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Public Opinion and Political Representation

by

David Edward Broockman

A dissertation submitted in partial satisfaction of the

requirements for the degree of

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in

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in the

Graduate Division

of the

University of California, Berkeley

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Public Opinion and Political Representation

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Abstract

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Doctor of Philosophy in Political Science

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Professor Eric Schickler, Chair

This dissertation considers the relationship between the opinions voters have on issues and the positions politicians take on them. The first chapter makes a methodological intervention into existing literature, showing that to understand these relationships we must examine one issue at a time, not boil down the preferences of voters and politicians to summaries of their ideologies. It then considers some implications of this distinction. The second chapter elaborates one of these implications, the implications of polarization for representation. This chapter argues for a different set of implications than is typically drawn. The final chapter then adopts this approach to bring a new perspective to a neglected question: how do politicians see their constituents? By investigating this question in individual issues, the final chapter illustrates the utility of the approach and raises new questions for scholars to consider.

To Adam

Contents

Contents	ii
List of Figures	iv
List of Tables	vi
1 Approaches to Studying Policy Representation	1
1.1 Comparing Strategies for Studying Policy Representation	5
1.2 Can An Ideological Scale Summarize Voters' Preferences?	9
1.3 Applications	13
1.4 Discussion: Studying Representation of Ideological Innocents	19
2 Does Polarization Imply Poor Representation?	27
2.1 Does Elite Ideological Polarization Imply Poor Representation?	30
2.2 Study 3: Do Citizens Reliably Support Moderate Policies?	45
2.3 Discussion: A New Perspective on the Representational "Disconnect"	55
3 What Politicians Believe About Their Constituents	59
3.1 Politicians' Perceptions and Public Policy	62
3.2 Data	65
3.3 What Politicians Believe About Their Constituents	68
3.4 Robustness Check: How Different Candidates Evaluate the Same Constituents . . .	73
3.5 Do Candidates Learn From Campaigns and Elections?	74
3.6 Discussion: Implications for Theories of Constituency Control	76
Bibliography	81
A	94
A.1 Survey Item Wordings	94
A.2 Details of Mass Survey Procedures	103
A.3 Measurement Error and Test-Retest Correlations Among Higher and Lower Knowl- edge Respondents	107
A.4 Measurement Error and Application 1	108

A.5	Measurement Error and Application 2	109
A.6	Coding of Senators	111
A.7	Other Figures	111
B		117
B.1	Robustness Checks for Study 2	118
B.2	Robustness Checks for Study 3	120
B.3	Robustness Checks for Study 4	121
C		122
C.1	Details of MRP Estimation Procedure	122
C.2	National Candidate Study Response Rate and Responsiveness	126
C.3	National Candidate Survey Questionnaire Item Wording	126

List of Figures

1.1	Mass Opinion On Individual Issues	7
1.2	Strategies for Aggregating Mass Opinion	22
1.3	Test-Retest Polychoric Correlations Within and Across Issues	23
1.4	Extremity On Ideological Scales Does Not Predict Support For Actual Extreme Policies	24
1.5	Strategies for Aggregating Elite Opinion	25
1.6	Relationships Between Political Knowledge, Ideology Scale, and Support for Extreme Policies	26
2.1	2012 ANES Scale Responses Across Policy Areas Correlate Only Weakly	31
2.2	An Example Matchup from Study 1, As Shown to Respondents	37
2.3	Example of Ideologically Correct and Ideologically Incorrect Politicians' Ideological Positions in Study 1B	42
2.4	Priming Ideology and Providing Ideological Information Fail to Increase Demand for Ideological Representation	44
2.5	Example of "Ideology Shown" Condition	44
2.6	The full range of public opinion on 13 issues.	48
2.7	Intertemporal Stability Within Issues	49
2.8	Intertemporal Stability Within Issues but not Across Issues	51
2.9	Study 3B as Shown to Respondents	52
2.10	Citizens do not Overwhelmingly Choose the Centrist Candidate in Study 3B	53
2.11	The Traditional "Disconnect" Versus a Revised "Disconnect"	54
2.12	Stimulus Shown to Respondents in Study 4	56
3.1	Citations to Miller and Stokes (1963) by Five-Year Period	63
3.2	Politicians' Perceptions of Districts' Opinions – Entire Sample	68
3.3	Politicians' Perceptions of Districts' Opinions – By Politicians' Ideology	70
3.4	Estimates of Sitting Legislators in Highly Professionalized Legislatures	71
3.5	Politicians' Perceptions of Support for Abolishing All Federal Welfare Programs	72
3.6	Responses of Candidates In Same Districts and MRP Predictions in Those Districts	73
3.7	Responses of Candidates In Same Districts	75
3.8	Politicians Learn Nothing About Constituents' Views From Campaigns Or Elections	80

A.1	Wave 1 and Wave 2 Responses: High Knowledge Respondents	109
A.2	Wave 1 and Wave 2 Responses: Low Knowledge Respondents	110
A.3	Citizen-Issue Means of Wave 1 and Wave 2 Responses	111
A.4	Most Moderate of Wave 1 and Wave 2 Responses	112
A.5	Coding of Democratic Senators	113
A.6	Coding of Republican Senators	114
A.7	Ideological Self-Placement Barely Predicts Support for Extreme Policies	115
A.8	Elite and Mass Opinion on IRT Scales	116
B.1	Choice of Extreme Politician, by Extremity of Extreme Politician	121
C.1	Density of standard deviations of MRP estimates for lower house districts in the health-care model.	125
C.2	Density of standard deviations of MRP estimates for lower house districts in the marriage model.	125
C.3	Response rate to the NCS by state.	126
C.4	Density of response rates to the NCS by state's Squire index. Most of our responses are from relatively unprofessionalized legislatures, but a sizable number are from professional legislatures, and response rates do not systematically differ with legislative professionalism. Subsetting to these responses, as shown in the main text, does not affect our key findings.	127

List of Tables

1.1	Example: Studying Extremism with Ideological Scales	3
1.2	Example: Studying Congruence with Ideological Scales	4
1.3	Strategies for Aggregating Mass Opinion, Example Data	8
2.1	Which Legislator is a Better Representative?	32
2.2	Are Political Surveys Like Math Tests?	33
2.3	Math Test: Average Score Taps Underlying Ability	33
2.4	Political Survey: Does Average Score Tap Underlying Ideology?	33
2.5	A Hypothetical Matchup Between Two Politicians to Gauge how Citizens Evaluate Representation	36
2.6	The Effect of Ideological Proximity on Political Choice Flows Through Issue Agreement	39
2.7	Elite Polarization Does Not Imply Politicians' Ideal Policies Are More Extreme Than Voters'	46
2.8	Example Matchup Shown to Respondents in Study 3B	52
2.9	Example: Study 4 stimulus	55
2.10	Example Wave 1 Issue Responses	55
2.11	Example Wave 2 Match-Up	55
A.1	Demographic Sample Statistics in 2012 ANES and SSI Survey	105
A.2	Political Sample Statistics in 2012 ANES and SSI Survey	106
A.3	Polychoric Correlations Within and Across Issues, by Knowledge	107
B.1	Can Citizens Infer Ideology from Issue Positions?	118
B.2	Can Citizens Infer Ideology from Issue Positions? ("Spatially Correct" Politicians Only)	119
B.3	Can Citizens Infer Ideology from Issue Positions? ("Spatially Incorrect" Politicians Only)	119
B.4	Opinion is Dispersed and Not Always Moderate in Central Tendency	120

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Chapter 1

Approaches to Studying Policy Representation¹

Some studies of policy representation test hypotheses about the relationship between citizens' views and elites' positions on multiple issues, proceeding issue-by-issue. Others first summarize citizens' and elites' policy preferences with "ideology scores" and test hypotheses with these scores. I show the latter approach is crucially flawed. It misinterprets 'ideology scores' as summaries of policy preferences, but they typically measure consistency: how often one's ideal policies are somewhere left of the status quo. I elaborate two examples. Contrary to what ideological scales suggest, legislators appear similarly moderate as citizens; but, politically engaged citizens appear especially moderate. Methodological implications are discussed.

Scholars typically employ one of two approaches when studying political elites' representation of public opinion. A first approach tests a hypothesis about the relationship between citizens' opinions and elites' positions one issue at a time on each of many issues, and then examines how well the hypothesis held across issues. For example, Lax and Phillips (2012) examine how likely policies are to become law at various levels of public support. Gilens (2012) compares how likely policies are to become law depending on levels of public support among those of various incomes. And Lenz (2012) examines whether citizens tend to adopt politicians' views on a variety of issues.²

¹A previous version of this paper circulated under the title 'An Artificial 'Disconnect.' I thank seminar participants at Berkeley, Columbia, Google, MIT, Stanford's Department of Political Science and Graduate School of Business, the 2014 meeting of the Midwest Political Science Association, the Pew Research Center and Alan Abramowitz, Doug Ahler, John Bullock, Kate Casey, Devin Caughey, Jack Citrin, Josh Clinton, Morris Fiorina, Anthony Fowler, Sean Gailmard, Marty Gilens, Don Green, Michael Herron, Josh Kalla, Mike LaCour, Jeffrey Lax, Gabe Lenz, Adam Levine, Lilliana Mason, Brendan Nyhan, Kevin Quinn, Jeremy Pope, David Reiley, Jon Rogowski, Timothy Ryan, Eric Schickler, Jas Sekhon, Ken Shotts, Chris Skovron, Walt Stone, Laura Stoker, Chris Tausanovitch, Rob Van Houweling, and Chris Warshaw for helpful comments. All remaining errors are my own.

²See also Canes-Wrone and Shotts (2004), Hill (2015), and Gilens and Page (2014) in recent literature on representation and Kinder and Kam (2009) and Tesler (2014) in recent literature on public opinion.

A second approach first computes measures of individual citizens' and individual politicians' overall 'ideologies' based on their positions on many policies and tests a hypothesis with these ideology scores. In such analyses, citizens' and elites' policy views are both summarized by a point on a liberal-conservative index and their locations on this index are then compared. For example, in their influential analysis, Bafumi and Herron (2010) estimate individual-level 'ideal points' for both survey respondents and their Members of Congress. Bafumi and Herron (2010) use these estimates to assess correspondence between representatives' policy decisions and their constituents' policy preferences, finding that over 90% of voters are more moderate than legislators, but that donors and primary voters are similarly extreme.

Research employing this latter ideological approach has long been conducted (e.g., Enelow and Hinich 1984) but has burgeoned in recent years (Barber 2014; Barberá 2014; Bonica 2013; Caughey and Warshaw 2014; Caughey 2014; Clinton 2006; Ellis and Stimson 2012; Erikson, MacKuen and Stimson 2002; Gerber and Lewis 2004; Griffin and Newman 2005; 2007; Masket and Noel 2012; Peress 2013; Rogowski and Tucker 2014; Stone and Simas 2010; Shor, Berry and McCarty 2010; Shor 2013; Tausanovitch and Warshaw 2014*a*; *b*; Tausanovitch 2014). Expressing a growing sentiment regarding the superiority of the ideological approach for studying citizens' policy preferences, Lo, Proksch and Gschwend (2014) write that "research on elections and party competition is unthinkable without measures of the ideological positions of voters."

This paper argues that this ideological approach has crucial and under-appreciated flaws. The key issue I explore is that ideological scales tend to capture citizens' degree of ideological consistency across policy domains ('this citizen has liberal views on two-thirds of issues') but say little about citizens' views within domains, on issues themselves ('this citizen supports state-sponsored healthcare').

To appreciate this distinction between consistency across domains and views within domains, consider a common use of ideological scales: comparing how 'extreme' legislators' policy positions are relative to citizens' views. In studies that employ ideological scales for this task, individual voters' or politicians' 'extremity' is typically based on the extremism of their score on an ideological index estimated from responses to many binary survey items (for citizens) or votes across many roll calls (for legislators) (e.g., Bafumi and Herron 2010; Barber 2014; Masket and Noel 2012; Peress 2013; Rogowski 2014; Shor 2013). With this methodology in mind, examine the political preferences and survey responses given by one voter and one legislator in two issue areas shown in Table 1.1. The legislator in Table 1.1 has consistently conservative but fairly moderate positions in both issue areas. However, because the legislator comes down on the conservative side of both issues, the legislator would appear as conservative as possible on an ideological index created from these two votes. On the other hand, the voter has extreme views in both policy areas. Nevertheless, one liberal response and one conservative response earns her a score at the middle of the index. Literature on this topic would thus deem the voter moderate despite her thoroughly extreme views and the legislator an extremist despite his moderate positions. But this voter is not really ideologically *moderate*, she is ideologically *mixed*; and the legislator is not ideologically *extreme*, he is ideologically *consistent*. Interpreting ideological scales as measuring views on issues themselves rather than ideological consistency can thus mislead even simple descriptions of individual's policy preferences.

Table 1.1: Example: Studying Extremism with Ideological Scales

	Voter	Legislator
Ideal Gay Rights Policy	Do not allow gays to teach in public schools (Extremely conservative)	Civil unions only, no same-sex marriage (Moderately conservative)
Answer to survey question / Roll call vote: “Should gay marriage be illegal?”	Yes	Yes
Ideal Immigration Policy	Open borders; unlimited immigration (Extremely liberal)	Limit low-skilled immigration with border protections (Moderately conservative)
Answer to survey question / Roll call vote: “Should immigration be restricted?”	No	Yes
One-Dimensional Ideology Estimated From Survey Responses / Votes	Moderate	Extreme Conservative

This distinction has more general consequences for the study of congruence between voters and their representatives with ideological scales, questions such as “how well [a politician] represents” his or her constituency on policy matters (e.g., Bafumi and Herron 2010) or which constituents a politician represents best (e.g., Griffin and Newman 2007; Tausanovitch 2014).

A second hypothetical illustrates these implications. Suppose you are a Member of Congress representing a district with five voters. In the upcoming session of Congress, you will be asked to cast a roll call vote on five issues. Imagine that, wanting to maintain congruence with district opinion, you conduct a poll of the five voters in your district on these five issues. The results appear in Table 1.2. In each cell in Table 1.2, a 0 corresponds to a conservative view on a policy and a 1 corresponds to a liberal view.

The results of the poll give clear guidance about how to vote congruently. On each of the five issues, a majority of your constituents say they would cast a liberal vote if they were in Congress. Suppose you accordingly cast a liberal vote on each of these issues. An issue-by-issue approach

Table 1.2: Example: Studying Congruence with Ideological Scales

	Liberal Survey Response?					Liberal Vote?
	Voter 1	Voter 2	Voter 3	Voter 4	Voter 5	Legislator
Issue 1	1	0	1	1	0	1
Issue 2	0	1	1	0	1	1
Issue 3	1	1	1	0	0	1
Issue 4	0	1	0	1	1	1
Issue 5	1	0	0	1	1	1
Estimated One-Dimensional Ideology	0.6	0.6	0.6	0.6	0.6	1

Notes: The majority of voters favor the liberal policy on each issue, as does the legislator. Despite voting congruently with majority opinion on every issue, the legislator appears ‘more extreme’ on one dimension.

– the first main approach to studying policy representation – would reveal your congruence with district opinion on these issues (e.g., Lax and Phillips 2012; Krimmel, Lax and Phillips 2012).

However, imagine a political scientist gains access to your polling data and attempts to assess your congruence with district opinion using an ideological scale. Since all your constituents hold some liberal views and some conservative views, they all earn middling scores on the ideological scale, shown in the last row. But you have taken the liberal position on every single issue. According to the ideological scale, you are therefore ‘more liberal’ than all of your constituents (e.g., Bafumi and Herron 2010). The political scientist’s verdict? You are far out of step.

You may ask this expert: what can you do to be more congruent with constituency opinion? To appear more congruent on an ideological scale, the political scientist explains, you need to take a couple positions that a majority of your constituents disagree with so that you appear more ideologically similar to them. (Thankfully, it does not matter which two.) If your opponent were to take such a set of incongruent positions on issues, the political scientist warns, she would be a much more congruent representative overall.

Clearly the political scientist in this example is wrong. You were not actually out of step with your constituents’ policy preferences, just more consistently on the liberal side. When scholars mistake ideological scales for measures of citizens’ policy preferences instead of measures of their consistency, scholars can reach very different portraits of the relationship between politicians’ decisions and citizens’ views than actually exist at the level of every issue. Not only can ideological scales mistake congruence for being out of step, they may negatively correlate with it.

It would be highly convenient if ideological scales did not exhibit such pathologies. Capturing data on citizens’ views on the same issues that legislators have taken positions on and examining a hypothesis for each issue requires exceptional effort (e.g., Gilens 2012; Lax and Phillips 2012; Lloren and Wüest 2014). Constructing a ‘joint scale’ that bridges politicians and voters may re-

quire only a few points of overlap (e.g., Bafumi and Herron 2010; Barber 2014; Jessee 2009; Shor 2013), or potentially none (Aldrich and McKelvey 1977; Hare et al. 2014; Ramey 2014).

The problem with all such ideological scaling approaches – no matter how many dimensions they estimate, or how they model the underlying dimension(s) being estimated – is their assumption that citizens do not have distinct views on distinct policies separate from what their ideologies dictate. This idea justifies inferences about citizens’ views on issues from their scores on an ideological index (e.g., Ansolabehere, Rodden and Snyder 2006; Bafumi and Herron 2010; Jessee 2009; Tausanovitch and Warshaw 2013). This paper examines this idea in detail and shows how it fails in ways that can significantly distort the study of representation. I first introduce the data and develop further intuition about why studying representation with ideological scales yields different conclusions than studying issues. I then show that we should prefer the answers issue-by-issue approaches yield, underscoring that citizens do have views on individual policies that ideological scales cannot capture, contrary to what recent scholarship has asserted. I also show how ideological scales fail to accurately capture theoretically significant patterns in these views: citizens with more moderate scores on ideological scales are no more likely to support moderate policies, despite that scholars using ideological scales refer to such citizens as moderates. Two applications then illustrate how widely accepted findings based on ideological scales may be in need of revisiting. First, the policies citizens support appear no more moderate than legislators in many policy domains, contrary to what ideological scales imply. Second, the most educated and engaged citizens tend to have the most *moderate* policy views, even though they appear the most ‘extreme’ on ideological measures. I conclude by discussing the potential implications for other literatures of attending to the distinction between the concept ideological scales appear to measure, citizens’ ideological consistency across policy domains, and the concept to which most theories of representation concern, individual policy issues. Across a wide variety of research questions, ideological scales are likely to yield erroneous conclusions about citizens’ policy preferences and how politicians represent them.

1.1 Comparing Strategies for Studying Policy Representation

In this section I introduce the data and use it to further develop intuition about why issue-by-issue and ideological approaches to studying representation can provide different conclusions.

Data

To help illustrate the differences between the conclusions about representation ideological approaches and issue-by-issue approaches yield, I conducted two national surveys with Survey Sampling International with unique items. (Sections A.1 and A.2 in the Supplementary Appendix respectively describe the survey questions and procedures.) The items spanned twelve issues: health care, gun control, immigration, taxes, abortion, the environment, Medicare, gay rights, affirmative action, unions, contraception, and education. Significantly, the items offered citizens the opportunity to voice support for policies more moderate and more extreme than the parties support

within a variety of policy domains, with these policy alternatives described concretely (see the Supplementary Appendix for the full questionnaire):

- at 1 and 2 on the scale, two extremely liberal policies that very few Democratic Members of Congress support, described concretely,
- at 3 on the scale, a policy corresponding to the typical Democratic view advanced by party leaders and most in the rank-and-file, described concretely,
- at 4 on the scale, a ‘moderate’ policy that is to the right of most Democratic elected officials’ positions but to the left of most Republicans’, usually describing the status quo, described concretely,
- at 5 on the scale, a ‘Republican’ choice mirroring the Democratic choice at point 3, described concretely, and,
- at 6 and 7 on the scale, two extremely conservative choices to the right of most Republican elites, described concretely.

Such items present two advantages. First, as variegated scales, these items capture a continuum of preferences, not just a binary that partitions respondents on one side or the other of a salient divide. Because they lack this quality,³ existing issue-specific data have not allowed us to examine the relationships between ideological scales and underlying issue preferences in fine detail.

In addition, anchoring the party’s positions at a fixed point on the scale also helps retain one of the benefits of ideological ‘joint scaling,’ being able to estimate where in the distribution of legislators’ preferences a voter’s preferences would belong (e.g., Bafumi and Herron 2010). Rather than relying on potentially problematic statistical assumptions to conduct this ‘bridging’ across many issues, I have relied upon human judgment to place the parties on scales and then allowed respondents to place themselves. To craft the scales for each issue area, a team of research assistants catalogued the positions of all senators from the 113th Congress on these issues. The positions were then validated by attempting to place all 100 sitting US Senators’ positions on each issue on the scales, revising the scales as necessary when it did not adequately capture a common position in the political debate. All Senators were then coded once the scales were finalized (see Section A.6 in the Supplementary Appendix).

There is no doubt room for improvement in the construction of these scales. Future work can and should make these improvements and endeavor to make stronger claims about the exact distribution of public opinion than I advance here.⁴ However, this data provides a reasonable proving ground for my more humble goals: illustrating how the differences between ideological and issue-specific approaches derived analytically manifest in real opinion data.

