Malpractice** Clean Energy Iraq Withdrawa Foreclosure Assistance Bank Bailoutsault Weapons Bar Minimum Wage TARP Gay Marriage P Clear Brinergyortion and Withdrawal Middle Class Tax Cut Stem Cell Restarchtrol 0.05 -Judge Appointment DADT ACA ACA Repeal Keystone Pipeline 0.0 0.2 0.4 0.6 0.8 Opinion Difference by Party

Figure 8: Partisan and Income Polarization

*Note:* The x-axis is the difference in opinion between Democrats and Republicans (averaged across states), while the y-axis is the difference in opinion between the top and bottom quintile (again averaged across states) Note that the x and y axes are not on the same scale.

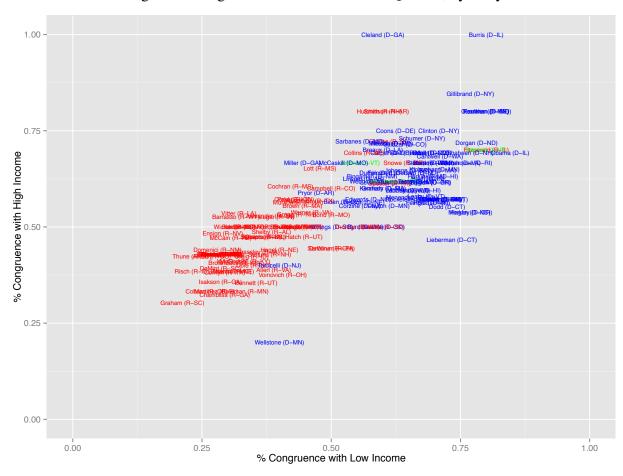


Figure 9: Congruence with Low-Income Quintile, by Party

*Note:* The x-axis is the percent of time (overall) that a senator votes in accord with the preferences of the low-income quintile. The y-axis measures the percent of the time that the same senator votes in accord with the preferences of the high-income quintile. Note, the names have been jittered a bit to create some legibility.

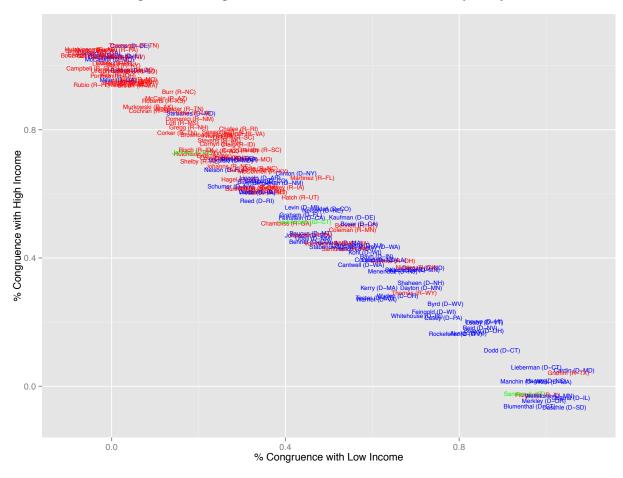


Figure 10: Congruence with Low-Income Quintile, by Party

*Note:* The x-axis is the percent of time, when there is disagreement between the low and high-income quintile, that a senator votes in accord with the preferences of the low-income quintile. The y-axis measures the percent of the time that the same senator votes in accord with the preferences of the high-income quintile (when there is disagreement between the preferences of low and high income groups).