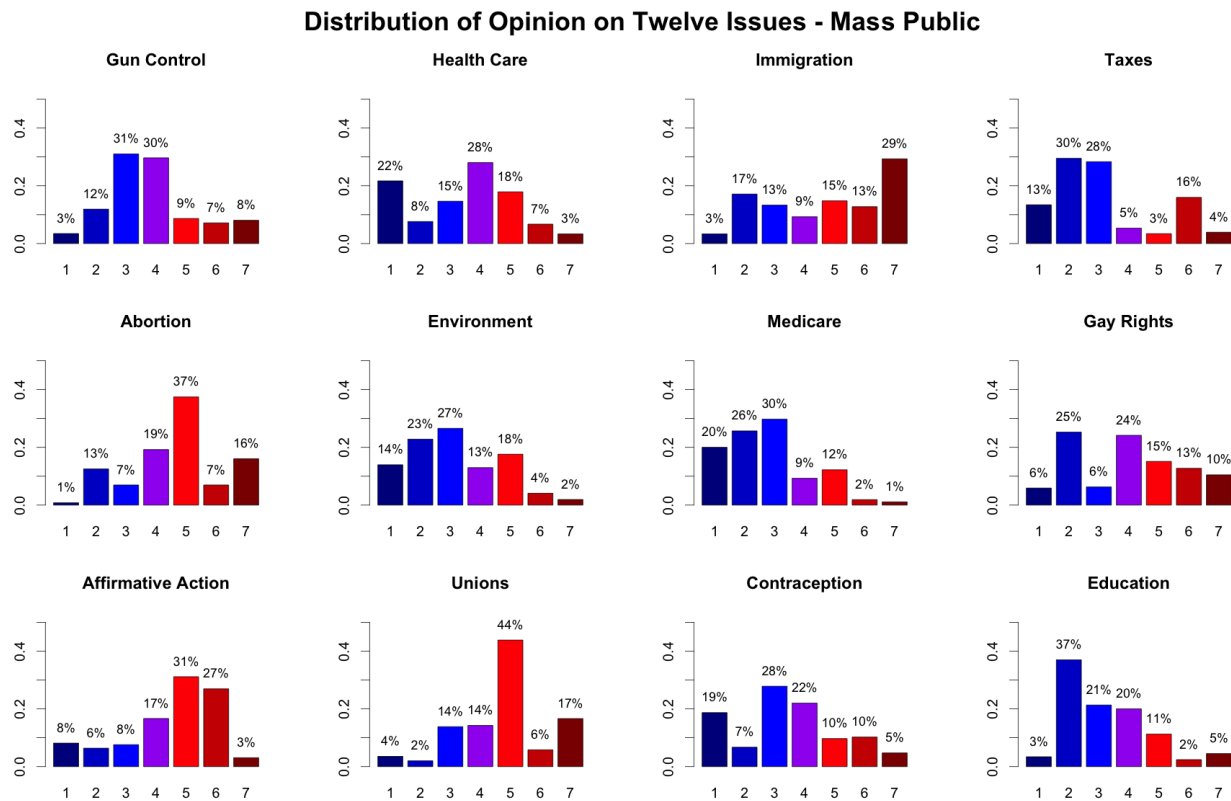
³Some surveys do offer citizens the opportunity to describe their policy views on *abstract* 7-point scales with unlabeled points, but, were abstract scales to be employed in this paper’s analysis, it would be easier to attribute the findings to differential item response or non-random measurement error.

⁴Any such work should be cognizant of some of the drawbacks of this data that ideological scales also share. For example, by enforcing one-dimensionality *within* policy domains, this data potentially oversimplifies some respondents’ views. But ideological scales that describe multiple policy domains do this to a strictly greater extent.

Differences Between Public Opinion On Issues and Ideological Scales

Figure 2.6 presents the raw distributions of respondent’s responses in each of the twelve issue areas. These data will help concretely illustrate why issue-by-issue and ideological approaches to studying representation may yield different answers.

Figure 1.1: Mass Opinion On Individual Issues



Notes: The policy labeled as a 1 in each question is the most extreme liberal response available, a 3 corresponds to the national Democratic party’s general position, a 5 corresponds to the national Republican party’s general position, and a 7 is the most extreme conservative response available.

Suppose an analyst is interested in understanding how often citizens tend to support moderate policies. Ideological scales are often used for identifying which citizens are moderate, and tend to suggest that citizens are moderates by and large (e.g., Fiorina and Abrams 2009; Bafumi and Herron 2010). The heart of this paper’s argument concerns what students of representation should do with data like that depicted in Figure 2.6 when attempting to explore a question such as whether citizens tend to support moderate policies.

Table 1.3: Strategies for Aggregating Mass Opinion, Example Data

	Issue 1	Issue 2	Mean	Aggregation Strategy
Voter 1's Responses	1	7	4	Voters' 'Average Responses'
Voter 2's Responses	6	1	3.5	
% At 1	50%	50%	50%	Pattern on 'Typical Issue'
% At 6	50%	0%	25%	
% At 7	0%	50%	25%	

Table 1.3 illustrates how each of the two approaches to studying policy representation would approach this question. An ideological approach for aggregating across items and respondents is shown in example data at the top right of Table 1.3. This approach first computes the average of each voters' responses and computes the distribution of voters' 'typical responses.' Note how this approach entails summarizing each voter's preferences across multiple issues to a point on a single scale. It also leads both voters to appear similarly moderate because neither reliably hews to one ideological side, despite that they strongly disagree with each other on both issues. The real public opinion data exhibit a similar tendency. The results of this same approach in the full public opinion data I described are shown in the top panel of Figure 1.2. As can be seen, the overwhelming tendency is for individual voters' 'average responses' to be near 4, the moderate anchor. The conclusion that one might reach from this data thus mirror the conclusion in the literature more generally that voters reliably support moderate policies (Ansolabehere, Rodden and Snyder 2006; Fiorina, Abrams and Pope 2005; Fiorina and Abrams 2009), despite that Figure 2.6 showed that non-moderate responses on issues were common.

Now consider a second approach to drawing conclusions from this data: analyzing it one issue at a time, and then aggregating across issues. This approach is shown at the bottom right in Table 1.3. This approach first considers the pattern on every issue and then estimates what pattern is typical on issues, yielding a picture of the distribution of mass opinion on the 'typical issue' in the survey.

The bottom panel of Figure 1.2 shows that this 'issue-by-issue' procedure characterizes these respondent's issue preferences markedly differently than the ideological approach. For example, the bottom panel shows that about 30% of Americans give one of the two most left-wing responses on the typical question. However, the top panel shows that nearly none of these respondents gave this response on *every* question, meaning few respondents have 'average views' this extreme. This potentially gives the impression that nearly no Americans support policies as or more left wing than the Democratic party, anchored at 3 (e.g., Bafumi and Herron 2010). Nevertheless, a look at the raw data without summarizing voters on one dimension suggests that many citizens support such positions.

These data, although quite naively aggregated, thus help illustrate why mapping voters to an ideological scale can change the conclusions we draw about their views. By averaging voters' views across many policy areas into an index, an ideological scale tells us how likely voters are to

be somewhere on the liberal or conservative side of a policy selected at random. What we typically learn from this exercise is that most voters have some mix of liberal and conservative views. This observation seems to imply very little about these voters' views on issues themselves.

1.2 Can An Ideological Scale Summarize Voters' Preferences?

The previous sections showed how issue-specific and ideological approaches to studying citizens' views may yield quite different answers, but offered no guidance about which approach's answer should be trusted. This section casts doubt on the validity of the ideological approach's answer more directly. I first show that the main assumption underpinning it is flawed. I then show that relying on ideological scales anyway is not innocuous, as ideological scales *fail to correlate* with the concept they are often used to measure.

Citizens Have Meaningful Issue Preferences Their Ideologies Cannot Predict

Scholars have traditionally been skeptical that citizens conceive of politics in ideological terms or have ideologically-driven preferences. The primary evidence for this claim is straightforward. If one or two dimensions did capture Americans' views well, Americans' attitudes on individual issues should correlate strongly, but empirically they correlate only weakly (e.g., Baldassarri and Gelman 2008; Converse 1964; Kinder and Sears 1985). Likewise, one or two dimension can explain far less of the variation in citizens' responses to surveys than in elite roll-call votes (Noel 2014; Treier and Hillygus 2009).⁵ When choosing between issue-by-issue approaches to studying citizens' views or ideological scales, this traditional perspective would tend to privilege issue-specific measures, believing citizens to have distinct views on distinct issues that cannot be captured by an ideological label or score.

A growing chorus among scholars who rely on ideological scales has questioned this traditional perspective (e.g., Ansolabehere, Rodden and Snyder 2006; 2008; Jessee 2009; Tausanovitch and Warshaw 2014b). According to this critique, the considerations that inform citizens' views on issues can be simplified down to one or two dimensions nearly entirely – hence Bafumi and Herron (2010) write that we should think of citizens as having latent ideological “ideal points that drive their...choices.”⁶ However, citizens are thought to make significant mistakes as they attempt to apply their ideological predispositions on surveys, generating large measurement error. Thus, issue items in surveys tend to correlate very weakly with each other because measurement error atten-

⁵I replicate this finding in these data; the first factor among the mass public captures about 59% of the variance while among elites it captures 90%. Factor analysis may exhibit upward bias and be sensitive to the distribution of the latent factor, so these findings alone are not definitive. Moreover, measurement error may attenuate the mass statistic considerably. However, Achen (1975) shows that corrections for measurement error do not increase correlations between policy domains considerably..

⁶Indeed, this belief runs so deeply that Jackman and Sniderman (2006) predict (but do not find evidence) that citizens who think they have issue positions inconsistent with their ideology are not informed enough to know how they really 'should' feel.

uates these correlations dramatically, even though citizens' underlying preferences are thoroughly one- or two-dimensional.

This alternative perspective, if true, should lead us to prefer the conclusions about public opinion and representation that ideological scales yield. For example, the issue-specific measures shown in the previous section may be plagued with measurement error that buffets citizens away from providing their true moderate preferences, but aggregating their views across many issues into an ideological index may reduce this noise and reveal citizens' true moderate nature.

Is there much informing Americans' survey responses to particular policy items beyond their ideologies and error? Suppose the new ideological perspective were correct and measurement error artificially attenuates correlations it is possible to achieve with individual issue items on surveys so much that citizens' ideological nature is nearly completely obscured. Such measurement error should dramatically attenuate *all* correlations one can achieve between two individual survey questions. Therefore, we should tend to observe similarly low correlations between two different issue items in the same survey and between an issue item when it is measured in a first survey and the same item when it is asked again. After all, according to this line of reasoning, these responses are all noisy reflections of the same underlying ideological predisposition. On the other hand, if the classic perspective is correct that citizens have distinct views on distinct policy issues separate from their ideologies, we would predict significantly higher test-retest correlations within issue areas than across issue areas.

To help adjudicate between these alternatives, I conducted a panel survey. Respondents were contacted again two months after a first survey wave and asked the same battery of policy questions again. This panel allows me to compare inter-issue and intra-issue correlations. 515 responded to both waves.

Figure 1.3 shows respondents' first-test and re-test responses within each issue and across issues. Each subgraph in Figure 1.3 shows individuals' responses on a first issue in the first test on the x-axis and individuals' scores on a second test given one month later on the y-axis. Raw data and a loess smoothed line are both shown for transparency and simplicity. The test-retest polychoric correlation is shown above each graph.

If a liberal-conservative continuum was able to capture Americans' views but inter-issue correlations were nearly extinguished by measurement error, we should see similarly low interwave correlations between individual issue items and across different issue items. However, the plots on the diagonal show that interwave correlations within issues are considerably larger than correlations between different issues. The mean correlation within issues over time is 0.56, but the mean correlation between different issues is only 0.13. This contrast is inconsistent with the measurement error account for low inter-issue correlations. Citizens have persistent views on individual issues that do not correlate strongly with their views on other issues. (Section A.3 in the Supplementary Appendix shows these figures for high- and low- political knowledge respondents.)

Two other pieces of evidence consistent with citizens' 'ideological innocence' outside this paper's scope are worthy of note. First, in Chapter 2, I show that professed issue preferences inconsistent with citizens' ostensible ideologies (and that ideological scales classify as 'errors') can powerfully predict citizens' subsequent choices. Moreover, citizens do not appear to place any significance on whether the 'mix of views' implied by a politicians' place on an ideologi-

cal scale is closer to their own. Second, although often cited to justify ideological scaling for originally identifying that measurement error can attenuate observed correlations between issues, Achen (1975) shows that error-corrected correlations between separate policy domains are usually low (see Achen (1975), Table 5).⁷

There is no doubt some measurement error in Americans' responses to survey questions and empirical analysts are wise to consider it (e.g., Palmquist and Green 1992). However, this measurement error has not been shown to be of the particular variety that would justify ideological scaling. Rather, despite what scholars who employ ideological scales have offered in justification, there is little reason to doubt what a long line of public opinion research has found: most citizens are 'ideologically mixed,' genuinely supporting liberal policies in some domains and conservative policies in others (Baldassarri and Gelman 2008; Converse 1964; Kinder and Sears 1985; Layman and Carsey 2002; Zaller 2004).

'Ideological Moderates' Are No More Likely To Support Moderate Policies

It may both be the case that the assumptions underpinning ideological scaling are unsound and that the answers scales provide tend to be correct. As the adage goes, all models are wrong, but some are useful. Here I show ideological scales do not seem useful for one of their main purposes.

Ideological scales are often said to identify citizens whose policy preferences are more 'moderate' or 'extreme' (e.g., Bafumi and Herron 2010; Fiorina, Abrams and Pope 2005). However, despite their common use for this purpose, it is unknown whether the vast majority of citizens with moderate scores on ideological scales are actually more likely to support moderate policies than the citizens with extreme scores. As previously noted, citizens appear to earn moderate ideology scores by being ideologically mixed, with each supporting their own idiosyncratic mix of liberal and conservative policies (e.g., Zaller 2004). Nevertheless, they may also be more likely to support moderate policies, too.

To examine the ability of ideological scales to identify individuals who tend to support moderate and extreme policies, I move beyond the crude ideological 'scale' depicted in the bottom of Figure 1.2 and instead rely upon the state-of-the-art approach for estimating ideological scales, Item Response Theory (e.g., Martin and Quinn 2002). To do so, I administered a series of 21 yes-or-no questions drawn from the questionnaires employed by prominent articles that use estimate citizens' 'ideal points' from issue questions elsewhere in the same survey (see Supplementary Appendix A.1). I then estimated an IRT model from these items using the `MCMCpack` package in R (Martin, Quinn and Park 2011). Recall that this approach is ultimately similar to the one described in the bottom panel of Figure 2.6: each respondent's responses to many issue questions are boiled down to a point on a scale.

Figure 1.4 shows the results. The first two panels of Figure 1.4 reinforce the point that ideological scales measure ideological consistency across policy domains, how often a citizen comes down on the liberal or conservative side of the status quo. The x-axis on these panels refer to

⁷Jackman and Sniderman (2006) evaluates the possibility that citizens would become more ideologically consistent if they thought through issues more carefully or were exposed to elite rhetoric and finds that they would not.

individuals' ideology scores built from binary questions, such that ideological moderates appear in the middle, 'ideological extremists' appear on the far left and far right. The y-axis on panel (a) records the share of the 7-point issue questions respondents gave an 'extreme liberal' answer to (at 1 or 2), and the y-axis on panel (b) records the share of these 7-point questions respondents gave an 'extreme conservative' answer to (at 6 or 7). The expected relationships between the ideological scale and support for more immoderate policies on each side of the spectrum do hold: 'extreme ideological liberals' do tend to hold extreme liberal views on more issue and 'extreme ideological conservatives' do tend to hold extreme conservative views on more issues.

But are 'ideological moderates' especially likely to support moderate policies in general? The y-axis in Panel (c) adds together the y-axes from panels (a) and (b), corresponding to the total number of extreme policies each respondent supported in the 12 seven-point questions. The x-axis in Panel (c) again corresponds to each respondents' score on the ideological scale estimated via IRT, with 'ideological moderates' in the middle. If extreme scores on ideological scales measured support for more extreme policies and moderate scores with support for moderate policies, we should observe a 'V' shape in Panel (c), whereby citizens with more extreme scores on the ideological scale are also more likely to support extreme policies. However, individuals with more extreme ideology scores appear no more likely to express extreme views than 'ideological moderates.' Likewise, those with more moderate scores are no more likely to support moderate policies in general than are 'ideological extremists.'⁸ Self-reported ideological extremity also only barely predicts support for extreme policies.⁹ The extremity of citizens' views on issues and 'extremism' as political scientists measure it with ideological scales appear literally orthogonal.

This data suggests we should think about citizens with extreme and moderate scores on ideological scales differently. Citizens do not earn moderate scores on ideological scales because the policies they support are especially moderate. They earn these scores because ideological scales have difficulty predicting their views. A citizen with a moderate score on an ideological scale is likely to support some liberal policies in some areas and conservative policies in some others, but we have no way of knowing in which. On the other hand, citizens with extreme scores on ideological scales are especially ideologically consistent, tending to come down on one ideological side across many policies. We can learn which side of the debate these citizens tend to come down on from their scores. But these citizens do not appear any more likely to support extreme policies within these domains than their moderate counterparts. These revised interpretations underscore how citizens' scores on ideological scales primarily measures the consistency of their views across policy domains, even as political scientists interpret them as measuring views on actual policies.

⁸The statistical relationship between extremity on the ideological scale and the number of extreme policies individuals support is negative and nearly significant in the opposite direction ($p = 0.09$).

⁹Self-reported ideological extremity also barely predicts extremity on the issue questions. See Figure A.7 in the Supplementary Appendix.

1.3 Applications

The evidence presented so far has suggested that ideological measures may significantly mislead the study of representation as they appear to say little about citizens' views on issues. To illustrate the importance of attending to this distinction, I now explore how two widely accepted conclusions largely drawn from ideological scales may need revisiting.

Application 1: An artificial 'disconnect' – How ideological scales distort the study of collective representation

In the United States today, an ambitious reform agenda seeks to expand the role of elites as delegates, hoping they will more closely attend to public opinion (e.g., Kousser, Phillips and Shor 2014; Lessig 2011; Mann and Ornstein 2013). A stated rationale for much of this agenda is an empirical claim drawn from ideological scales: voters reliably support more moderate policies than elites (e.g., Ansolabehere, Rodden and Snyder 2006; Stone and Simas 2010; Masket and Noel 2012). For example, Bafumi and Herron (2010) find that only 10% of American voters prefer policies that are as extreme as their representatives in Congress. For many reformers, it follows from this view that, if we observe one political party successfully pursuing a policy that we see as undesirable relative to the status quo, most voters will support a less extreme and thus more desirable alternative. For example, in support of campaign finance reform, Lessig (2011) writes: "Fundraising happens among the extreme, and that puts pressure on the extremist [politicians] to become even more extreme." Similarly, Mann and Ornstein (2013) recommend that we can "moderate politics by expanding the electorate."

This new conventional wisdom concerning legislators' extremism and voters' moderation stands in sharp contrast to classic empirical studies that find American politicians provide robust 'collective representation.' As a whole, this literature suggested, elites do tend to support policies in concert with the public's views (e.g., Weissberg 1978). Moreover, if anything, these classic studies assumed that political elites would only support policies within a relatively narrow and moderate range relative to the broad range of policies for which many citizens might voice support (e.g., Kingdon 1989, page 291). But recent scholars using ideological measures consistently conclude the opposite: political elites support policies far more extreme than citizens, leaving Americans governed by extremists fundamentally "disconnected" from rank-and-file Americans' reliably moderate demands (e.g., Fiorina and Abrams 2009; Bafumi and Herron 2010; Henderson 2013; Hill and Tausanovitch 2014; McCarty et al. 2014).

There is reason to suspect these new studies' departure from classic wisdom may be an artifact of the ideological measures they use. Research has long found that elites tend to consistently take positions on one side of the ideological spectrum across many policy areas but also eschew taking positions that are too extreme within any policy area (e.g., Converse and Pierce 1986; Jennings 1992). This is reminiscent of the legislator from Table 1.1, who scored at the extreme of an ideological scale for having consistently conservative views despite having fairly moderate positions on issues themselves. If political elites have positions like this, they may appear 'extreme' on ideological scales by virtue of their consistency across policy domains ('this legislator supports the

liberal position on every single policy'), even if elites tend to stake out fairly moderate positions on issues themselves ('none of this legislator's positions are very far to the left').

Figures 2.6 and 1.2 provided the first evidence consistent with this possibility. Many citizens voice support for policies well to the left or right. But when these views are 'averaged' at the individual level, they appear moderate on the whole.

What happens when this same procedure is applied to elites? To compare what happens when voters and elites are examined one issue at a time or on ideological scales, I conducted a parallel survey to a convenience sample of sitting state legislators in April 2013 and administered the same issue batteries as I delivered to the mass public.¹⁰ This survey was not intended to be strictly representative of sitting legislators, but merely to explore the consequences of the much greater degree of ideological consistency typically present in elite samples.¹¹

Figure 1.5 depicts the results of this survey in the same two ways the mass survey results were depicted in Figure 1.2: the top panel shows the distributions of individual legislators' 'typical responses,' whereas the bottom panel shows the frequency of the legislators' responses on the 'typical issue.'

A first striking pattern is worthy of comment: there is strong similarity between the results these two aggregation approaches yield among elites. This shows what the dimensionality assumption underpinning ideological scales looks like when it holds, and why ideological scales have been so widely adopted among scholars of political elites. Political elites who are to the left of the Democratic party on one issue, for example, tend to be consistently to the left of the Democratic party across most other issues also. This means that their views can be meaningfully summarized by a point on a scale – 'left-wing Democrats.'¹²

But what happens when we add voters to the picture? A comparison of the bottom panels in Figure 1.2 and Figure 1.5 suggests that the public in fact delivers similar amounts of support for moderate and immoderate policies as legislators. At the level of the public (shown previously in Figure 1.2), the deep blue and red bars at points 1, 2, 6, and 7 on the scale received a great deal of support: on the typical question about 45% of the public offered these positions. On the typical issue at the elite level – which ideological scores suggest are a hotbed of support for extreme policies – the modal responses centered nearly exactly at points 3 and 5, where the parties' expected positions were specified *ex ante*. Moreover, legislators were actually slightly *less* likely to describe their positions at points 1, 2, 6, and 7. And, the exact same share – 18% at both the mass and elite levels – picked a 'moderate' option on the typical policy. This is quite a different portrait than existing literature paints, such as Bafumi and Herron's (2010) conclusion that only 10% of the public supports policies more extreme than legislators. However, when these data are mapped to a single dimension as existing literature is accustomed, voters again appeared moderate and elites retained their clusterings, now at the extremes.

¹⁰State legislators were invited to participate by contacting them at their public email addresses. Screener questions ensured that only legislators themselves were answering the survey.

¹¹The survey was also not intended to query legislators' *personal opinions* on the issues at hand but rather their *public positions*, the concept at stake in studies of policy representation.

¹²There are certainly legitimate concerns that can be raised about ideological scales separate from the issues this paper interrogates, but space is limited to elaborate those critiques in detail (see, e.g., Lee 2009).

The ‘disconnect’ scholars routinely report thus seems to be an artifact of the ideological measures they use, which assign ‘ideologically mixed’ Americans middling scores on an index and ‘ideologically consistent’ politicians extreme scores. It is certainly too soon to confidently overturn conventional wisdom based just on these unique survey items and this one sample. It is possible that measurement error would change the picture slightly (Section A.4 in the Supplementary Appendix discusses this possibility), or that other issues would yield different answers. Nevertheless, the finding that nearly half the public supports policies more extreme than legislators on the typical issues in this survey raises questions about the new conventional wisdom that voters are reliably more moderate. On individual issues, these patterns of moderation and extremism do not reliably persist. Rather, collective representation may be significantly stronger than ideological scales imply (Weissberg 1978).

One may wonder whether the aggregation strategies pursued in the Figures above do justice to the more sophisticated procedures employed by methods such as IRT models, but Figure A.8 in the Supplementary Appendix uses data from the binary response options delivered to both the mass public and legislators to show that state of the art methods do not overcome these problems. The IRT estimates look like the bottom panels on Figures 1.2 and 1.5, suggesting these legislators are reliably more extreme despite what is plain in the data when it is aggregated by issue first.

Of course, the whole truth is never quite so simple. An additional benefit of examining representation on individual issues is the heterogeneity across issues that this mode of analysis can reveal (e.g., Lax and Phillips 2012; Pacheco 2014). And there indeed appears to be substantial heterogeneity in the collective relationship between politicians and voters on different issues. Moreover, this heterogeneity may be theoretically significant. The issue data in Figure 2.6 suggested a quite different ‘disconnect’ prevails on many issues than existing literature deems possible: elites in *both* parties sometimes spurn many voters in the same way – declining to raise taxes on the wealthy by large amounts or increasing spending on social insurance programs dramatically, for example, or being much harsher towards undocumented immigrants. Such patterns are ripe for further investigation. They may also have implications for reformers. If public opinion is assumed to be a moderate gold standard, encouraging legislators to act as delegates of voters may seem obviously desirable (e.g., Lessig 2011; Mann and Ornstein 2013). But examining the public’s potentially unwise preferences on individual issues (Sances 2014) provides an important reminder: faithful representation of sometimes-extreme public opinion is not the sole standard to which representatives can aspire (Burke 1774).

Application 2: Political Sophistication and Extremity of Opinion

Scholars are not only concerned with how well politicians represent the public overall; they are also concerned with which citizens politicians tend to represent best or are most responsive to. Here again a rich tradition that tests who is represented in a variety of particular issue areas (e.g., Dahl 1961; Gilens 2012) coexists with a recent literature asking similar questions using ideological scales (e.g., Bafumi and Herron 2010; Bartels 2008; Bhatti and Erikson 2011; Griffin and Newman 2005; 2007; Fiorina and Abrams 2009; Tausanovitch 2014).

Perhaps the most influential finding about who politicians represent best that is based on ideological scales regards the allegedly radicalizing influence of especially engaged citizens. Because politically engaged, active, and knowledgeable individuals appear extreme on ideological scales, they have often been implicated in leading legislators to support extreme policies (e.g., Abramowitz 2010; Bafumi and Herron 2010; Fiorina 1999; Fiorina and Abrams 2009). Fiorina and Levendusky (2006a) clearly state this idea: “People who are active in politics tend to have more extreme views than ordinary voters.”

The notion that engaged citizens’ policy views are more extreme may seem natural, but sits at odds with a great deal of classic literature. This literature suggested that rank-and-file members of the public with the *least* political information and education were the most likely to support extreme endeavors (e.g., Kingdon 1989; Stouffer 1955). On the other hand, as Zaller (1984) wrote, educated and politically engaged citizens were widely accepted to be “more rather than less likely to conform to prevailing convention” (p. 22), hewing to beliefs within the mainstream.

Why, then, might knowledgeable individuals appear more extreme on ideological scales? Classic political behavior research also provides an answer. This research would expect politically engaged citizens to be the most ideologically consistent across issues, as they tend to support their party’s side of salient issues (e.g., Converse 1964; Glaeser and Ward 2006; Lenz 2012; Zaller 1992). The greater ideological loyalty of political sophisticates to one side of many policy debates could account for why sophisticates appear ‘extreme’ on the ideological scales, even if their views within these policy areas tend not to be extreme.

Are engaged and knowledgeable Americans in fact more likely to support extreme policies, or merely more ideologically consistent across policy domains? The left panel in Figure 1.6 shows that highly engaged and knowledgeable individuals are the likeliest to have extreme scores on an ideological scale as they consistently fall on their parties’ side of the ideological spectrum across many issues. This replicates the typical finding that extremity on an ideological measure (shown on the y-axis, and computed using IRT from the 20 binary items) correlates strongly and positively with a political knowledge scale¹³ (on the x-axis) ($t > 14, p < 0.001$) (Abramowitz 2010; Fiorina and Abrams 2009). Highly knowledgeable individuals are more likely to voice support for one of the two parties’ side of many policy debates.

However, political sophisticates appear no less likely to support moderate policies within policy areas than other Americans. In fact, the second panel of Figure 1.6 suggests that the truth may be closer to the reverse: individuals who are higher in political knowledge appear *less* likely to support policies that are more extreme than the parties’ positions ($p < 0.001$). Highly knowledgeable and politically attuned Americans may appear extreme on ideological scales merely because they consistently answer in line with one of the parties’ positions, but they do not seem more likely to prefer more extreme policies than other Americans. (Section A.5 of the Supplementary Appendix discusses whether these patterns are attributable to measurement error.)

¹³See the Supplementary Appendix for the items used to create the political knowledge scale.

The same reversal of conventional wisdom persists among self-reported¹⁴ primary voters, another class of individuals scholars routinely indict for drawing politics to the extremes (e.g., Brady, Han and Pope 2007; Fiorina and Levendusky 2006b).¹⁵ Self-reported primary voters appear (slightly) *less* likely to volunteer extreme views than those who do not report voting in a primary ($p < 0.001$), even though they are much more ‘extreme’ on ideology measures by virtue of their greater loyalty to their ideological side across issues ($p < 0.001$).

The role of political information does not seem to be to pull voters outside the realm of mainstream political debate; quite the contrary. With that said, this evidence does nothing to impeach arguments that strong partisans and political activists are increasingly likely adopt their parties’ views or express disdain for the other party (e.g., Mason 2014; Iyengar, Sood and Lelkes 2012). However, extremity of opinion on a given issue is a separate construct from – and is not guaranteed to correlate positively with – ideological consistency across issues, intensity of opinion on issues, or strength of partisan identification.

Other Potential Applications

Relaxing the assumption that voters’ views can be summarized on by one or two dimensions may also have implications for the study of representation more generally, as one-dimensional ideological scales have formed the basis of much conventional wisdom in numerous literatures. I briefly elaborate three more examples to illustrate this potential.

First, an influential literature considers the conditions under which elites are ‘held accountable to voters more strongly.’ This concept is often operationalized as the extent to which politicians’ estimated ideal points are moderate (e.g., Canes-Wrone, Brady and Cogan 2002; Snyder and Strömberg 2010). This metric is premised upon the idea that voters by and large want ideological moderates to represent them. Yet, consider again the example from Table 1.2. In order to represent majority will on every issue, the legislator in that example must take the liberal position on every issue and appear ‘very liberal’ ideologically. On the other hand, legislators who were actually out of step with more constituents would seem ideologically closer to the district. Thus, even though scholars often assume that ‘moderate’ representatives represent voters’ preferences more closely, it is possible that legislators who appear ‘ideologically extreme’ are actually likelier to agree with their constituents on issues – even if voters’ views are not extreme.¹⁶ The substantive conclusions

¹⁴The self-reported primary voting measure is clearly not ideal, although most existing studies rely on this measure as well and rarely find different results when subsetting to validated primary voters.

¹⁵For a review of early literature on this topic and an early skeptical perspective, see Norrander (1989).

¹⁶Empirical studies are remarkably mixed on whether voters prefer ideological moderates (e.g., Adams et al. 2013; Montagnes and Rogowski 2012), and when differences between extremists and moderates on valence dimensions are carefully taken into account, the conclusions of such studies can reverse (e.g., Stone and Simas 2010).

of studies using ideology to study electoral accountability depend upon how voters evaluate the particular policies on which moderate legislators and extreme legislators disagree.¹⁷

Second, the literature on race and unequal representation has attempted to judge the conditions under which Latinos and whites are better represented by comparing the one-dimensional ideal points of legislators to the typical ideal points imputed to white and Latino voters (Griffin and Newman 2007). However, consider a hypothetical libertarian legislator representing a Latino-majority district. This libertarian could appear ‘moderate’ and in-step with her constituents on a one-dimensional scale due to being ‘liberal on some issues and conservative on others,’ just as Latinos tend to be. However, the specific issues on which libertarians are liberal and conservative tend to be the opposite of Latinos. Such a legislator might thus be very unrepresentative of her Latino constituents’ views on all issues *and* appear to be a ‘good ideological fit.’ Recommendations on how to encourage better representation of Latinos’ views based on one-dimensional scales thus may yield counterproductive results.¹⁸ Similar issues could arise in studies of differential representation by income, partisan responsiveness, and sub-constituency responsiveness, many of which rely on ideological scales (e.g., Barber, Canes-Wrone and Thrower 2014; Bartels 2008; Bhatti and Erikson 2011; Gerber and Lewis 2004; Ezrow et al. 2011). Because ideological consistency correlates with many of these attributes, these studies may reach conclusions about representation that instead reflect unrelated reasons certain groups tend to be more ideologically loyal. Measures of issue-specific opinion are necessary to assess these questions.

Finally, Tausanovitch and Warshaw (2014a) report a remarkable finding based on ideological scales: voters are completely unaware of the ideological positions of their Members of Congress, once what they can guess from party is taken into account. This lack of voter awareness spells troubling implications for democratic accountability, they conclude, and allows legislators to pursue their out-of-step agendas. But Ansolabehere and Jones (2010), using the very same dataset, have shown that voters are actually remarkably knowledgeable about these same legislators’ votes on individual bills, much more so than one could guess based on their party alone. It is difficult to see how measurement error could account for Ansolabehere and Jones’s (2010) results. And it does not seem desirable to average voters’ knowledge away into an index of their perceptions that exaggerates their ignorance by attributing their knowledge to error.

¹⁷As an example of this potential for substantive conclusions to change as a result of this critique, Snyder and Strömberg (2010) show that legislators whose districts overlap well with newspaper markets tend to be more moderate, which they interpret as showing that the media helps voters hold legislators accountable to their preferences. If voters are thought to be uniformly moderate and other political actors uniformly extreme, this interpretation may be relatively straightforward. However, consider an alternative interpretation of this result: interest groups tend to encourage ideological moderation, perhaps because it is less likely to lead to changes in the status quo (Baumgartner et al. 2009; Bonica 2013); and, when Members of Congress know it is less expensive for interest groups to purchase negative advertisements against them (because an advertisement in only one newspaper can cover an entire district), they are more careful not to contravene interest groups’ preferences. This is quite a different view of how media coverage affects political accountability. Without the assumption of voter one-dimensionality, which interpretation of Snyder and Strömberg’s (2010) results is unclear.

¹⁸This example illustrates the converse pathology of that shown in Table 1.2.

1.4 Discussion: Studying Representation of Ideological Innocents

Scholars often pursue one of two strategies when seeking to characterize public opinion and investigate how politicians represent it. The first strategy is exemplified in recent work like Gilens's (2012) *Affluence and Influence*, Lax and Phillips's (2012) "Democratic Deficit in the States," and Lenz's (2012) *Follow The Leader*. These works first collect data about the public's opinions on a number of issues and then ask research questions at the level of these issues – for example, how predictive are lower income Americans' support of particular proposals for whether it ultimately becomes law? How much public support is typically necessary until a proposal is likely to be enacted? Showing the consistency of these works' hypotheses across a number of issues facilitates their persuasive contributions.

An alternative, increasingly popular approach first summarizes citizens' preferences across a variety of issues to estimate their ideological orientations (or asks respondents to supply their own general ideology). It then describes public opinion and tests hypotheses about its representation in government using these ideological summaries.

These ideological summaries are often interpreted as summaries of citizens' policy preferences, but they primarily measure ideological consistency: the share of policies on which an individual has a liberal or conservative view. Citizens' scores say little about *how liberal* or *how conservative* their views on these issues are. Moreover, for the vast majority of citizens who support an idiosyncratic mix of liberal and conservative policies, their middling scores imply nothing about their view on any issue, not allowing us to do better than guessing when predicting which side of an issue they are likely to be on.

This paper first illustrated analytically how attending to this distinction between ideological consistency across policy domains and policy views within domains can have dramatic implications for studying representation. For example, what appears to be a legislator providing 'good representation' on an ideological index can correspond to very poor representation in reality if legislators do not match their constituents on the actual issues that go into the index; likewise, as Table 1.2 showed, legislators providing very close representation of public opinion in reality can appear out of step on an ideological index if their constituents are not as ideologically consistent as they are. Ideological measures can thus lead to inaccurate answers to the significant questions they are increasingly used to investigate, such as "how well [a politician] represents" his or her constituency. The key issue with such measures is their fundamental assumption that do not have meaningful views distinct from their ideological orientations. A rich history of public opinion research has detailed that citizens should be conceptualized in precisely the opposite manner (e.g., Converse and Pierce 1986; Kinder and Sears 1985).

Several pieces of evidence supported this critique. I showed that citizens have persistent views on individual issues that do not correlate strongly with their views on other issues nor can be predicted well by their scores on a scale. I also showed that support for extreme policies within policy domains is *uncorrelated* with state-of-the-art ideological scales often interpreted as diagnostic of support for extreme policies. I next provided examples of how two widely accepted findings about

representation based on ideological scales may need revisiting. First, although scholars increasingly accept that American politicians support more extreme policies than their reliably moderate constituents would prefer, the policies politicians support appear no more extreme in general. Moreover, the highly politically active and knowledgeable citizens that scholars routinely indict for pulling politics to the extremes appear if anything less likely than their peers to support more extreme policies than legislators. Although they have not been devoted much attention in this paper, measures of respondent's own ideological self-placement present similar conceptual issues.¹⁹

There are some areas where measures of citizens' ideological consistency across policy domains are likely to be the most appropriate tools. Sometimes scholars are interested in comparing how likely different collective units in the public are to support liberal policies without regard to what these policies are. For example, Caughey, Dougal and Schickler (2013) use a one-dimensional scale to document changes in the public's propensity to support liberal policies over the course of the New Deal. Likewise, Gerber et al. (2010) use an ideological scale to examine whether individuals with different personality profiles are more likely to support liberal policies.²⁰ In these applications, 'how much likelier is this group of citizens to support a liberal policy than another group, without regard to which policy?' is the research question of interest, unlike in studies of representation.²¹

This paper's critique be reformulated in the language of multidimensionality, and a critic adopting this language may note that adding a second or third dimension to ideology models does not explain much additional variance in Americans' policy preferences. The lack of predictive power of an additional dimension is often taken as evidence that one or two dimensions is 'enough' (e.g., Jessee 2009; Tausanovitch and Warshaw 2013; 2014*b*). However, merely because adding *one* additional dimension does not capture a great deal of the heterogeneity of Americans' issue preferences does not mean that additional dimensions do not exist; it merely means that there is not any one particularly large secondary influence common across all Americans.²² This logic can be seen by considering a placebo test: a factor analysis of Census-tract-level correlates of socio-economic sta-

¹⁹Many citizens have several genuine policy views on both sides of the ideological spectrum, so it is difficult for their policy views to be accurately described with one location on this spectrum, regardless of whether it is the output of a scaling procedure or citizens themselves supply it. Those who identify as 'moderate' may still be best understood as 'cross-pressured' or 'ideologically mixed,' rather than as typically supporting moderate policies (Treier and Hillygus 2009; Zaller 2004). Consistent with this potential, Figure A.7 in the Appendix shows that self-described moderates are similarly likely to support moderate policies as self-described extremists.

²⁰In the special case when Democratic and Republican candidates for office are at the poles of ideological scales, an ideological scale might also be useful for summarizing individuals' policy preferences when estimating the influence of policy preferences on vote choice (e.g., Jessee 2009). In this application, 'on what share of issues does a citizen agree with the Democratic candidate' is the quantity we seek to measure, potentially without regard to *which* issues these are. However, this interpretation quickly dissipates if there is any differentiation between multiple Democratic or Republican candidates' positions on different issues (Hill 2015).

²¹Chapter 2 evaluates the possibility that citizens judge representation on the basis of ideological fit rather than congruence with their positions on individual issues and finds that they do not.

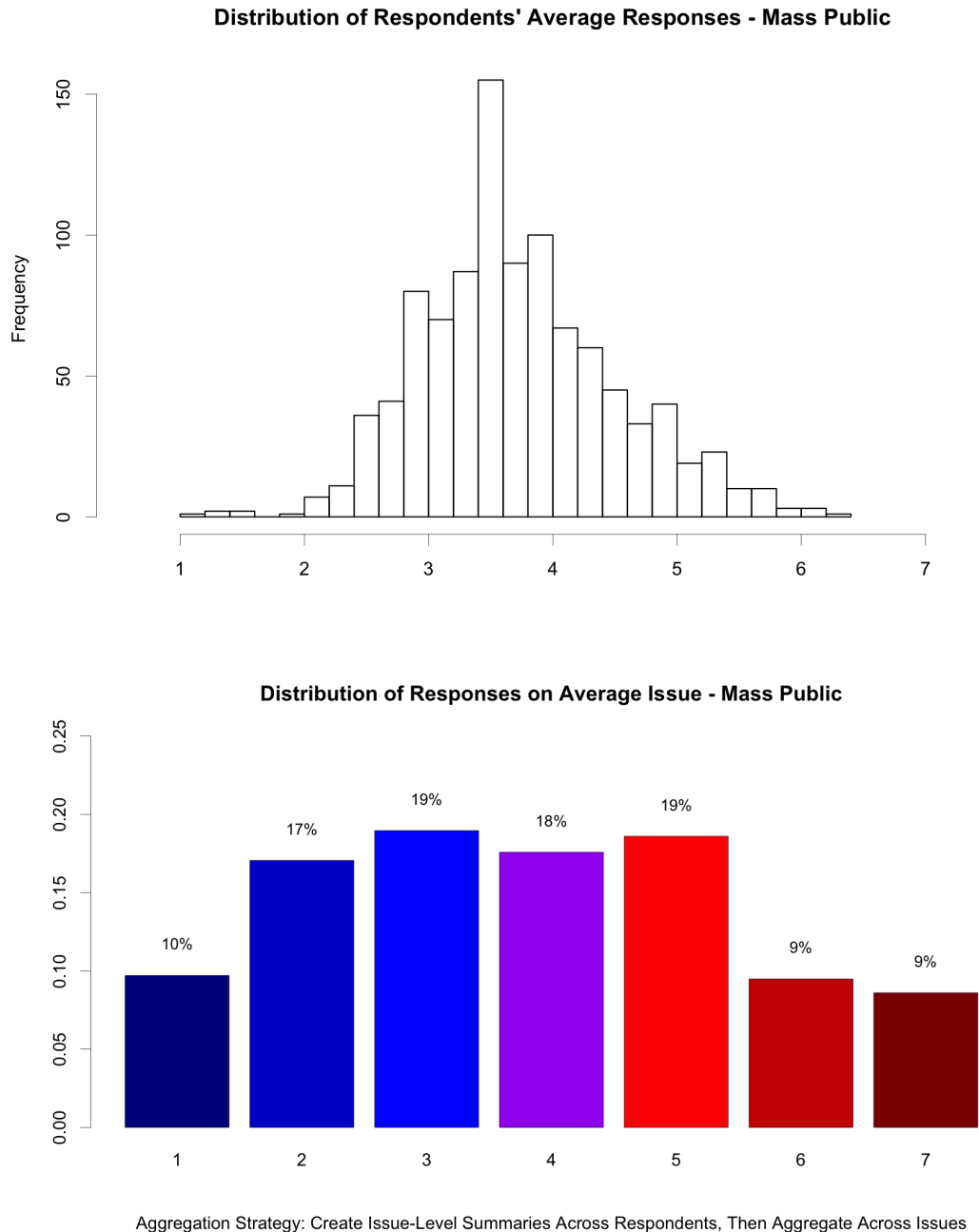
²²Some existing literature finds a strong second 'social issues' dimension (e.g., Ansolabehere, Rodden and Snyder 2006; 2008; Treier and Hillygus 2009), although this appears to depend upon the data source used. The point this paper makes remains apt regardless of whether one or two dimensions are considered; the argument is that many more dimensions exist than one or two, even if no one of them is individually large.

tus such as race, income, education rates, and marriage rates produce one large dimension because all these variables correlate moderately; but, this does not mean that race and marital status are ‘actually the same thing.’ Similarly, there may be hundreds of ‘dimensions’ to Americans’ policy preferences – some might favor universal healthcare because of a personal experience with an insurance provider, for example, and others may oppose gay marriage due to their religious convictions (Tesler 2014). Simply because there is no single particular factor that competes in strength with the first dimension does not mean that such factors collectively matter little and that ‘views on gay marriage’ and ‘views on abortion’ are ‘actually the same thing.’²³ As Figure 1.3 makes clear, there are many issues on which Americans have persistent views yet that do not have strong relationships with other policy domains.