Bill Name	Survey Year	N	Question
House Budget	2012		Budget plan would cut Medicare and Medicaid by 42%. Would reduce debt by
			16% by 2020.
Middle Class Tax Cut	2012		Would extend Bush era tax cuts for incomes below \$200,000. Would increase the
			budget deficit by an estimated \$250 billion.
Tax Hike Prevention	2012		Would extend Bush-era tax cuts for all individuals, regardless of income. Would
			increase the budget deficit by an estimated \$405 billion.
Birth Control	2012		Let employers and insurers refuse to cover birth control and other health services
			that violate their religious beliefs.
US-Korea Free Trade	2012		Remove tariffs on imports and exports between South Korea and the U.S.
Affordable Care Act Repeal	2012		Repeal the Affordable Care Act.
Keystone Pipeline	2012		A bill to approve the Keystone XL pipeline from Montana to Texas and provide for
			environmental protection and government oversight.
			through 2014 and include 4 million additional children.
			provider. Sets up health insurance option for those without coverage. Increases taxes
			on those making more than \$280,000 a year.
SCHIP	2010		Program insures children in low income households. Act would renew the program
			through 2014 and include 4 million additional children.
Affordable Care Act	2010		Requires all Americans to obtain health insurance. Allows people to keep current
			provider. Sets up health insurance option for those without coverage. Increases taxes
			on those making more than \$280,000 a year.
Judicial Appointment	2010		Appoint Elena Kagan to the U.S. Supreme Court
Financial Reform	2010		Protects consumers against abusive lending. Regulates high risk investments known
i manetar Reform	2010		as derivatives. Allows government to shut down failing financial institutions.
"Don't Ask, Don't Tell"	2010		Would allow gays to serve openly in the armed services.
Don't Ask, Don't Ten	2010		a court order.
TARP	2010		
Iraq Withdrawal	2008		\$700 billion loans to banks to stabilize finance
1			Withdraw Troops from Iraq within 180 days.
Minimum Wage	2008		Increase Minimum Wage from \$5.15 to \$7.25
Stem Cell Research	2008		Allow federal funding of embryonic stem cell research.
FISA	2008		Allow U. S. spy agencies to eavesdrop on overseas terrorist suspects without first
			getting a court order.
SCHIP	2008		Fund a \$20 billion program to provide health insurance for children in families
			earning less that \$43,000
Federal Assistance for Housing Crisis	2008		Federal assistance for homeowners facing foreclosure and large lending institutions
			at risk of failing.
Extend NAFTA	2008		Extend the North American Free trade Agreement (NAFTA) to include Peru
			and Columbia.
Bank Bailout	2008		U. S. Governments \$700 Billion Bank Bailout Plan
Gay Marriage	2006		Constitutional Amendment banning Gay Marriage
Partial Birth Abortion	2006		A ban on a type of late-term abortion sometimes called "partial-birth abortion".
Stem Cell Research	2006		Should the federal government should fund stem cell research?
Iraq Withdrawal	2006		Should the President begin phased redeployment of U.S. troops from Iraq starting
			this year and submit to Congress by the end of 2006 a plan with estimated dates for
			continued phased withdrawal.
Illegal Immigration	2006		A plan to offer illegal immigrants who already live in the U.S. more opportunities to
- <del>-</del>			become legal citizens.
Minimum Wage	2006		A proposal to increase the federal minimum wage from \$5.15 to \$6.25 within the nex
			year and a half.
Capital Gains Tax	2006		A proposal to cut taxes on the money people make from selling investments, also
- · · I			referred to as capital gains (a bill to extend capital gains tax cuts passed in 2001).
CAFTA	2006		A new free trade agreement that reduces barriers to trade between the U.S. and
	2000		countries in Central America.
Prescription Drug Benefit	2004		A bill to amend title XVIII of the Social Security Act to provide for a voluntary
rescription Drug Deliciti	2004		· · · · · · · · · · · · · · · · · · ·
Partial Birth Abortion	2004		prescription drug benefit under the Medicare program.
	2004		A ban on a type of late-term abortion sometimes called "partial-birth abortion".
Gay Marriage	2004		Constitutional Amendment banning Gay Marriage.
Limiting Medical Malpractice Lawsuits	2004		A bill to reform the medical malpractice system
Assault Weapons Ban	2004		A bill to extend the assault weapons ban.
Iraq War Authorization	2002		A vote to authorize military intervention in Iraq.
Estate Tax Repeal	2002		A proposal to permanently eliminate the federal estate tax.
School Vouchers	2001		A proposed school voucher program in ten cities.
Patriot Act	2001		Expand the legal tools federal law enforcement can use to stop terrorism.
	2001		Proposal to cut taxes.

Table 1: Issues Included in Analysis

Table 2: Responsiveness by Income Quintile

All Respondents	Bottom Quintile	Middle Quintile	Top Quintile
0.25**	0.17**	0.22**	0.35**
(0.05)	(0.05)	(0.05)	(0.06)
0.49	0.53	0.50	0.43
(0.03)	(0.03)	(0.03)	(0.03)
3,791	3,791	3,791	3,791
	0.25** (0.05) 0.49 (0.03)	0.25** 0.17** (0.05) (0.05) 0.49 0.53 (0.03) (0.03)	0.25** 0.17** 0.22** (0.05) (0.05) (0.05) 0.49 0.53 0.50 (0.03) (0.03)

*Note:* \*p<0.1; \*\*p<0.05

Table 3: Congruence by Income Quintile

	Bottom Quintile	Top Quintile
Share of time the group gets its desired vote (Across all issues)	52% (1,507 out of 3,791)	56% (1,629 out of 3,791)
Share of time the group gets its desired vote (When the poor disagree) with the rich)	41% (297 out of 725)	59% (428 out of 725)

## References

Achen, Christopher H. 1978. "Measuring Representation." *American Journal of Political Science* 22(3):475-510.

Arceneaux, Kevin. 2002. "Direct Democracy and the Link between Public Opinion and State Abortion Policy." *State Politics and Policy Quarterly* 2(4):372-88.

Bartels, Larry M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton: Princeton University Press.

Bartels, Larry M., Benjamin I. Page and Jason Seawright. 2013. "Democracy and the Policy Preferences of Wealthy Americans." *Perspectives on Politics* 11:(1): 51-73.