Confronting the multidimensionality of citizens’ preferences significantly complicates the task of studying representation empirically and theoretically (e.g., Shepsle and Cox 2007). But the consequences of assuming otherwise appear far from benign. As Converse (1964) famously cautioned, “belief systems have never surrendered easily to empirical study or quantification.” An addendum is perhaps necessary: assume otherwise with caution.

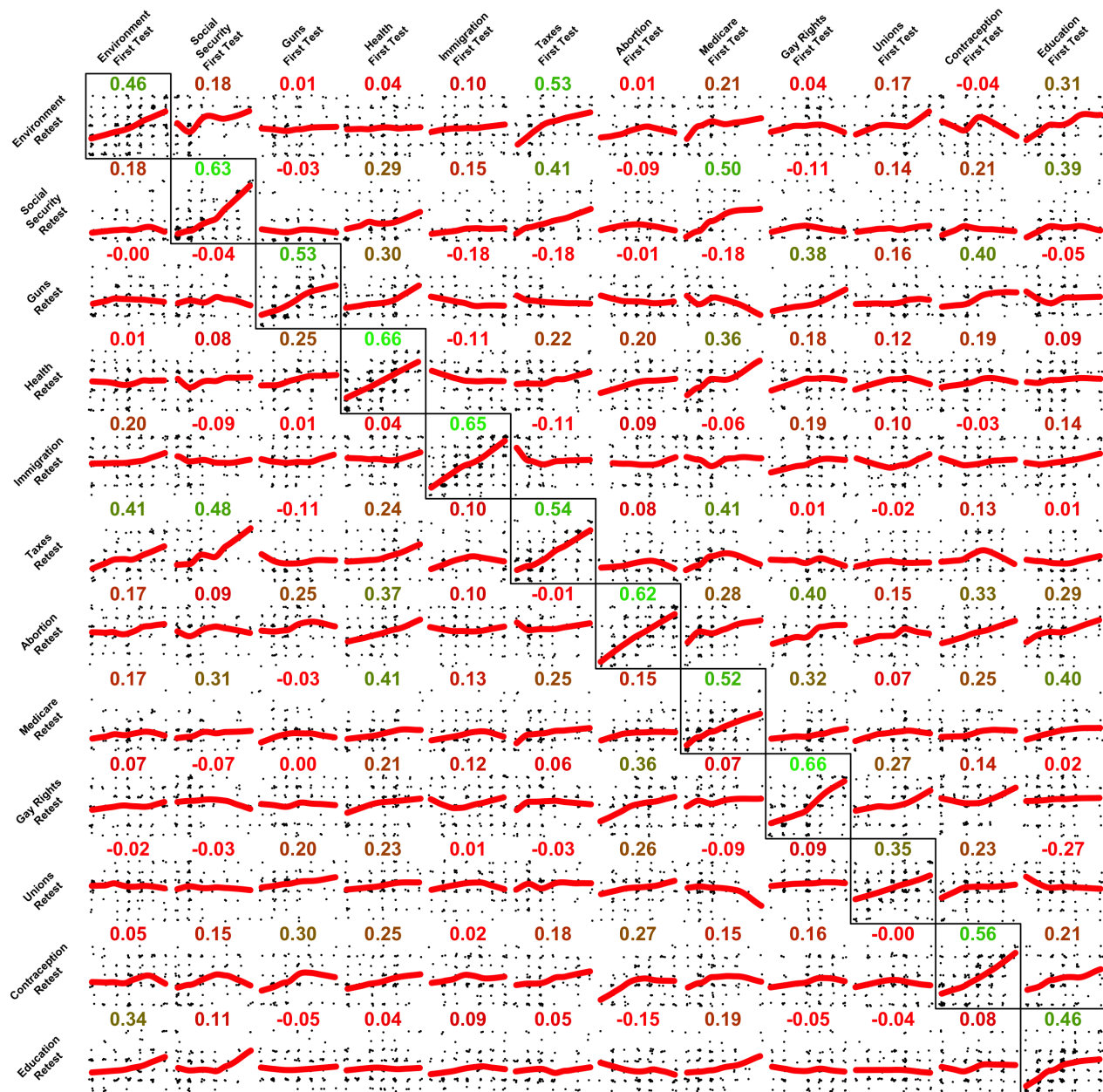
²³Although this paper is agnostic about why the first dimension exists, a simple explanation consistent with the evidence is that citizens largely arrive at their preferences on distinct issues for idiosyncratic reasons but adopt the position of their favored political party on some issues (e.g., Glaeser and Ward 2006).

Figure 1.2: Strategies for Aggregating Mass Opinion



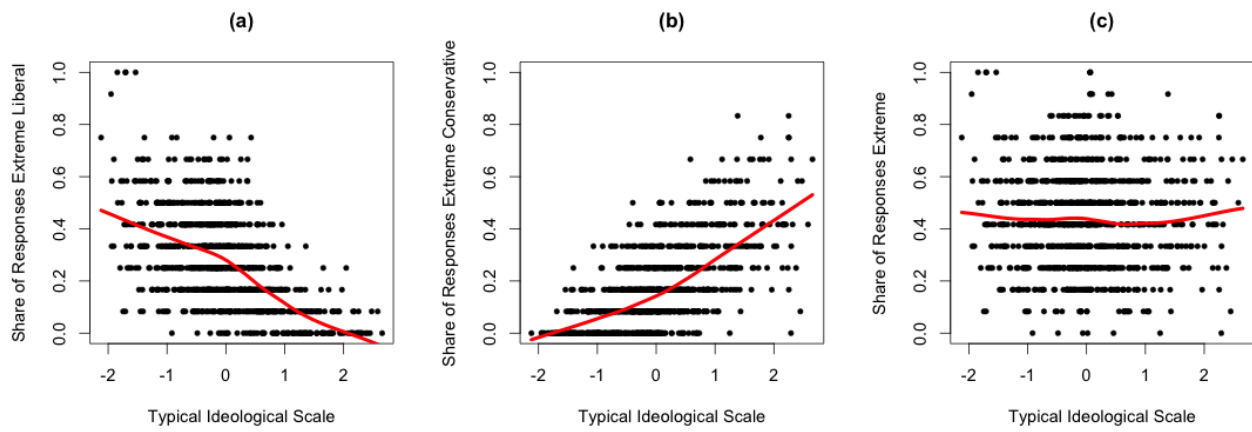
Notes: The histogram in the top panel shows the distribution of respondents' 'average responses.' To compute this figure, I first average each voters' response across multiple issues and then plot a histogram of these voter-level response averages, as shown in the top right of Table 1.3. To calculate the bottom figure, I followed the aggregation strategy shown at the bottom of Table 1.3: I first calculated the marginals on every issue (see next section), and then average the marginals to describe the 'typical issue.'

Figure 1.3: Test-Retest Polychoric Correlations Within and Across Issues



Notes: Each subgraph depicts responses on a first issue during the first survey wave on the x-axis and responses on a second test a month later on the y-axis. Raw data is plotted with jitter given the categorical nature of the variables. Red lines depict the loess smoothed relationship between the responses. Polychoric correlations are shown above each graph. Issue names for the x- and y-axes of each graph are shown, respectively, along the top and left of the figure.

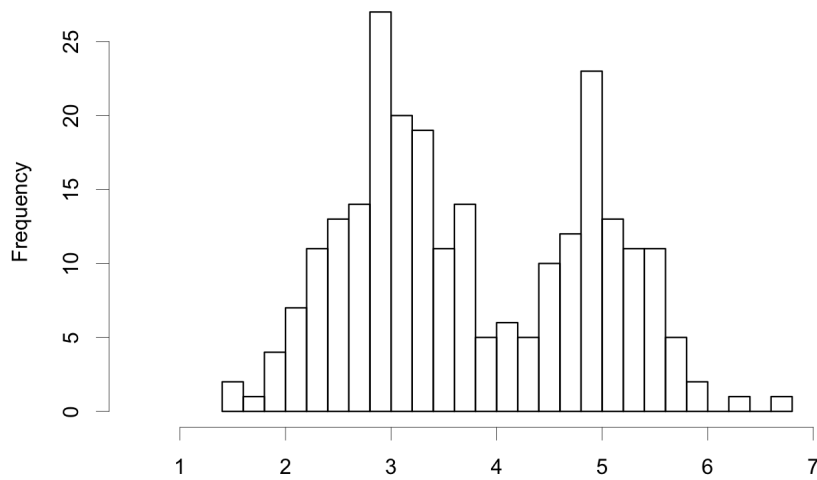
Figure 1.4: Extremity On Ideological Scales Does Not Predict Support For Actual Extreme Policies



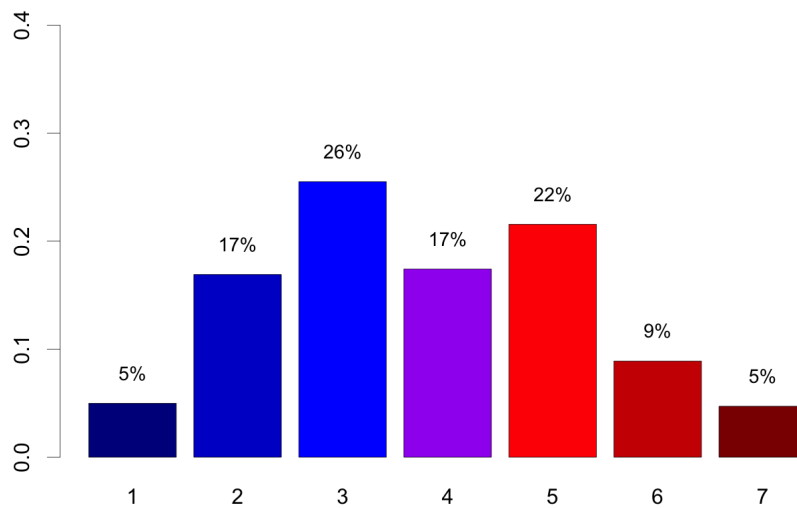
Notes: Black dots show raw data, red lines are loess smoothed lines.

Figure 1.5: Strategies for Aggregating Elite Opinion

Distribution of Respondents' Average Responses - Legislators

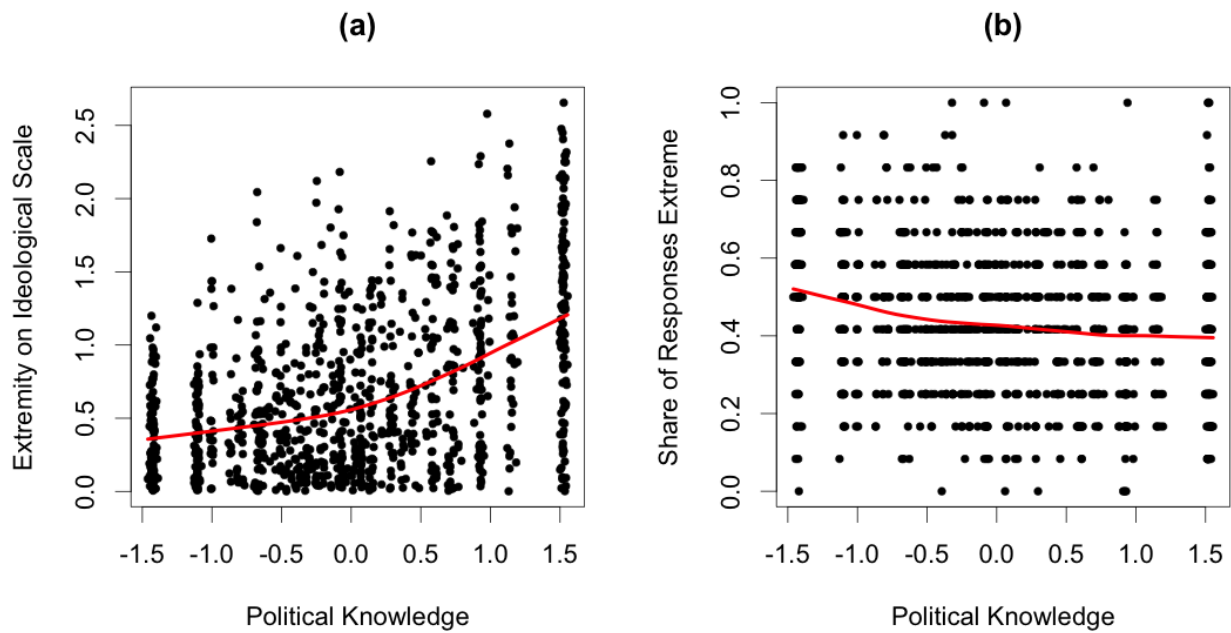


Distribution of Responses on 'Average Issue' - Legislators



Notes: The panels were computed identically to Figure 1.2, but with the elite sample.

Figure 1.6: Relationships Between Political Knowledge, Ideology Scale, and Support for Extreme Policies



Chapter 2

Does Polarization Imply Poor Representation? A New Perspective on the “Disconnect” Between Politicians and Voters¹

Many argue that elite polarization implies a “disconnect” between the policy preferences of politicians and citizens which the election of more moderate politicians would resolve. We critique two common versions of this claim, showing that they rely on the faulty assumption that citizens’ policy preferences are ideologically rooted. First, with unique revealed preference experiments, we show that citizens are more concerned with seeing politicians represent their personal pattern of issue views than a moderate ideology. As a result, citizens may not see ideologically moderate politicians as superior to their existing polarized representatives. Second, some claim that citizen’ ideological moderation implies citizens’ views on individual issues are more moderate than politicians’. We show this is not the case. Rather, the “disconnect” appears more nuanced than a simple undersupply of moderate politicians: the range of policy alternatives elites debate often appears systematically to the left or right of the range of policies popular among the public.

Elite political polarization is one of the most significant developments in contemporary American politics (Lee 2009; Noel 2014). Almost universally, scholars argue that its consequences for

¹This paper is co-authored with Douglas Ahler. A previous version of this paper circulated under the title “How Ideological Moderation Conceals Support for Immoderate Policies: A New Perspective on the “Disconnect” in American Politics.” We thank the Institute of Governmental Studies at UC Berkeley for support and Nick Carnes for sharing data. We thank Joseph Bafumi, Anthony Fowler, Don Green, Andy Hall, Seth Hill, Josh Kalla, Stephen Jessee, Gabe Lenz, Kevin Quinn, Jonathan Rodden, Boris Shor, Gaurav Sood, Walt Stone, Chris Tausanovitch, Rob van Houweling, and seminar participants at Columbia University, MIT, MPSA, and the Pew Research Center for helpful comments. David Broockman thanks the National Science Foundation Graduate Research Fellowship Program for support.

representation are dour. Perhaps the most lamented consequence of elite polarization is the chasm it is said to imply between the policy positions of American political elites, which are described as increasingly extreme, and the policy preferences American voters, which are characterized as reliably moderate. Fiorina and Levendusky (2006a) define this perceived “disconnect” aptly: “The political class is increasingly polarized” but “the majority of Americans remain largely centrist. ... The result is a disconnect between the American people and those who purport to represent them.”

This dominant perspective on the consequences of polarization implies that voters would overwhelmingly feel better represented if politicians were to take more moderate positions. This notion of how to improve representation appears throughout contemporary research on representation, institutions, and behavior in American politics. For example, Bafumi and Herron’s (2010) influential analysis suggested that over 90% of voters would like their Members of Congress to take more moderate positions. Consistent with this view, many scholars operationalize “responsiveness to constituents” as the degree to which legislators’ positions are moderate (e.g., Hall 2014; Snyder and Strömberg 2010). And a cottage industry has evaluated political reforms on the basis of whether politicians’ positions become more moderate, taking for granted that this would improve representation in voters’ eyes (e.g., Ahler, Citrin and Lenz 2013; Brownstein 2007; Bullock and Clinton 2011; Gerber and Morton 1998; Mann and Ornstein 2013).

The claim that voters would feel better represented if politicians were to take moderate positions commonly appears in two forms. In this paper, we show how both rely on assumptions about the ideological content of citizens’ policy preferences that data do not support. We illustrate these assumptions with care theoretically, then show that they do not hold empirically.

First, many characterize citizens as disconnected from polarized elites on an *ideological* basis and suggest citizens would welcome the election of politicians with a moderate ideological makeup. Most citizens are characterized as ideological moderates because they are not ideologically consistent in their expressed preferences; citizens tend to support a mix of liberal and conservative policies. By contrast, the essence of elite polarization is that few Members of Congress take an ideologically mixed pattern of positions; rather, nearly all politicians consistently support liberal or conservative policies across nearly every policy area. The lack of ‘ideologically mixed’ politicians who support each ideological side at least some of the time is the first main component of the “disconnect” between politicians and voters that scholars have noted (e.g., Ansolabehere, Rodden and Snyder 2006; Bafumi and Herron 2010; Fowler and Hall 2013). For example, based on this pattern, Barber (2014) concludes that “legislators pay little attention to the preferences of constituents altogether.”

We show that this popular line of reasoning connecting polarization to an ideological disconnect relies on an assumption that citizens have ideologically-rooted policy preferences. The importance of this assumption is not widely acknowledged, but we will argue it is crucial. Moreover, we will cast doubt on it, arguing that citizens are better conceptualized as having personal patterns of issue views that they want represented, and not as ideologues. In other words, citizens want to see politicians represent *their* personal mix of policy preferences, not just *a* mix. This distinction has important implications for understanding polarization’s ills: because the ostensibly monolithically moderate American public is internally divided on many issues, politicians cannot simply take a ‘less polarized’ set of stances and automatically please most voters.

This leads us to our critique of the second common articulation of the “disconnect” polarization is said to have caused. Citizens’ views on *individual issues* are often characterized as reliably moderate, while elites are thought to have comparatively extreme positions on individual issues (e.g., Fiorina and Abrams 2009). The implication of this idea is that most citizens would feel best represented by politicians who support policies somewhere between than the two parties’ positions on each of many individual policies. For example, if Democrats in Congress support raising taxes by 5% and Republicans support lowering them by 5%, this view would lead us to expect that nearly all citizens would like their representatives to support a tax rate somewhere in the middle of these extremes.

Surprisingly little data exists on the moderation or extremity of citizens’ views within policy areas; most existing research simply assumes that Americans are more moderate than politicians on individual issues because they are not as polarized as politicians across issues. But, building on our previous critique, we show theoretically that citizens’ ideological predispositions imply surprisingly little about their views on individual issues when citizens’ policy views are not ideologically rooted. And indeed, when we empirically investigate citizens’ policy views in a more nuanced manner, we find that they are often not moderate. For example, many citizens’ ideal Social Security policy appears to the left of most Democratic politicians’ positions, while many citizens’ ideal immigration policy appears to the right of most Republican politicians’. Moreover, we show that such views are widespread and guide citizens’ choices.

The evidence for both these critiques is drawn from a novel series of survey items and experiments we delivered to voters in a two-wave panel. For reasons that we elaborate in greater detail below, many of our studies allow us to evade the potential for measurement error that has bedeviled previous work.

These findings paint a more nuanced portrait of the ‘disconnect’ between politicians and voters that prevails when elites are polarized, as well as a more complicated picture of citizens’ views. When citizens are seen as monolithically moderate, it may seem obvious how politicians can change their behavior to improve representation: be moderates, too. However, a closer look reveals that ostensibly moderate citizens are incredibly diverse in their issue views, meaning that no one politician—moderate or otherwise—can easily satisfy them all at once.

Our results suggest two correctives to dominant trends in research on polarization. First, our findings reveal a more nuanced “disconnect” between politicians and voters than a simple undersupply of moderates: on many issues, the range of policy alternatives on the elite agenda is systematically to the left or right of the range of policies popular among the public. Second, our results suggest that concerns over polarization should focus to a greater extent on effects beyonds its consequences for dyadic representation. There are many ills polarization may exacerbate, such as gridlock, incivility, and more. We would welcome more evidence considering whether or how polarization exacerbates these phenomenon (e.g., Krehbiel 1998; Lee 2009). However, polarization does not appear to imply a disconnect in dyadic representation to the extent many assume.

2.1 Does Elite Ideological Polarization Imply Poor Representation?

“Pick a dozen issues. If you agree with me on eight out of twelve, you should vote for me. If you agree with me on twelve out of twelve, you should see a psychiatrist.”
 – *Attributed to New York Mayor Ed Koch*

The essence of elite polarization is the increasing ideological orthodoxy of contemporary American politicians: Republican politicians nearly always vote on the conservative side of roll call votes, while Democratic politicians nearly always vote on the liberal side. Of course, American voters look quite different. Most Americans are ideologically mixed, supporting a mix of liberal and conservative policies (Baldassarri and Gelman 2008) (see also Chapter 1). For example, as Figure 2.1 shows, correlations between 2012 American National Election Study respondents’ reported preferences on abortion, environmentalism, and social spending are quite weak; most citizens express conservative views on some issues and liberal views on others.

Many argue that this contrast between polarized elites and mixed voters implies voters are poorly represented and would be better represented by politicians who also have a mix of positions (e.g., Ansolabehere, Rodden and Snyder 2006; Bafumi and Herron 2010; Fiorina and Levendusky 2006a; Fiorina and Abrams 2009; Mann and Ornstein 2013). However, making inferences about policy representation based on this ideological contrast is not as straightforward as it may seem. Rather, this reasoning depends on the extent to which voters’ positions on individual issues should be thought of as rooted in their moderate ideology. An extended example will illustrate why.

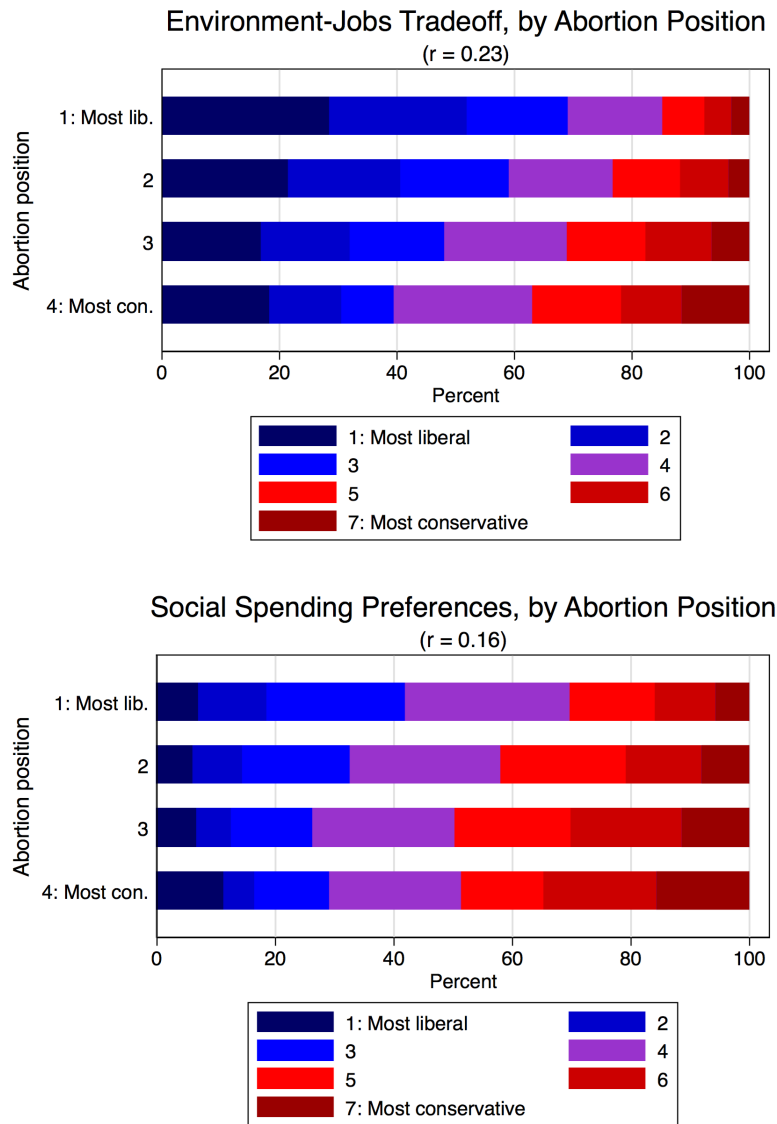
A Tale of Two Legislators: How Unresolved Debates About Public Opinion Affect Interpretations of Elite Polarization

Consider the hypothetical voter in Table 2.1. A survey has been administered to this voter and she claims to have liberal views on two of four issues that will come up for a vote in Congress and conservative views on the other two issues. Similar to many citizens, this voter thus claims to support a mix of liberal and conservative policies and is thus considered an ideological moderate.

Now consider two potential legislators who might represent this voter. Most existing Legislators look like Legislator A: consistently loyal to one side and polarized. But would encouraging a less polarized, more ‘ideologically moderate’ legislator to represent this voter necessarily improve representation in her eyes? Consider the case of electing Legislator B to represent this voter instead. Legislator B has positions that sit at odds with the voter’s survey responses on every issue; but, from an ideological perspective, Legislator B satisfies the criteria of being not polarized.

Many voices in the debate over the consequences of elite polarization would indeed find it obvious that Legislator B provides better representation for this voter. From this perspective, the evidence is clear: the voter is not polarized but Legislator A is; meanwhile, Legislator B is a perfect ideological match. The trouble is that many other scholars find it similarly obvious that Legislator A’s representation is superior.

Figure 2.1: 2012 ANES Scale Responses Across Policy Areas Correlate Only Weakly



Why would scholars disagree about how to judge which legislator provides superior representation, and which group is correct? The answer touches on an unresolved debate concerning the nature of public opinion and how it is measured. The relevance of this debate for understanding the consequences of polarization are not widely appreciated, but we will argue is crucial.

Table 2.1: Which Legislator is a Better Representative?

	Voter Liberal Survey Response?	Legislator A Liberal Vote?	Legislator B Liberal Vote?
Issue 1	1	1	0
Issue 2	0	1	1
Issue 3	1	1	0
Issue 4	0	1	1
<i>'Ideology'</i>	<i>0.5</i>	<i>1</i>	<i>0.5</i>

Notes: 0 denotes a conservative survey response or position, and 1 denotes a liberal survey response or position.

The Argument for Legislator B: Citizens' Policy Views Are Mere Windows Into Ideology, And Political Surveys Are Like Math Tests

The underlying premise animating the idea that Legislator B is a superior representative for this voter is the notion that voters' issue preferences are ideologically rooted. For those who do not share this perspective, a metaphor may help communicate it.

The methods used to model elites' and voters' ideologies are usually drawn from the literature on educational testing (Bafumi and Herron 2010; Barber 2014; Tausanovitch and Warshaw 2014*b*). Consider the application of such an approach in the context where it was developed, on the example mathematics test shown in Table 2.3. In this example, Students 1 and 2 each correctly answered half the questions correctly, but the questions they answered correctly and incorrectly were exactly opposite each other. Nevertheless, we still might characterize these students as having similar mathematical ability; the individual items are merely windows into these students' overall mathematical abilities, with random error determining which questions are answered correctly and incorrectly.² Importantly, in this application, few would disagree that Students 1 and 2 are almost certainly more similar to each other than either one is to a students who answered all questions correctly ('whiz') or all questions incorrectly ('dunce').

Scholars increasingly conceptualize voters' responses to issue questions in exactly the same manner: citizens' responses to issue questions are thought of as merely windows into their underlying ideology, not reflecting significant patterns specific to those issues (Ansolabehere, Rodden and Snyder 2006; Clinton 2006; Jessee 2009; Shor 2013). For example, in their prominent study of representation, Bafumi and Herron (2010) write that "if we conceptualize legislators as having ideal points that drive their roll call voting choices, then we should think similarly about voters" and their views on issues (p. 521).

The upshot of this conceptualization of citizens' responses to issue questions is similar to the upshot of scoring math tests: it allows us to calculate overall summary statistics for individual citi-

²One might imagine, for instance, that Students 1 and 2 have a 0.5 chance of committing an arithmetic error on any question.

Table 2.2: Are Political Surveys Like Math Tests?

Table 2.3: Math Test: Average Score Taps Underlying Ability

	Correct Answer?			
	Student 1	Student 2	Whiz	Dunce
Question 1	1	0	1	0
Question 2	0	1	1	0
Question 3	1	0	1	0
Question 4	0	1	1	0
Score	0.5	0.5	1	0

Table 2.4: Political Survey: Does Average Score Tap Underlying Ideology?

	Liberal Position?			
	Voter A	Voter B	Democrat	Republican
Lower Taxes	1	0	1	0
Restrict Immigration	0	1	1	0
Restrict Abortion	1	0	1	0
Shrink Medicare	0	1	1	0
'Ideology'	0.5	0.5	1	0

zens that “can be compared in a proximate sense” (Bafumi and Herron 2010). Just like calculating an overall score allows us to capture the clear commonalities between Students 1 and 2 on the math test in Table 2.3, so too is it thought that an ideological ‘ideal point’ can capture commonality between the political views of Voters A and B in Table 2.4. Under this view, Voters A and B can thus be considered quite similar, as their ideal points are as “proximate” as can be, and certainly are more alike to each other than to Democrats or Republicans.

Returning to Table 2.1, the argument for Legislator B is now clear: when we compute ideal points for all these actors and compare them in a proximate sense, the voter and Legislator B look similar, just like the two voters in Table 2.4. Under this perspective their claimed differences on individual issues are immaterial, just like the two students’ different answers to the math questions in Table 2.3.

The Argument for Legislator A: Ideological Innocence

We will argue that the growing conceptualization of political surveys like educational tests is in error. Rather, we suspect Voters 1 and 2 will see each other as quite different than each other, and that the voter in Table 2.1 would see little to like about Legislator B.

Our conviction is rooted in an alternative conception of public opinion, one that sees citizens as having genuine views particular to individual policies that are not rooted in any overall ideology.

The idea that citizens are ‘ideologically innocent’ is, no doubt, an old idea (e.g., Converse 1964; Kinder and Sears 1985). But despite the rich intellectual history of this perspective, its importance for understanding the implications of polarization is underappreciated: as Table 2.4 showed, implied ideological similarities and differences may say little about citizens’ and politicians’ similarities and differences on actual issues. For example, the two ‘moderate’ citizens in Table 2.4 may both view Democrats *and* Republicans as better representatives of their views than each other!

In summary, assuming that polarization implies an ideological disconnect that can be resolved by electing ideological moderates assumes that voters look to their underlying ideological orientation—moderate, liberal, conservative, etc.—as they evaluate issues and politicians, just as students’ answers to math tests are primarily a function of their underlying ability. Many scholars implicitly and explicitly hold this view. But, if citizens instead evaluate politicians on the basis of issues, ideological moderates may not be superior to polarized representatives, even if citizens are not themselves polarized. Indeed, a polarized set of positions may reflect a legislator doing their best to respect majority will across a series of issues, like Legislator A. To understand whether resolving elite ideological polarization would improve representation in and of itself, it is thus important to understand to what extent citizens evaluate politicians through an ideological lens.

Evidentiary Ambiguity

Why is it necessary to examine whether citizens prioritize issue or ideological representation? Many scholars find the answer to this question obvious; the problem is that they find different answers to it to be obvious. Unfortunately, existing empirical evidence has important ambiguities that also leave this question difficult to resolve.

On the one hand, the data that most strongly supports the idea that citizens are ideologically innocent is the empirical finding that citizens’ issue views do not correlate strongly. If citizens tended to evaluate the political world in ideological terms, we should tend to see citizens’ issue views correlate strongly, as under this theory they are all reflections of the same underlying concept. However, we do not observe such correlations empirically (Baldassarri and Gelman 2008; Converse 1964; Kinder and Sears 1985) (see also Chapter 1).

This evidence is not dispositive, however. Those who hold the ideological view argue that these correlations are artificially attenuated because of the tremendous measurement error in survey responses. Indeed, it is often argued that *precisely because* citizens primarily evaluate politics through an ideological lens, it should be no surprise that there is so much measurement error in their responses to individual policy questions (e.g., Ansolabehere, Rodden and Snyder 2008; Jessee 2009). The classic evidence for ideological innocence thus has not managed to convince the many scholars who assume citizens evaluate political stimuli through an ideological lens.

On the other hand, proponents of the ideological conception of public opinion have shown that citizens whose scores on an ideological index are more similar to a candidate’s are more likely to vote for that candidate (Ansolabehere, Rodden and Snyder 2008; Enelow and Hinich 1984; Jessee 2009; Joesten and Stone 2014; Shor and Rogowski 2013). This evidence seems to support the view that citizens evaluate the representation politicians provide them on an ideological

basis (“ideological proximity”) (e.g., Boudreau, Elmendorf and MacKenzie 2013; Stone and Simas 2010).

However, this evidence is more limited than at first glance, because the ‘ideological innocence perspective’ would also predict that many citizens who appear closer to politicians on an ideological scale would be more likely to vote for them. In particular, when polarized politicians sit at the extreme of ideological scales, where an “ideologically innocent’ citizen scores on the scale may reflect the share of policies on which they agree with each party and not an ideological position per se. We would expect both “more liberal” citizens and “citizens who support a greater number of liberal policies than conservative policies” to be more likely to vote for Democrats. Both perspectives thus predict that citizens who answer more questions on a policy battery in a liberal manner will be more likely to prefer to be represented by Democratic politicians.

This limitation of existing research reflects the fact that, in a polarized era, we rarely get to observe voters making choices between politicians like Legislator A and Legislator B – nearly all politicians consistently support one side and so we learn little about whether voters would prefer ideological or issue representation; few Legislators of type B exist. Significantly, this lack of data is not guaranteed to hold if reformers succeed in electing more ideological moderates to office. Although it is assumed that citizens would prefer this state of affairs, examining to what extent citizens would indeed prefer Legislator B’s ideological representation thus has immediate practical relevance as well. Our first set of studies is inspired by this exact ambiguity.

Study 1: Do Citizens Prefer Issue Representation or Ideological Representation?

Are citizens’ responses to issue questions merely windows into their underlying ideology or do they reflect genuine convictions specific to those issues? We consider this question in Study 1 by giving citizens a choice³ between two potential legislators with four issue positions. These issue items were themselves drawn from prominent works that have used these items to calculate an ideological index for the purpose of studying representation. Unlike in these studies, however, we construct politicians who do not take a consistent set of liberal and conservative responses across questions. The presence of ideologically diverse candidates that provide different degrees of issue and ideological representation allows us to drive a wedge between the observationally equivalent real-world predictions of the ideological and ideological innocence perspectives and appraise to what extent citizens might welcome ideological congruence in and of itself.

Table 2.5 shows an example of how ideological and issue similarity can diverge in the context of our studies. A voter provides responses to a variety of issue questions in a first survey, shown in the first column. Then, in a second survey months later, we ask a voter to choose between two politicians with the positions shown in the remaining columns.

³Although we are not principally concerned with explaining electoral choice per se, we thought a mock election would be a naturalistic way to capture citizens’ demand for ideological or issue representation, as it most closely approximates a common choice environment for citizens. (An alternative would have been to have citizens rate how well one politician represents them on a feeling thermometer, for example, but one might worry that results from such a comparison would reflect measurement idiosyncrasies. As such, we preferred a revealed preference approach.)

Table 2.5: A Hypothetical Matchup Between Two Politicians to Gauge how Citizens Evaluate Representation

Issue	Voter Survey Response in Baseline Survey	Positions Shown in Second Survey	
		<i>Politician A</i>	<i>Politician B</i>
1	L	-	-
2	L	-	-
3	L	-	-
4	L	-	-
5	L	-	-
6	L	-	-
7	L	-	-
8	L	-	-
9	L	-	-
10	L	-	-
11	L	-	-
12	L	C	-
13	C	L	C
14	C	L	C
15	C	L	C
16	C	-	C
Implied Ideology	75% Liberal	75% Liberal	100% Conservative
Ideological Agreement with Voter		Perfect	Divergent
Issue Agreement with Voter		Divergent	Perfect

Which would this voter see as a better representative? As a reminder, this voter might see Politician A as a better fit if the ideological perspective is correct because, according to the ideological perspective, there is nothing special about the particular issues on which the voter claims to have had liberal and conservative views on the baseline survey, just like there is nothing special about the questions students get right and wrong on math tests. What matters and persists is a voter's underlying score.

On the other hand, if there voters have meaningful views particular to issues that arise independently of their ideology, we would expect the voter to select Politician B. From the ideological perspective such a choice would be surprising, as a mostly-liberal voter would be selecting a consistent, polarized conservative. But if ideological polarization does not imply poor representation, the voter may see Politician B as a good fit.

(Voters were not shown a Table like this; an example matchup is shown in Figure 2.2.)

Figure 2.2: An Example Matchup from Study 1, As Shown to Respondents

Imagine choosing between the two candidates for US Congress described below:

Candidate A	Candidate B
<ul style="list-style-type: none"> • Support the death penalty in this state. • Allow illegal immigrants brought to the US as children to apply for citizenship. • Legalize the purchase and possession of small amounts of marijuana. • Increase taxes for those making over \$250,000 per year. 	<ul style="list-style-type: none"> • Do not allow illegal immigrants brought to the US as children to apply for citizenship. • Do not increase taxes for those making over \$250,000 per year. • Prohibit the purchase and possession of small amounts of marijuana. • By law, abortion should never be permitted.

Please take a few moments to review the candidates' positions and think about the degree to which each candidate reflects your views.

If you had to choose, which candidate would you vote for?

- Candidate A
- Candidate B

Data

Most of our studies rely on a two-wave panel survey conducted in January and March of 2014. In the first wave, we recruited 1,240 survey respondents from the United States through Survey Sampling International, which recruits samples that compare favorably to Census benchmarks. The sample matches the population reasonably well on key demographic variables, although African-Americans were intentionally oversampled for another project (see subsection A.1 of the Online Appendix [OA]). We use survey weights to account for this oversampling and to improve the correspondence between the sample and the population on observable covariates more generally.

In the first survey wave, we asked respondents 27 binary choice issue questions to which they indicated agreement or disagreement with the statement given (e.g., “Same-sex couples should be allowed to marry”; see the appendix for all 27 issue questions). Consistent with research in the recent ideological tradition, we estimated a *latent ideology* variable by scaling respondents’ answers to the binary issue questions using a unidimensional item-response theory (IRT) model.⁴

We then conducted a follow-up wave in March 2014 with 515 of the Wave 1 respondents. Wave 2 contained our four main studies, in which we examined the relationship between political choices made during Wave 2 and issue opinions as measured during Wave 1. The two months between the two waves was intended to preclude bias in favor of the ideological innocence perspective: given

⁴We use the MCMCpack R package to generate 10,000 draws from a posterior distribution of each respondent’s estimated ideal point.

how much time passed, respondents should not feel significant pressure to prefer politicians who share the individual issue positions they reported in Wave 1.

Study 1A: Probing the Demand for Ideological Representation with Random Positions

In our first study, we create match-ups like those shown in the second and third columns of Table 2.5 by picking candidates' positions completely at random: we pick four issues at random for each candidate and then pick four positions at random. Our main independent variables are the implied ideological and issue similarity between the voter and each politician generated by the experimental variation; our dependent variable is which politician the voter choice.⁵

How do citizens choose? Consistent with past studies of ideologically-driven choice (e.g., Boudreau, Elmendorf and MacKenzie 2013; Jessee 2009), the first column of Table 2.6 shows a significant bivariate association between citizens' ideological proximity to Politician B and a preference for Politician B. When we regress an indicator variable for choice of Politician B on Politician B's ideological proximity advantage (via OLS), we find that ideological proximity strongly predicts preference for Politician B.

However, as we noted, ideological agreement tends to correlate with issue agreement, making it unclear whether citizens who vote in a way the ideological perspective would predict are actually evaluating political figures on the basis of ideological proximity. And indeed, the evidence suggests that the association between ideological proximity and choice that many have noted may be a byproduct of its correlation with issue agreement. In other words, what has been seen a strong evidence that citizens evaluate politicians based on ideological proximity may reflect significant omitted variable bias because agreement on issues is not usually included in these statistical models. As column 2 shows, when we introduce Politician B's issue agreement advantage into the regression model, the apparent effect of ideological proximity on politician preference plummets

⁵To measure the degree of congruence between these hypothetical politicians and respondents on issues, we simply calculate the proportion of positions for which the citizen's Wave 1 responses agree with each of the fictive politicians we randomly generated. Citizen i 's agreement score with Politician A is specified as $\text{Agreement}_{iA} = \frac{\sum_{j=1}^n (j_i = j_A)}{n}$, with j indexing the randomly chosen issues and n referring to the set of those issues for which the respondent expressed a Wave 1 opinion ($n = 4$ for all respondents). Our main measure of issue congruence in this test is *Politician B's issue agreement advantage*, $\text{Agreement}_{iB} - \text{Agreement}_{iA}$.

To measure ideological congruence, we estimate latent ideology for all possible politicians (combinations of four issue positions) with a unidimensional IRT model. Again using the MCMCpack R package, we generate 10,000 draws from a posterior distribution of each politician's estimated ideal point. We calculate *Politician B's ideological proximity advantage*—the probability that Politician B's ideal point (ψ_B) is ideologically closer than Politician A's (ψ_A) to citizen i 's (θ_i)—as follows:

$$Pr(\text{Politician B is more proximate}) = \frac{\sum_{d=1}^{10,000} |\theta_{id} - \psi_{Bd}| < |\theta_{id} - \psi_{Ad}|}{10,000},$$

where d indexes draws from the posterior distributions. We use this measure of Politician B's ideological advantage and the measure of Politician B's issue agreement advantage detailed in the above paragraph to assess the extent to which issues and ideological proximity affect respondents' tendency to prefer the representation provided by Politician B.

Table 2.6: The Effect of Ideological Proximity on Political Choice Flows Through Issue Agreement

	DV: Preference for Politician B	
	(1)	(2)
Pol. B ideological proximity advantage	0.48** (0.20)	0.06 (0.21)
Pol. B issue agreement advantage		0.51*** (0.08)
Constant	0.23** (0.10)	0.46*** (0.11)
R ²	0.03	0.13
SER	0.49	0.47
Observations	513	513

Robust standard errors reported in parentheses. * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

to near zero.⁶ Moreover, we find that when we pit ideological advantage and issue agreement advantage against each other in this model, only issue agreement strongly predict citizens' preferences. *Ceteris paribus*, we would expect a respondent to be 26 percentage points more likely to support a politician who agrees with her on three of the four issues than one who agrees with her on just one issue.