Clinton, Joshua. 2006. "Representation in Congress: Constituents and Roll Calls in the 106th House." *The Journal of Politics* 68(2): 397-409.

Cook, Timothy E. 1999. "The Empirical Study of Lesbian, Gay, and Bisexual Politics: Assessing the First Wave of Research." *American Political Science Review* 93(3): 679-92.

Erikson, Robert S., Michael B. MacKuen, and James A. Stimson. 2002. *The Macro Polity*. New York: Cambridge University Press.

Gelman, Andrew, Boris Shor, Joseph Bafumi, and David Park. 2007. "Rich state, poor state, red state, blue state: What's the matter with Connecticut?" *Quarterly Journal of Political Science* 2(4): 345-367.

Gelman, Andrew, and Thomas C. Little. 1997. "Poststratification into Many Categories Using Hierarchical Logistic Regression." *Survey Methodology* 23(2): 12735.

Gerber, Elisabeth R. 1996. "Legislative Response to the Threat of the Popular Initiative." *American Journal of Political Science* 40: 99-128.

Gerber, Elisabeth. 1999. *The Populist Paradox: Interest Group Influence and the Promise of Direct Legislation*. Princeton: Princeton University Press.

Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. New York: Russell Sage Foundation.

Hacker, Jacob S., and Paul Pierson. 2006. *Off center: The Republican Revolution and the Erosion of American Democracy*. New Haven: Yale University Press.

Jacobs, Lawrence R., and Benjamin I. Page. 2005. "Who influences US foreign policy?" *American Political Science Review* 99(1):107-23.

Kastellec, Jonathan, Jeffrey R. Lax, Michael Malecki, and Justin H. Phillips. Forthcoming. "Polarizing the Electoral Connection: Partisan Representation in Supreme Court Confirmation Politics." *The Journal of Politics* 

Krimmel, Katherine, Jeffrey Lax, and Justin Phillips. Forthcoming, "Gay Rights in Congress: Public Opinion and (Mis)Representation." *Public Opinion Quarterly*.

Lax, Jeffrey R. and Justin H. Phillips. 2013. "How Should We Estimate Sub-National Opinion Using MRP? Preliminary Findings and Recommendations." Working paper.

Lax, Jeffrey R. and Justin H. Phillips. 2009a. "How Should We Estimate Public Opinion in the States." *American Journal of Political Science* 53(1): 107-21.

Lax, Jeffrey R. and Justin H. Phillips. 2009b. "Gay Rights in the States: Public Opinion and Policy Responsiveness." *American Political Science Review* 103(3): 367385.

Lax, Jeffrey R. and Justin H. Phillips. 2012. "The Democratic Deficit in State Policymaking." *American Journal of Political Science* 56(1): 148-66.

Lupia, Arthur. 1994. "Shortcuts Versus Encyclopedias: Information and Voting Behavior in California Insurance Reform Elections." *American Political Science Review* 88:63-76.

Matsusaka, John G. 2001. "Problems with a Methodology Used to Evaluate the Voter Initiative." *The Journal of Politics* 63(4):125056.

Matsusaka, John. 2004. For the Many or the Few: The Initiative, Public Policy, and American Democracy. Chicago: The University of Chicago Press.

McCarty, Nolan M., Keith T. Poole, and Howard Rosenthal. 2006. *Polarized America: The Dance of Ideology and Unequal Riches*, Walras-Pareto Lectures. Cambridge, Mass.: MIT Press.

Page, Benjamin I., and Robert Y. Shapiro. 1983. "Effects of Public Opinion on Policy." *American Political Science Review* 77(1):175-90.

Park, David K., Andrew Gelman, and Joseph Bafumi. 2004. "Bayesian Multilevel Estimation with Poststratification: State-Level Estimates from National Polls." *Political Analysis* 12 (4):375-85.

Park, David K., Andrew Gelman, and Joseph Bafumi. 2006. "State-Level Opinions from National Surveys: Poststratification Using Multilevel Logistic Regression." In *Public Opinion in State Politics*, ed. J. E. Cohen. Stanford: Stanford University Press.

Rigby, Elizabeth, and Gerald C. Wright. 2011. "Whose Statehouse Democracy? Policy Responsiveness to Poor versus Rich Constituents in Poor versus Rich States." In *Who Gets Represented*?, eds. Peter K. Enns and Christopher Wlezien. New York, NY: Russell Sage Foundation.

Shor, Boris, Christopher Berry, and Nolan M. McCarty. 2010. "A Bridge to Somewhere: Mapping State and Congressional Ideology on a Cross-institutional Common Space." *Legislative Studies Quarterly* 35:417-448.

Stimson, James A., Michael B. MacKuen, and Robert S. Erikson. 1995. "Dynamic Representation." *American Political Science Review* 89 (3):543-65.

Warshaw, Christopher and Jonathan Rodden. 2012. "How Should We Measure District-Level Public Opinion on Individual Issues?" *The Journal of Politics* 74(1): 203-19.