The data from our first study thus suggests that when citizens have the choice between representatives who represent their claimed positions on individual issues and their implied ideological positions to a different extent, citizens appear to be fairly indifferent to ideological match. However, this preference for issue agreement can be mistaken as ideological voting if the issue alternative is not considered. By contrast, citizens strongly prefer politicians who represent their claimed positions on individual issues. This provides our first hint that citizens would not necessarily be much more satisfied with representation if politicians moderated in a general ideological sense.

Study 1B: A Direct Test of The Demand for Ideological Representation with Tailored Politicians

Study 1A suggested that citizens evaluate political representation on the basis of issue agreement to a much greater extent than they do on the basis of ideological proximity, to the extent citizens appear to prioritize ideological representation at all. To put the question of citizens' preference for

⁶Collinearity in a linear regression does not bias estimates (Achen 1982), although it does favor concepts that are more precisely measured. In this case, our measure of ideological agreement is drawn from the literature, although our measure of issue agreement is coarse and does not reflect that citizens might see some issues are more important than others. Nevertheless, we see the coarse measure of issue agreement significantly outperforming the sensitive ideological measure.

ideological representation vis-à-vis issue representation to a starker test, in Study 1B we present citizens with a stark choice between the two. We again use the “Politician A vs. Politician B” format from Study 1A but tailor the politicians so that their issue positions and underlying ideologies are not merely random but instead force the respondent into a stark tradeoff between issue and ideological representation.

An example of this stark tradeoff was shown in Table 2.5. We constructed politicians like these for all respondents as follows. To construct the “ideologically correct” politicians for our respondents, we considered every possible hypothetical politician who took four positions and disagreed with a particular respondent’s prior positions on all four, scaled them one-by-one with all Wave 1 respondents, and selected the politician who was closest to the respondent on latent ideology.⁷ We then constructed an “ideologically incorrect” politician who took positions in concordance with each of the respondent’s previously stated issue preferences but who was very likely to be ide-

⁷Specifically, we first created a list of every possible politician who took four positions, all of which disagree with the respondent’s Wave 1 responses to the binary choice issue questions. We then scaled each of these politicians together with all of the Wave 1 survey respondents, one by one, using a unidimensional IRT model and calculated the mean squared distance between the politician and the citizen to whom we were attempting to pair a politician. Among the politicians who disagreed with the respondent’s previously stated preferences on all four issues, we then found the politician who nevertheless was likeliest to share the citizen’s ideological position, as measured by minimum mean squared distance. By the ideological perspective, the citizen should be quite satisfied with this politician despite having taken issue positions entirely at odds in the previous wave. In pseudo-code, the procedure for finding the ‘ideology-only agreement’ candidate is as follows:

```
for voter in all.voters:
  for candidate in all.possible.candidates:
    if issue.agreement.proportion(voter, candidate) == 0:
      ideal.points <- scale([all.voters, candidate])
      ideological.distance[candidate] = ideal.points[candidate] -
ideal.points[voter]
    else:
      pass
  candidate.shown[voter] <- which(min(ideological.distance))
```

ologically inferior to the “ideologically correct” politician.⁸ Figure 2.3 shows the results of this process for one respondent. In black is the density of estimated ideal points for all Wave 1 respondents. In blue is the respondent’s own estimated ideal point, in green is the estimated ideal point of the “ideologically correct” politician, and in red is the estimated ideal point of the “ideologically incorrect” politician we showed this respondent. If the ideological perspective is correct and citizens evaluate representation on an ideological basis, respondents should more often choose the politician with an implied ideological ideal point very close to their own over the politician with an implied ideological ideal point quite far away.

As in Study 1A, we asked citizens to imagine choosing between these two candidates in a congressional election. We randomly assigned the “ideologically correct” and “ideologically incorrect” candidate to occupy the positions of “Politician A” and “Politician B” to avoid order effects.

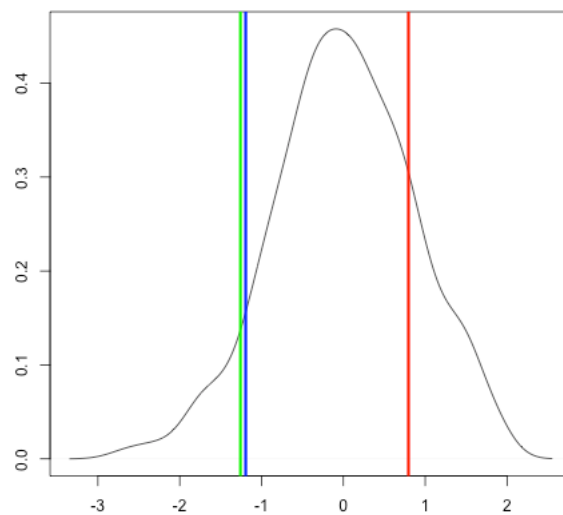
When presented with the stark choice between a politician who mirrors their implied ideology and is similarly not polarized (yet disagrees with their previously stated positions) or a politician who takes their previously stated positions on individual issues (yet takes a consistent set of liberal or conservative positions), which do citizens choose? We find that they overwhelmingly prefer the politician who agrees with their previously stated issue positions despite being more polarized and inferior from an ideological perspective. 69.9% of the 513 respondents in Study 1B selected the “ideologically incorrect” politician, while just 31.1% selected the “ideologically correct” politician ($p < 0.001$, 95% CI: [24.9%, 37.3%]). A clear minority of respondents behaved in accordance with the predictions of the ideological perspective while a clear majority appear to have evaluated the politicians according to their distinct positions on individual issues.

Before exploring the implications of these results in greater detail, we first explore their robustness in Study 2.

⁸To construct the “ideologically correct” politicians, we began with the universe of all possible politicians that took four positions, each of which the respondent had also taken in Wave 1. For each possible citizen-politician pair i , we then estimated ideal points for all citizens, the “ideologically correct” politician already selected for citizen i , and each potential “ideologically incorrect” politician j , again one hypothetical politician at a time. We then calculated the probability (again, with the MCMCpack package) that the “ideologically correct” politician already paired with citizen i would be superior in an ideological sense to each potential “ideologically incorrect” politician j . We finally selected as the “ideologically incorrect” politician the one which, despite agreeing with the respondent on every issue, was most likely to be worse from an ideological perspective than any other potential politician. In pseudo-code, the procedure for finding the ‘issue-only agreement’ candidate is as follows:

```
for voter in all.voters:
  for candidate in all.possible.candidates:
    if issue.agreement.proportion(voter, candidate) == 1:
      ideal.points <- scale([all.voters, candidate])
      ideological.distance[candidate] = ideal.points[candidate] -
ideal.points[voter]
    else:
      pass
candidate.shown[voter] <- which(max(ideological.distance))
```

Figure 2.3: Example of Ideologically Correct and Ideologically Incorrect Politicians' Ideological Positions in Study 1B



Blue: respondent's estimated ideal point. Green: estimated ideal point for "ideologically correct" politician who nevertheless disagrees with citizen on all particular issues. Red: estimated ideal point for "ideologically incorrect" politician who agrees with citizen on all issues. Gray: estimated density curve for all respondent ideal points.

Study 2: Citizens Are Indifferent To Ideology In The Presence of Issue Information

A potential alternative explanation for the results from Study 1 is that citizens would have preferred an ideologically proximate politician but did not understand how ideology tends to constrain the issues we selected. That is, respondents may not have understood “what goes with what” (e.g., Converse 1964). For example, a Voter in Table 2.1 may mistakenly believe that Politician A’s pattern of positions is actually more indicative of his own underlying ideology and, thus, that selecting Politician A is ideologically correct. Further complicating matters, citizens usually evaluate potential representatives in an information-rich environment, i.e., when campaigns are active and thus providing ideological cues.

To assess these possibilities and the robustness of citizens’ indifference to ideology, we introduced a series of ideological primes and information before voters chose in Study 1B. Specifically, we varied the extent of ideological information and priming with three treatments of differing impact and directness.

Our first two treatments were relatively indirect. First, before allowing them to choose between the politicians, we randomly asked 122 respondents whether they thought Politician A (randomly assigned to be either the “ideologically correct” or “ideologically incorrect” politician) would agree or disagree with 5 other issue statements (randomly chosen from the 22 binary response issue questions not displayed as part of Politician A’s platform). This task was meant to lead respondents to think more carefully about how issues fit together and thus the politicians’ implied ideologies. Second, as discussed in the above subsection, we randomly asked 132 respondents where they thought the two politicians stood on a 7-point ideological scale, directly asking them to consider politicians’ ideology before voting.

Finally, to put the external validity of Study 1B to an even tougher test, our final and most direct treatment actually showed 127 respondents the ideal point estimates for the two politicians, a more direct ideological treatment than even election campaigns typically deliver. In addition to the four positions for each politician, we showed respondents an image featuring an ideological dimension bounded by “liberal” on the left, “conservative” on the right, and arrows indicating the estimated ideal points for Politicians A and B. (See Figure 2.5 for an example.) We told respondents that, “based on these positions, scholars believe these two candidates are at about the positions shown on a liberal-conservative spectrum” before asking them to choose between the two.⁹ This treatment should leave no doubt about the ideological aspect of the choice respondents faced. Indeed, studies that adopt the ideological perspective increasingly capture citizens’ views by asking them to place themselves and politicians on scales like this (Ahler, Citrin and Lenz 2013; Tausanovitch and Warshaw 2014b); thus, we suspected that citizens might be able to make sense of these candidates with this aid.

None of these interventions led citizens to evaluate potential representatives ideologically. As Figure 2 shows, compared to the baseline condition, respondents were no more likely to choose the “ideologically correct” politician when primed to think about where one politician likely

⁹To avoid demand effects, we did not include respondents’ estimated latent ideal points on these figures.

Figure 2.4: Priming Ideology and Providing Ideological Information Fail to Increase Demand for Ideological Representation

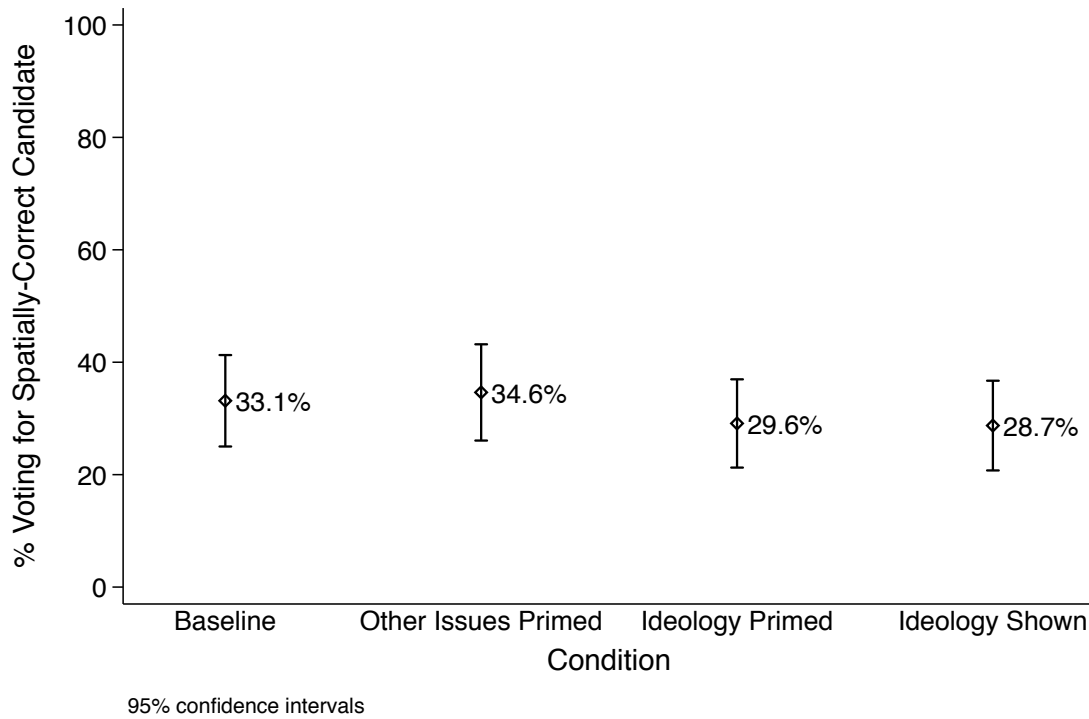
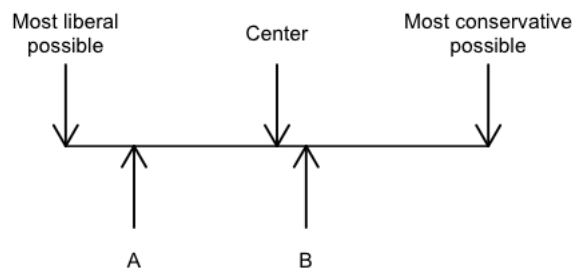


Figure 2.5: Example of “Ideology Shown” Condition

Based on these positions, scholars believe these two candidates are at about the positions shown below on a liberal-conservative spectrum:



In this example, Candidate B is the respondent’s “ideologically correct” candidate who nevertheless disagrees with the respondent on all four issues, while Candidate A is the respondent’s “ideologically incorrect” candidate who agrees with the respondent on all four issues.

stands on other issues. Nor were they more likely to choose the “ideologically correct” politi-

cian when asked about the politicians' likely ideological predispositions. Across all three of these conditions—priming issue packages, priming ideology, and the baseline—a clear minority of respondents choose the ideologically correct candidate over the ideologically distant candidate who agrees with them on all four issues.

Citizens' total disregard of the ideological information we provided in Study 2 and prioritization of issue information makes little sense from the point of view that citizens do not have meaningful attachments to individual issues separate from their underlying ideology. However, it is fully compatible with our claim that citizens are issue-driven first and foremost in ways that ideological summaries cannot capture.

In summary, Studies 1 and 2 are consistent with the view that Americans have real views specific to individual issues that they want to see represented and do not evaluate representation on an ideological basis. As we will elaborate in the remaining studies, if citizens evaluate representation on the basis of individual issues instead of ideology, we may need to re-examine why they are dissatisfied with the representation they receive today and whether electing moderates would address their grievances. Since citizens tend to claim ideological moderation (Fiorina and Abrams 2009) and, indeed, tend to appear ideologically moderate when we scale their responses to individual policy questions (Bafumi and Herron 2010),¹⁰ scholars of representation in the ideological tradition argue that moderation by parties and candidates would remedy the “disconnect” citizens feel. But if citizens evaluate the representation they receive not according to ideological fit but instead according to whether politicians advocate for the individual policy positions they favor, reducing elite polarization may not improve representation in many citizens' eyes, despite citizens' own lack of polarization – just as electing Legislator B in Table 2.1 would not improve representation for these citizens.

2.2 Study 3: Do Citizens Reliably Support Moderate Policies?

“Within the range of alternatives permitted by the mass public, elites in the district further constrain the congressman by not tolerating some alternatives that were tolerated by the mass.”
– (Kingdon 1989, p., 291)

A second way elite polarization has been said to degrade representation is by encouraging politicians to take extreme positions within issue areas relative to voters' moderate positions on issues (Fiorina, Abrams and Pope 2005; Fiorina and Abrams 2009; Mann and Ornstein 2013). For example, if Democrats in Congress support raising taxes by 5% and Republicans support lowering them by 5%, this view would lead us to expect that nearly all citizens would like their representatives to support a tax rate somewhere in the middle of these extremes. Consistent with this idea scholars like Ellis and Stimson (2012) speak of a large group of centrist voters who tend to see the policies advanced by leftist parties as “more leftist than it prefers” and the policies advanced by rightist parties as too rightist (p. 47-8).

¹⁰Also see Figure 2.3 which shows that this tendency appears in this data.

But the existence of elite polarization has more ambiguous implications than many realize for elites' and voters' preferences on issues. Table 2.7 illustrates why. Suppose policy options on four issues can be arrayed from left to right on a 7-point scale, with Democrats and Republicans consistently supporting policies at 3 and 5, respectively. Moreover, suppose that voters' "average positions" or "ideology" is at 4, in the center. When everyone's views are boiled down to an ideological dimension, Democrats and Republicans may appear polarized (at 3 and 5, respectively) and all voters in between them (at 4). However, observing voters' ideal policies within each area may reveal that politicians are much closer to the center of public opinion on each issue than at first glance. The problem is that individual voters in the example do not disagree with elites in a consistent way across different policies, leaving them appearing 'similarly conflicted' at the middle of one dimension despite their dramatic differences with each other relative to elites' small disagreements. Only if we assume that individuals' policy views are error-laden views into a moderate ideology can we dismiss the possibility Table 2.7 raises, but Studies 1 and 2 suggest it cannot be dismissed.

Table 2.7: Elite Polarization Does Not Imply Politicians' Ideal Policies Are More Extreme Than Voters'

	Ideal Policy on 1 to 7 Scale				Democratic Legislator	Republican Legislator
	Voter 1	Voter 2	Voter 3	Voter 4		
Issue 1	1	3	5	7	3	5
Issue 2	7	5	3	1	3	5
Issue 3	5	7	1	3	3	5
Issue 4	3	1	7	5	3	5
"Ideology"	4	4	4	4	3	5

Remarkably little existing data speaks to the extent of voters' support for moderate policies within policy areas; scholars typically infer that citizens have moderate views on issues because they have moderate scores on ideological scales. But, as we have shown, there is far more heterogeneity among 'moderate' citizens than this inference requires (see also Chapter 1).

Issue-specific measures are thus necessary to understand how moderate or extreme citizens' preferences are within issue areas; we cannot impute citizens' policy preferences from their ideological scores. However, political surveys typically ask citizens to pick between Democratic and Republican policy proposals, without options somewhere in the middle or to the far left or right. Some psychometric scales ask citizens to define their own preferences, but typically in a vague manner that makes it difficult to compare their preferences to their representatives' positions. Except for a small number of items on the ANES, it is difficult to find survey data that give citizens a choice between multiple concrete options within a given policy domain, including a moderate policy option.

We designed such items across a dozen policy domains and administered them to citizens in Studies 3 and 4, dramatically expanding the number of policy domains where citizens' moderation

has been directly measured. These studies consider what citizens say they want government to do on individual issues to reexamine the “disconnect” between politicians and citizens.

Data

To explore congruence between politicians and citizens on individual issues, we asked respondents for their positions on 13 issues. These 13 issue questions are notably different from those on most surveys. Most issue questions on national surveys are like those we used in Studies 1 and 2: they are binary-choice and ask whether citizens prefer the typical Republican or Democratic position. It is difficult to know from such questions how many citizens would prefer more moderate or more extreme courses of actions than those offered by either party. For example, if a citizen opposes President Barack Obama’s health care plan, does this mean the citizen would prefer a policy somewhere in the middle, would be satisfied with the Republicans’ proposals, or perhaps even a policy more conservative than this? We cannot tell, and thus it is difficult to assess how well Democrats, Republicans, or alternatives would represent this person on this issue on the basis of their response to this binary-choice question alone.

In order to capture citizens’ issue preferences with greater nuance, our 13 issue questions thus provided seven response options ranging from very liberal statements to very conservative statements (see the appendix for all 7-point scales, as well as all binary-choice issue questions from Studies 1 and 2). To craft these scales, a team of research assistants catalogued the positions of all senators from the 113th Congress on these 13 issues. We measured elite positions in the interest of making scale points “3” and “5” correspond with mainstream Democratic and Republican elite positions. We then composed a point “4” occupying centrist ground for each of the 13 issues.¹¹

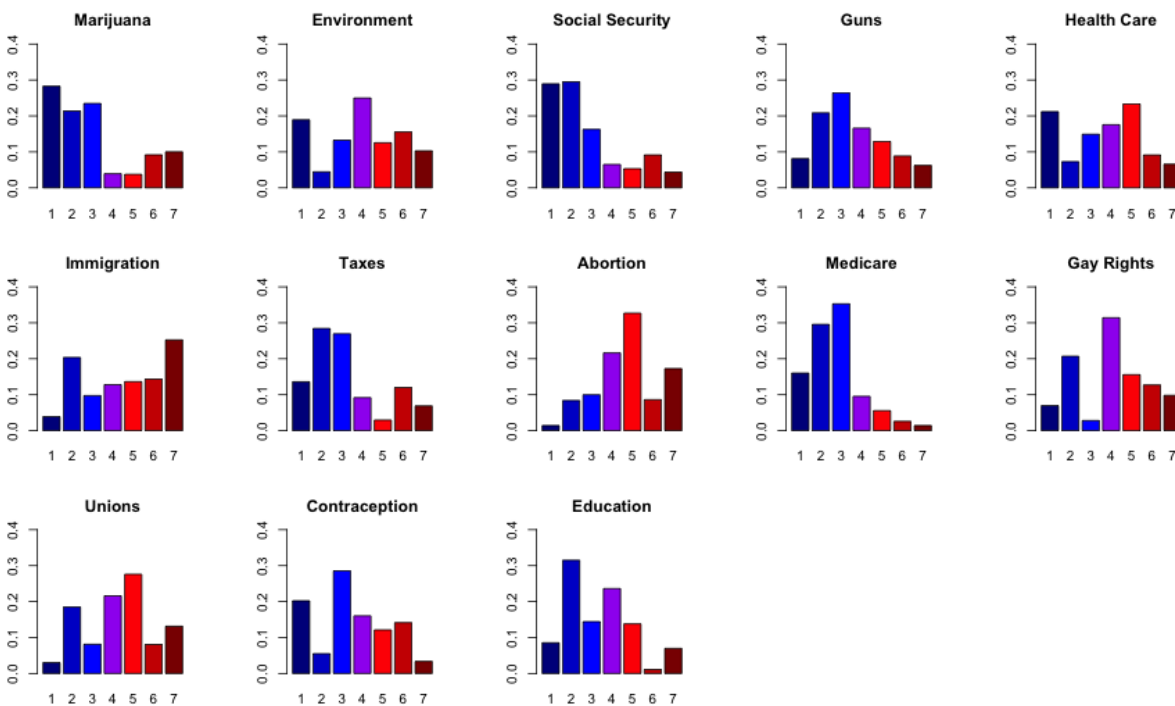
In Study 3A, we rely on survey data using these scales to explore whether citizens would reliably prefer policies more moderate than either party, tend to support either party’s positions, or even prefer policies that are more extreme. We find that a sizable proportion of individuals support policies as or more extreme than either party’s typical position and that these responses do not represent erroneous measurement. In Study 3B, we then demonstrate that citizens by and large do not prefer moderates to their current copartisan representatives.

¹¹Coding of senators’ positions took place in three stages. First, we coded positions for roughly a quarter of the Senate according to an early version of the 7-point scales shown in the appendix. RAs (two per senator) independently researched the senators’ public statements (through press releases, website content, and local media coverage) on each of the 13 issues and recorded the scale point closest to each senator’s apparent position on each issue with available information. We then adjusted the scales so that they captured the major facets of elite discourse and debate on each of these issues and so that scale points “3” and “5” would represent the mainstream party positions, “2” and “6” would represent the extreme positions in the Senate, and “1” and “7” would stand outside the political mainstream. We then repeated the coding process for all senators, including the original subset.

Study 3A: The Centrist Public? The Prevalence of Immoderate Policy Preferences

We first explore the demand for politicians with moderate policy positions by exploring demand for moderate policies via responses to the 7-point policy questions. These responses are shown in Figure 2.6. First, consider which responses citizens most commonly give. On only two of the 13 issues—environmental/energy policy and gay rights—is the centrist response (scale point 4) citizens’ modal preference. This is the same as the number of issues on which the modal preference is one of the outside-the-mainstream policies. On marijuana, a modal 26.7% of respondents expressed a preference for the complete legalization of cannabis, a very liberal position nearly no national political elites adopt. By contrast, on immigration, a modal 24.4% expressed a preference for a very conservative position: the immediate roundup and deportation of all undocumented immigrants and an outright moratorium on all immigration until the border is proven secure. On these two issues, then, there appears to be greater demand for immoderate policies than centrist ones, albeit in discrepant ideological directions.

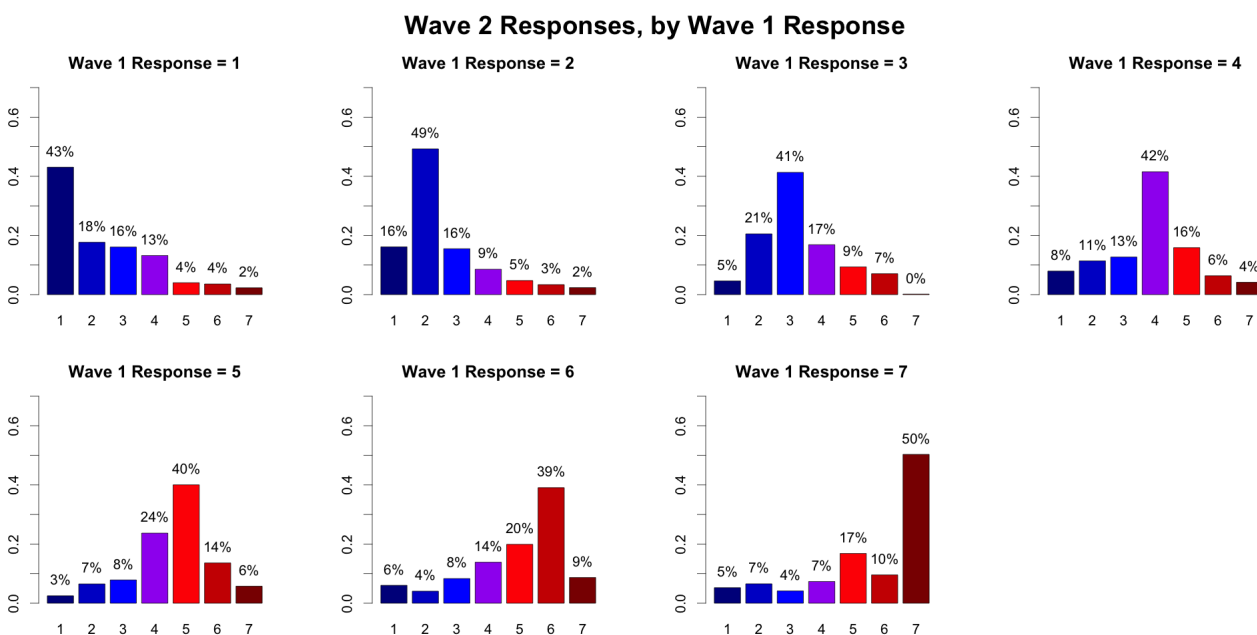
Figure 2.6: The full range of public opinion on 13 issues.



More generally, we observe widespread support for the policies championed by the parties-in-government on many issues (or positions even more extreme). For example, the Democratic Party appears to represent citizens' preferences on issues of social welfare and economic fairness: on Medicare, Social Security, and taxes, a majority of respondents placed themselves at scale points 2 or 3, implying that the party's delegation to Congress represents citizens well on these issues. By contrast, the Republican Party appears to represent the views of at least a clear plurality of citizens on other issues, namely abortion and the rules governing labor unions.

Should we believe citizens' claims that they have these immoderate views on issues? There is no doubt some measurement error in citizens' responses to policy questions; but is there enough that we should disregard their answers to these questions entirely? The panel data we collected allows us to explore whether these views reflect mistaken measurement, as we can examine whether citizens take the same position again two months later. At the end of Wave 2, we asked respondents a random subset of the 7-point policy questions from Wave 1. Reassuringly, we find that these preferences on individual issues are relatively stable over time. As Figure 2.7 shows, citizens who express views outside the elite mainstream on an issue also tend to do so again two months later. Within issues, respondents are far more likely to select their Wave 1 response as their preference than any other option in Wave 2, and deviations tend to be proximate to that prior response. Further, immoderate opinions are at least as stable as more moderate opinions, if not more so. We thus find it difficult to chalk immoderate attitudes up to measurement error. (Study 4 considers this possibility in more detail.)

Figure 2.7: Intertemporal Stability Within Issues



Moreover, as Figure 2.8 shows, the correlations between Wave 1 and Wave 2 responses are considerably stronger within issue domains than across issue domains. If citizens merely answer survey questions by attempting to apply their overall ideology, we should not see this pattern. Instead, we find evidence that these policy preferences are both genuine and unique to their issue domains, and thus not mere reflections of citizens' ideologies; there are clearly attitudes respondents rely on specific to each issue.

In summary, Study 3A suggests that characterizing citizens as moderate overstates the mass publics' desire for representatives with moderate issue positions. Citizens who appear moderate overall when their issue positions are aggregated into an ideological index often espouse positions on many individual issues that are consistent with typical party positions or even more extreme (e.g., Chapter 1). These positions are stable over time, implying that they are genuine. Finally, and consistent with the ideological innocence perspective, these positions do not correlate well across issues. Not only do citizens appear to judge representation on the basis of individual issues, and not their moderate ideologies, but their views on these issues are not reliably moderate.

Study 3B: Would Citizens Prefer Moderates to Contemporary Party Politicians?

We have argued that the “disconnect” between citizens and representatives does not reflect a wholesale failure of politicians to take moderate positions on issues, as citizens want to see their issue views represented and appear to have many immoderate views on issues. Study 3A was consistent with this notion, as citizens explicitly register such preferences. Here we test another implication of our perspective – that even if candidates with moderate positions were on offer in American politics, most voters would still prefer their copartisan representatives.

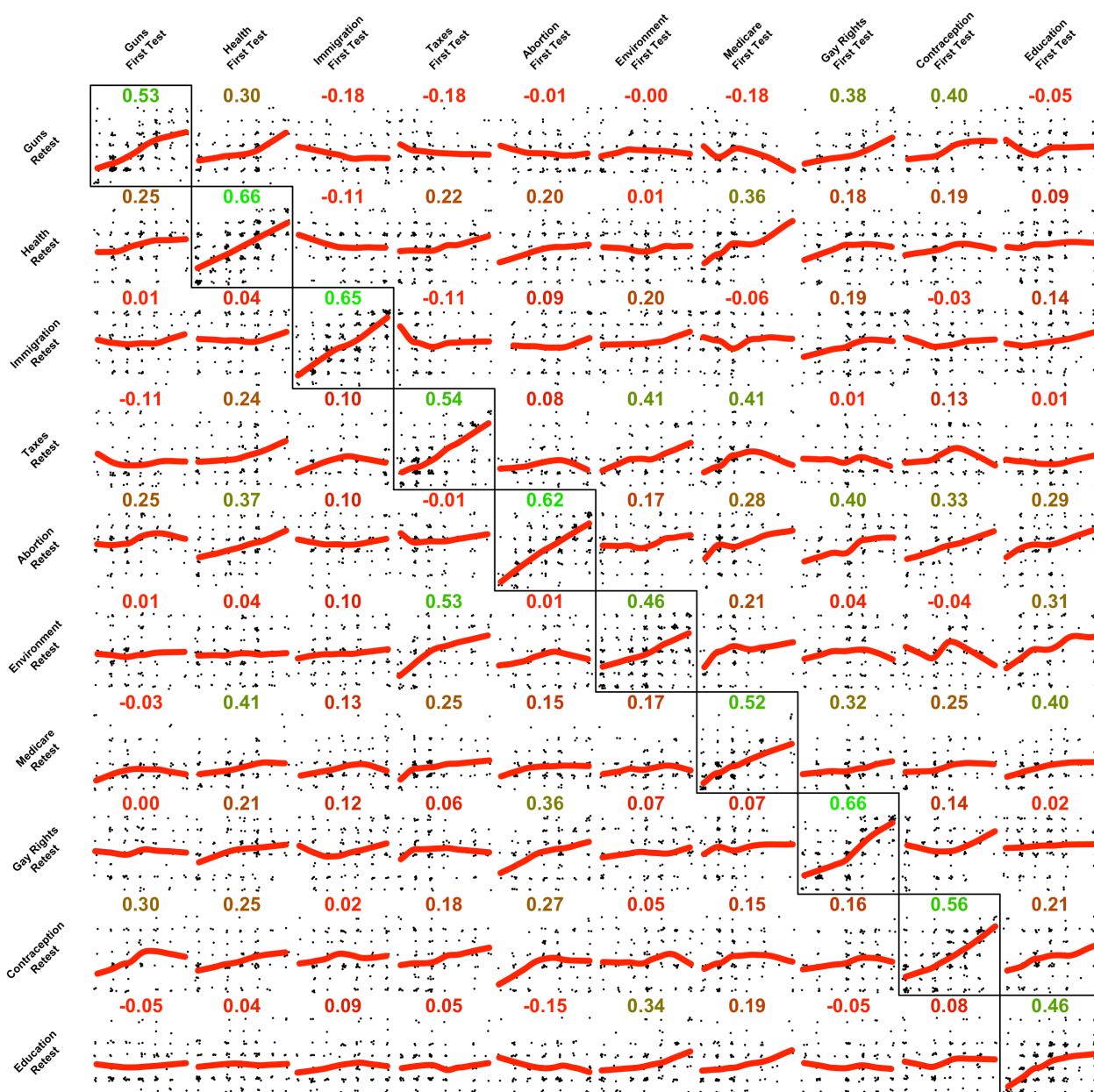
In Study 3B, we showed respondents three hypothetical candidates for US House, a “pure Republican,” a “pure moderate,” and a “pure Democrat.” These candidates took positions on three distinct issues. We randomly selected which issues these were, but not the positions themselves: the “pure Democratic” politician consistently took the Democratic party-line position on all issues, the “3” statement on the corresponding 7-point policy scale. The “pure Republican” politician consistently took the Republican party-line position on all issues, or the “5” statement. Finally, the “pure moderate” politician consistently took the centrist position between the two parties, or the “4” on statement. To avoid party effects, we labeled all three candidates with the respondent's self-professed party label from the previous wave.¹²

Table 2.8 shows an example of how these positions were assigned, and Figure 2.9 shows how the choice appeared to respondents.

Would citizens reliably prefer politicians who take moderate positions over politicians who take the positions contemporary Democrats and Republicans take? These results of Study 3B imply that the public's demand for centrists is weaker than many suggest. Just 32.5% of all respondents ($n = 513$) voted for the consistently centrist candidate. By contrast, the candidate who consistently took Democratic party-line positions won the most votes with 40.3%. The consistently Republican party-line candidate took 27.2%.

¹²We randomly assigned non-leaning independents to see either all Democrats or all Republicans.

Figure 2.8: Intertemporal Stability Within Issues but not Across Issues



Notes: Each subgraph depicts responses on a first issue during the first survey wave on the x-axis and responses on a second issue a month later on the y-axis. Raw data is plotted with jitter given the categorical nature of the variables. Red lines depict the loess smoothed relationship between the responses. Polychoric correlations are shown above each graph. Issue names for the x- and y-axes of each graph are shown, respectively, along the top and left of the figure.

Table 2.8: Example Matchup Shown to Respondents in Study 3B

	Candidate 1	Candidate 2	Candidate 3
Party	Same as Respondent	Same as Respondent	Same as Respondent
Issue 3	3	4	5
Issue 5	3	4	5
Issue 10	3	4	5

Figure 2.9: Study 3B as Shown to Respondents

Now, imagine choosing between these three candidates for US Congress described below:

Party Affiliation		
Candidate A	Candidate B	Candidate C
Republican	Republican	Republican

Issue 1: Education		
Candidate A	Candidate B	Candidate C
The government should create a voucher program in all school districts, paying private school tuition for families so that they always have the choice to send their children to private schools.	The government should create private school voucher programs in school districts where regular public schools are failing so all families in such areas can send their children to a private school if they wish.	Private schools should be legal and retain tax exempt status, but government should play no active role in funding private education.

Issue 2: Abortion		
Candidate A	Candidate B	Candidate C
Abortion should only be legal if the life of the mother is in danger or in cases of rape and incest.	Abortions should be legal in the first two trimesters, though the government should not play any role in financially supporting abortions.	Abortions should be legal in the first two trimesters at least, and the government should require private insurers to cover abortions.

Issue 3: Unions		
Candidate A	Candidate B	Candidate C
Workers should be allowed to attempt to form unions with voluntary dues and membership. Unions should only be formed through secret ballots, and unionized workplaces must hold recertification elections regularly. Corporations should not be allowed to fire workers for starting them.	Workers should be allowed to attempt to form unions with voluntary dues and membership. Unions should only be formed through secret ballots. Corporations should not be allowed to fire workers for starting them.	Workers should be allowed to attempt to form unions that charge mandatory dues, by secret ballot. If a company's workers form a union, new employees may be compelled to join.

Please take a few moments to review the candidates' positions and think about the degree to which each candidate reflects your views.

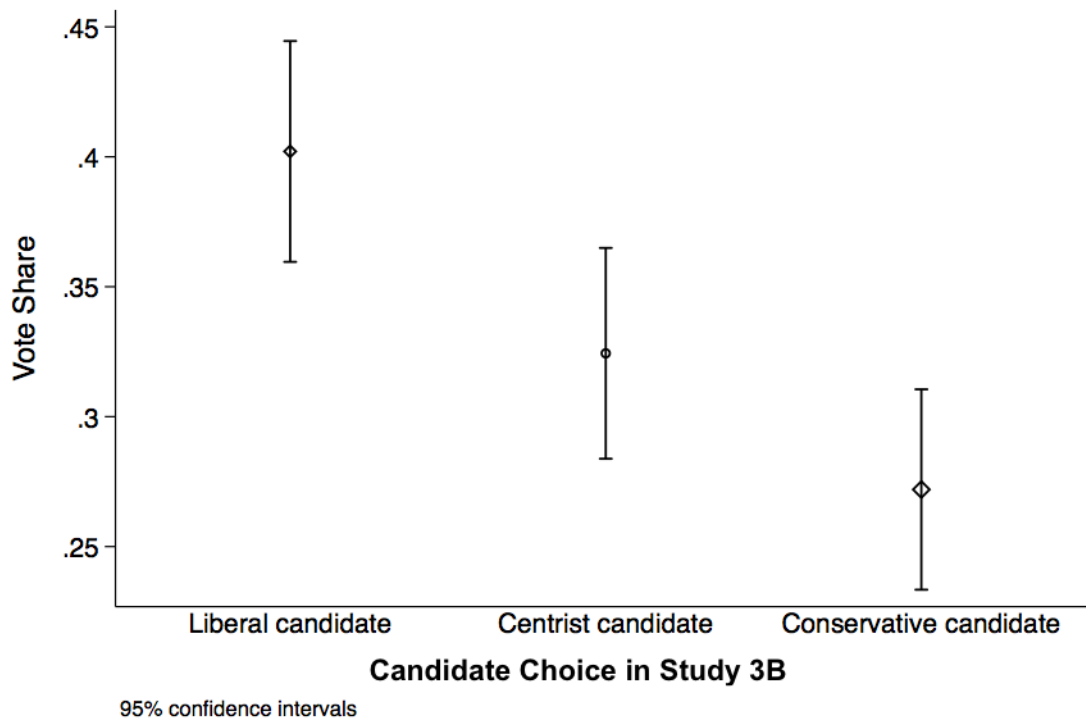
If you had to choose, which candidate would you vote for?

- Candidate A
- Candidate B
- Candidate C

The results of Studies 3A and 3B raise questions about the idea that an overwhelming majority of Americans would favor a representative with moderate positions over one with the issue positions typically taken by their party. To be clear, these results are consistent with the view that moderate politicians may perform better in elections under certain electoral rules. Some Ameri-

cans also seem to prefer the positions moderate politicians take on the whole. But, the demand for representatives with moderate positions on issues is nowhere near universal.

Figure 2.10: Citizens do not Overwhelmingly Choose the Centrist Candidate in Study 3B



Study 4: An Alternative “Disconnect”

“The definition of alternatives is the supreme instrument of power.” – Schattschneider (1960)

Our studies so far suggest an alternative to the standard view of the ‘disconnect’ in American politics. Figure 2.11 summarizes the traditional view of this disconnect and this alternative. In the traditional view, the parties misrepresent citizens because they reliably take positions that are too polarized across issues and too extreme on issues. However, Figure 2.6 implied a different disconnect, one between the range of policy options that characterize elite conflict and the range of policy options popular among citizens: on some issues both parties are too far to the left or too far to the right for most Americans’ tastes. Moreover, this revised view sees little role for ideological representation, as citizens themselves do not reliably line up in the same order across all issue areas and cannot be summarized in an ideological manner.

Figure 2.11: The Traditional “Disconnect” Versus a Revised “Disconnect”

	Traditional "Disconnect"	Revised "Disconnect"
Issue 1	D — A — B — C — R	D — A — R — B — C
Issue 2	D — A — B — C — R	B — A — D — C — R
Issue 3	D — A — B — C — R	C — D — R — A — B
Issue 4	D — A — B — C — R	B — C — A — D — R

Notes: Politicians shown as ‘D’ and ‘R,’ and voters shown as the remaining letters.

Our last study, Study 4, directly pits the traditional view against our revised view. In this study, we give voters a choice between two candidates, one who represents our view of voters’ ideals, and one who represents the traditional view of voters’ ideal.

We designed these candidates as follows. First, we designed our ‘alternative’ candidate to be as different from the traditional view as possible. Our candidate is a tailed politician taking the three least moderate positions each voter previously reported on the 7-point items in Wave 1. This politician is “immoderate,” albeit in an idiosyncratic way consistent with the respondent. Under the view that citizens do not have immoderate views, these are the survey responses that the traditional view would suggest are the likeliest to represent ‘mistakes.’

The other politician in these matchups, representing the traditional view of what most citizens would broadly like, consistently takes the centrist (“4”) option on those same issues, and so is moderate on issues and ideologically.

Table 2.9 shows an example. If a citizen gave a series of issue responses like that shown in Table 2.10, she would be shown the candidate match-up in Table 2.11. (Figure 2.12 shows how this match-up appeared to respondents.)

The results of this study are the most decisive yet. When presented with a choice between a politician who espouses their own least moderate positions and a politician who is centrist on those same issues, 74.6% of respondents ($n = 513$) select the politician who mirrors their previously reported immoderate issue views ($p < 0.001$, 95% CI: [68.6%, 80.7%]). This result is consistent with our suggestion that citizens do not reliably clamor for moderates on every issue. Rather, con-

Table 2.9: Example: Study 4 stimulus

Table 2.10: Example Wave 1 Issue Responses

Issue 1	2	Issue 7	4
Issue 2	4	Issue 8	5
Issue 3	5	Issue 9	1
Issue 4	7	Issue 10	3
Issue 5	3	Issue 11	5
Issue 6	3	Issue 12	3

Table 2.11: Example Wave 2 Match-Up

	Candidate 1	Candidate 2
Issue 1	2	4
Issue 4	7	4
Issue 9	1	4

sistent with findings from the previous studies, citizens appear to desire politicians who represent their own unique bundle of genuinely held positions, including many that are not moderate.¹³

2.3 Discussion: A New Perspective on the Representational “Disconnect”

The essence of polarization is the lack of elected officials who have a mix of liberal and conservative positions. Most voters do, and a popular perspective laments this contrast as a clear failure of representation (e.g., Bafumi and Herron 2010; Fiorina and Abrams 2009). This paper raised new questions about two common forms of this lament.

First, according to a common perspective, this contrast implies that the distribution of polarized politicians’ *ideological* positions fails to mirror the public’s generally moderate ideological preferences in a way that the public would like to see resolved. However, we found that the public appears largely indifferent to ideological representation and thus does not seem to have a strong desire for ideologically moderate politicians per se, despite most citizens appearing ideologically moderate. Specifically, in Study 1 we found that citizens tend to prefer politicians who represent their distinct issue positions rather than their ideological predispositions. In Study 2 we found that this pattern holds even when we encourage citizens to consider politicians ideologically in a number of ways—including directly showing citizens politicians’ ideological locations. These studies

¹³The ideological implications of the “immoderate” politician appears not to influence respondents’ choices; we find no difference in respondents’ willingness to support the extreme politician across the extremity of this politician. See OA subsection D.1.

Figure 2.12: Stimulus Shown to Respondents in Study 4

Now, imagine choosing between these two candidates for US Congress described below:

Candidate A	Candidate B
<ul style="list-style-type: none"> • Social security benefits should be tied to the Chained Consumer Price Index, meaning that benefits would rise slower with time than they currently do. • Immigration of highly skilled individuals should greatly increase, and immigration among those without such skills should be limited in time and/or magnitude, e.g., through a guest worker program. • Maintain current levels of federal spending and federal income taxes on the rich, middle class, and poor. 	<ul style="list-style-type: none"> • Social security benefits should be increased. • Further immigration to the United States should be banned until the border is fully secured, and all illegal immigrants currently in the US should be deported immediately. • Move to a completely flat income tax system where all individuals pay the same percentage of their income in taxes, accomplished by decreasing government services.

Please take a moment to review the candidates' positions and think about the degree to which each candidate reflects your views.

If you had to choose, which candidate would you vote for?

- Candidate A
 Candidate B

suggest that increasing politicians' congruence with citizens' ideological orientations will do little to improve representation in citizens' eyes in and of itself. Rather, citizens appear to evaluate representation on the basis of individual issues.

It is on individual issues where a second group of scholars see polarization as implying a disconnect between politicians and voters. These scholars characterize politicians' positions on individual issues as extreme and citizens' views on individual issues as moderate (Ellis and Stimson 2012; Fiorina, Abrams and Pope 2005; Fiorina and Abrams 2009). However, surprisingly little data has evaluated the extent of citizens' support for more moderate policies within areas, rather than assuming that these positions can be inferred from citizens' ideologies. In Study 3, we found that citizens' opinions on the issues do not seem reliably more moderate than the parties. Study 4 also indicated that citizens' demand for politicians who represent these immoderate issue views appears greater than their desire for politicians with centrist positions. Finally, even when given the chance, we find that a majority of citizens do not prefer the representation a centrist politician would provide over the representation typically offered by one of the contemporary parties.

Our findings do not imply the absence of a representational disconnect but rather prompt us to revisit its nature. Studies 3 and 4 suggest that citizens do not overwhelmingly want politicians who

support moderate policies to represent them, contrary to what scholars and political observers suggest. Instead, what many scholars characterize as centrism actually appears to reflect citizens who have a *mixed* set of positions. However, because each citizen prefers a different mix of policies, there is no one mix a politician could adopt that would broadly satisfy citizens. Thus, it is natural that many citizens appear frustrated with the choices they have in American elections; yet, given the relatively idiosyncratic nature of citizens' own preference bundles, it is also unclear that there is dramatic room for improvement.

This revised understanding of the disconnect has important implications for efforts to improve representation. Reforms attempting to elect moderates by giving citizens a stronger voice are increasingly under consideration, predicated on the view that citizens would broadly prefer to be represented by moderates if they had the chance. But, surprising in light of this view, scholars who have studied reforms that empower voters like open primaries, non-partisan redistricting, and public funding of primary elections have generally found that these reforms fail to help moderate politicians (Ahler, Citrin and Lenz 2013; Bullock and Clinton 2011; Kousser, Phillips and Shor 2013; Hall 2014; McGhee et al. 2013).¹⁴ Our argument may help make sense of why. Reforms trying to boost moderate candidates' electoral fortunes by magnifying the "voice of the people" may not have boosted moderate candidates' electoral fortunes as much as many have expected because the voice of the people does not appear to be singing in unison in support of ideologically moderate politicians or politicians with moderate positions on issues. Rather, underneath the public's ostensible centrism is a multiplicity of ideologically mixed and often immoderate views on issues that more strongly inform citizens' view of the political world.

This alternative picture points to inherent difficulties in achieving the robust collective representation American political thought has long valued. John Adams hoped American legislators would look like "in miniature an exact portrait of the people at large." If nearly all Americans wanted politicians to take a clear set of moderate positions on issues or to position themselves as moderates in an ideological sense, this ideal would be relatively straightforward to achieve. But we have suggested a different portrait of the "disconnect" between elites and citizens in American politics than scholars and observers typically paint. Contrary to the conventional wisdom rooted in the ideological perspective, most citizens do not seem to wish the Senate were composed of 100 Olympia Snowes and Max Baucuses, the noted Senate moderates. But this does not mean that Americans are satisfied with the politicians who represent them either. Rather, because each citizen's pattern of views across issues appears unique, each citizen is likely to be "disconnected" from the positions their representatives take in his or her own way, a situation which the election of more moderates—or more of any other one particular kind of politician—could not easily resolve (Plott 1967).

There are certainly many other political ills that polarization may cause or exacerbate. Decreasing agreement between parties may create gridlock (Krehbiel 1998) and incentives to tarnish the other party's reputation may make it even more difficult for new laws to be passed (Lee 2009). Our

¹⁴Some empirical work finds that citizens tend to prefer moderate candidates in elections (Hall 2015, e.g.), but this work is by no means alone (e.g., Adams et al. 2013; Hopkins 2014; Stone and Simas 2010) For example, Hopkins (2014) finds that "moderates are in fact less electorally secure than their more ideologically extreme congressional colleagues, and their rate of reelection has declined over time."

data says little about these potential consequences. However, our analysis does underscore that the implications of polarization for representation are not always as obvious as they may seem. The precise ways in which polarization degrades representation – not only its antecedents – deserve more careful scrutiny than many realize.

Chapter 3

What Politicians Believe About Their Constituents: Asymmetric Misperceptions and Prospects for Constituency Control¹

Conceptions of democratic governance emphasize the role of public opinion in shaping public policy. We explore a central but dimly understood process by which public opinion affects policy: legislators' perceptions of public opinion in their constituencies. We collected original data on nearly 2,000 US state legislative candidates' perceptions of district opinion on salient issues and compared them to new estimates of actual district opinion. Our findings underscore doubts that policymakers perceive public opinion accurately: we show that politicians maintain systematic misperceptions about their constituents' views, typically erring by over 10 percentage points, and that entire groups of politicians maintain even more severe collective misperceptions. A second post-election survey finds that the electoral process fails to ameliorate these misperceptions. Speaking to debates left unresolved since Miller and Stokes (1963), these findings suggest that collective representation, the electoral process, and the rise of opinion polls do not ameliorate legislators' difficulty gauging constituent opinion. Implications for understanding political competition and representation are discussed.

¹This paper is co-authored with Christopher Skovron. We thank Chris Warshaw for sharing data and for helpful conversations, Nick Carnes and Melody Crowder-Meyer for their assistance as co-PIs on the National Candidate Study, and Jon Stiles at the University of California DATA Center for technical assistance with Census data. We thank Doug Ahler, Nick Carnes, David Cottrell, Ryan Enos, Anthony Fowler, Sean Gailmard, John Jackson, Gabe Lenz, Arthur Lupia, Paul Pierson, Tim Ryan, Eric Schickler, Jas Sekhon, Ken Shotts, Laura Stoker, Chris Tausanovitch, Rob Van Houweling, Lynn Vavreck, John Zaller, and seminar participants at the University of California, Berkeley, the University of Michigan, and the 'Political Representation: Fifty Years After Miller and Stokes' Conference at Vanderbilt. All remaining errors are our own. David Broockman and Chris Skovron both acknowledge the National Science Foundation Graduate Research Fellowship Program for support.

“Unless mass views have some place in the shaping of policy, all the talk about democracy is nonsense.” – V.O. Key (1961)

A hallmark of conceptions of democratic governance is the notion that public opinion plays a central role in guiding public policy (Lax and Phillips 2012). However, the influence of public opinion on public policy is mediated through representative institutions – and such institutions, in turn, rely upon politicians to perceive and adapt to the public’s demands.

According to many theories, re-election-seeking politicians make great efforts to fulfill this role, as they feel powerful incentives to respond to public opinion in their constituencies. Stimson et al. (1995) hence depict legislators as “like an antelope in an open field, [cocking] their ears...keen to pick up the faintest signals in their political environment.” A rich tradition thus views democracy as involving the “the aggregation of [voters’] independently formed preferences” (Miller 1992) and suggests a relatively optimistic view of politicians’ performance at this facilitating this process (e.g., Bartels 1991; Brody and Page 1972).

Of course, this sanguine view coexists with a tradition that doubts politicians pay much heed to general public opinion (e.g., Bartels 2008; Hacker and Pierson 2011). By this telling, politicians feel much more accountable to the wealthy, party leaders, or interest groups than to rank and file voters’ preferences (e.g., Bawn et al. 2012; DeCanio 2005; 2006; Gilens 2012; Page, Bartels and Seawright 2013; Rogers 2014a;b).

In this paper we provide a unique perspective on these debates. Since Miller and Stokes (1963), scholars have recognized that politicians’ perceptions of public opinion play a crucial role in generating responsiveness to public opinion, to the extent responsiveness exists (e.g., Grose 2014; Kingdon 1967; Jacobs and Shapiro 2000; Kousser, Lewis and Masket 2007). Yet, despite the central role of politicians’ perceptions in theories of democratic policymaking, we know remarkably little about how politicians see voters. The most influential study on the subject, Miller and Stokes’s (1963) landmark study of members of Congress’ perceptions of public opinion in 1958, left open significant questions. First, as Achen (1977; 1978) showed, Miller and Stokes’s (1963) measure of representation, the correlation coefficient, was deeply flawed and left their findings ambiguous. Second, as Weissberg (1978) noted, collective representation might be robust even if individual legislators tend to have flawed views of their particular constituencies, raising questions about its limits. Finally, with public opinion polls now widely available (Herbst 1993), and as politics has become more sorted along partisan lines (Koger, Masket and Noel 2009; Nall 2014), one may well expect to find different results today than in 1958. Thus, despite the continuing influence of Miller and Stokes’s (1963) findings from more than fifty years ago (see next section for review), our understanding of this central mechanism linking public opinion and public policy remains surprisingly murky.

To shed light on the central question of how politicians see their constituents and illuminate the dynamics of electoral accountability more generally, we conducted one of the most extensive documentations of elite perceptions of public opinion in their constituencies and actual public opinion therein ever compiled. To measure elite perceptions of public opinion, we surveyed nearly 2,000 candidates for state legislative office in the United States in 2012 and probed their perceptions of their constituents’ positions on universal health care, same-sex marriage, and federal welfare

programs, three of the most publicly salient issues in both national-level and state-level American politics during the early 2010s (e.g., Lax and Phillips 2009*b*; Haider-Markel 2010). With recent advances in public opinion estimation (Lax and Phillips 2009*a*; Warshaw and Rodden 2012) and data describing the political views of nearly 100,000 Americans, we also estimated actual district- and issue-specific opinion in these politicians' districts. A follow-up survey after the election and the collection of many surveys from both candidates in the same races facilitate further comparisons and unique robustness checks.

Our results raise questions about theories of electoral accountability that depict politicians as strongly motivated and able to accurately perceive public opinion in their constituencies. First, although there is a clear relationship between elite perception of public opinion and actual opinion in general, most politicians appear fairly inaccurate about district opinion, erring by at least 10 percentage points on average. Second, on the issues we examine, politicians also show systematic misperceptions, with liberal politicians and conservative politicians both overestimating support for conservative policy positions, and conservative politicians doing so by more than 20 percentage points on average. The presence of these systematic misperceptions across politicians on highly salient issues suggests that collective representation is unlikely to smooth over the deficiencies in dyadic representation (Weissberg 1978). Finally, in light of these severe misperceptions, we also investigated whether the democratic process helps elites come to more accurate views of the public. We exploited the timing of our survey, August 2012 – prior to the most intense period of the fall election campaign, and prior to when the first election itself had occurred in newly drawn legislative districts – to examine whether politicians gain information from campaigns and elections that allows them to correct these misperceptions. A follow-up survey in late November yields little evidence that politicians do learn about public opinion over the course of election campaigns, as their accuracy does not appear to increase.

Our study's sample size allows for a variety of robustness checks on these findings. First, all our findings stand among sitting legislators in highly professionalized legislatures, where legislators should have the most resources to gather information about public opinion. Second, because in many instances we have responses from candidates running against each other to represent the very same district, we can document that candidates hold perceptions that diverge from each other (and thus must, on average, from the truth) without relying on estimating public opinion or contending with its sampling variability at all.² Next, we show that many politicians do admit that public opinion is not on their side and that even these politicians do not provide accurate perceptions, suggesting that social desirability bias or a desire to avoid appearing out of step do not account for our results – for example, many liberal politicians who represent districts that almost certainly favor same-sex marriage and universal healthcare and who support these policies themselves nev-

²To appreciate why this follows, consider a district where one candidate estimates that 40% of constituents support a policy and her opponent believes that 60% support the same policy. No matter whether true support is 40%, 50%, or 60%, the average error of these candidates is 10%. And if true support is greater than 60% or lower than 40%, the true average error is even larger.

ertheless indicated that they thought their constituents stood opposed.³ Finally, even though our estimates of public opinion in individual districts reflect sampling variability, the aggregate ‘intercept shift’ we find such that politicians overestimate opposition to these policies does not rely on these district-level estimates and can be reproduced with other national polls.

These findings have important implications for a question that has occupied scholars since Miller and Stokes (1963) – how well are the “conditions for constituency control” met in American politics? In this regard our conclusions do not give much cause for optimism: in an era when correctly ascertaining public opinion would represent little burden for many politicians, they nevertheless maintain striking and systematic misperceptions about their constituents’ views on three of the most salient policies in American state and federal politics.

3.1 Politicians’ Perceptions and Public Policy

The influence of public opinion on public policy is mediated through representative institutions – and such institutions, in turn, either rely upon representatives to perceive and adapt to public opinion (*elite perception*) or upon voters to select representatives who share their views (*voter selection*) (Miller and Stokes 1963). Given that incumbents tend to win re-election easily (e.g., Carey, Niemi and Powell 2000), scholars generally place special importance on elite perception, sitting politicians’ efforts to adapt to changes in their environment (e.g., Kousser, Lewis and Masket 2007). As (Mayhew 1974, p. 37) writes in a memorable passage:

When we say “Congressman Smith is unbeatable,” we do not mean that there is nothing he could do that would lose him his seat. Rather we mean, “Congressman Smith is unbeatable as long as he continues to do the things he is doing.” ... What characterizes “safe” congressmen is not that they are beyond electoral reach, but that their efforts are very likely to bring them uninterrupted electoral success.

Prominent models of elite decision-making thus emphasize the role of legislators’ attempts to carefully monitor voters’ preferences in generating congruence (e.g., Miller and Stokes 1963; Kingdon 1967; Fenno 1978; Arnold 1990).

But do representatives perceive their constituents’ views accurately enough to represent them well? Miller and Stokes’s (1963) classic work concluded otherwise, finding that “the conditions of influence that presuppose effective communication between [Representative] and district” are not “well met” – after pairing a pioneering survey of political elites with data on mass opinion from the American National Election Study, they concluded that Representatives typically have “very imperfect information about the issue preferences of [their] constituenc[ies].”

³In addition, it seems unlikely our results are a spurious reflection of politicians having “better” information on public opinion than we do in our survey, both because comparisons of how politicians perceive the same constituents show that they still diverge in their perceptions and because, at least on the issue of same-sex marriage, evidence from list experiments has shown there is little reason to believe that citizens are misrepresenting their opinions because of social desirability (Lax, Phillips and Stollwerk 2014).

The impact of Miller and Stokes's (1963) findings were enormous and are still growing. Figure 3.1 shows citations to Miller and Stokes (1963) by five-year period and shows that scholars today rely on their findings at least as much as Miller and Stokes's (1963) contemporaries.⁴

Figure 3.1: Citations to Miller and Stokes (1963) by Five-Year Period



Yet, despite Miller and Stokes's (1963) sizable and growing legacy, it remains startlingly unclear whether one should accept their central empirical claim that politicians largely fail to accurately perceive their constituents' opinions. First, Achen (1977; 1978) showed that Miller and Stokes's (1963) standard for measuring accuracy – the correlation coefficient – had important flaws: a correlation coefficient might suggest excellent 'responsiveness' even when politicians' congruence with or perception of public opinion is poor if politicians tend to err in similar ways. Second, Weissberg (1978) noted that Miller and Stokes's (1963) pessimistic findings about dyadic representation might belie robust collective or aggregate representation – the legislature itself might produce policy closely in line with voters' demands even if many particular legislators were mismatched with their districts to some degree (e.g., Lax and Phillips 2009*b*; 2012). Finally, after decades of political and technological developments, one might worry about what a study of politicians' perceptions of public opinion in 1958 has to say about politics today. On the one hand, it is far easier to ascertain public opinion today than in the 1950s: opinion polls are ubiquitous and inexpensive, while the nationalization of American politics and sorting of American citizens along

⁴These were retrieved from Google Scholar in August 2014, <http://scholar.google.com>.

political lines has meant that district opinion is easier to discern from national trends than ever (e.g., Nall 2014; Hersh and Nall 2014).⁵

Available data provide thus little guidance on whether one should accept Miller and Stokes's (1963) still-influential conclusions. Small elite and mass sample sizes in Miller and Stokes's (1963) make it difficult to re-evaluate their findings in light of the critiques by Achen (1977; 1978) and Weissberg (1978), in addition to raising further questions about the validity of their original estimates (e.g., Erikson 1978; Clausen 1977). And scholars largely ceased producing new work in this area decades ago (Jewell 1983), with only rare attempts to appraise elites' perceptions having been made since, and nearly always in contexts beyond the United States (Belchior 2012; Converse and Pierce 1986; Holmberg 1989; Norris and Lovendusky 2004).⁶ In recent years, several scholars have also carried on the Miller and Stokes (1963) tradition by investigating how constituent communication might shape politicians' perceptions (e.g., Bergan 2009; Bergan and Cole 2014; Miler 2007; 2009), a significant and important question. Yet, our overall picture of how well politicians perceive public opinion remains murky.

In this paper we seek to shed new light on how politicians perceive public opinion, with special attention to the unresolved debates on the topic that stretch back decades. In this pursuit we are fortunate to benefit from the significant technological developments that have taken place since Miller and Stokes (1963) and their contemporaries conducted their investigations. Thanks to advances in public opinion estimation, the availability of unprecedented volumes of opinion data, and the greater accessibility of political elites, it is now possible to compare political elites' perception of opinion and actual opinion with greater rigor. We exploit these opportunities to advance the tradition Miller and Stokes (1963) inspired. In the next section we describe how we amassed data on constituency-level public opinion and elite perception to help address the question of how politicians perceive their constituencies, a query that has captured scholars' imagination for decades.

⁵On the other hand, scholars warn us that changes in civil society (e.g., Skocpol 2003; Putnam 2000) and partisan polarization have left politicians more 'disconnected' from their constituents than ever (Fiorina, Abrams and Pope 2005; Fiorina and Abrams 2009), suggesting politicians could be even further 'out of touch' with district opinion than they appeared several decades ago.

⁶Scholars in the 1960s and 1970s did follow in Miller and Stokes's (1963) footsteps, yet none managed to overcome the issues their original critics identified.

Following Miller and Stokes (1963), a cottage industry sprung up in the field seeking to replicate, criticize, and build upon their findings.

Scholars in the decade after Miller and Stokes (1963) sought to replicate their findings among state legislators and other elites (McCrone and Kuklinski 1979; Kuklinski and Elling 1977; Brand 1969; Uslaner and Weber 1979; Erikson, Luttbeg and Holloway 1975; Hedlund and Friesema 1972). In addition to facing the same challenges as Miller and Stokes (1963), these studies reached conflicting results. McCrone and Kuklinski (1979), for example, described the accuracy of elites' perceptions of their constituents as "reasonable" while Brand (1969) judged it "scandalously low." See also work on the perceptions and social worlds of political actors beyond politicians (e.g., Nyhan and Montgomery 2014).

3.2 Data

Measurement of Elite Perceptions: The 2012 National Candidate Study

To measure elite perceptions, in early August 2012 we gathered data on contact information for every candidate for state legislative office in the United States. Many legislators only had email addresses, many more had only physical street addresses, and the preponderance of candidates had both. We attempted to gather contact information for all 10,131 state legislative candidates though were unable to gather contact information for 306 (3%). This left a total of 9,825 in the sampling frame. In mid-August we (cite removed for peer review) sent three waves of email solicitations to all 7,444 candidates for whom we had e-mail addresses. After 1,318 responses from this email solicitation, we then attempted to secure cooperation in a mail version of the survey among a randomly selected⁷ 5,000 candidates who had not yet responded. These candidates were sent a postcard informing them that the survey would be arriving in the mail, followed by a paper version of the survey one week later. An additional 589 candidates returned this paper survey.

1,907 candidates responded to the NCS in total, for a response rate of 19.5%, or about double the typical response rate for opinion surveys of the mass public. Suggesting propitious prospects for the generalizability of our results, there is no meaningful relationship between response rate and party of the candidate, whether the candidate won or lost, or the candidates' margin of victory. About half the sample won their November general elections and are now sitting in office, and about half the same comes from each party. The only systematic non-response bias we could locate is that the relatively few candidates who were running unopposed were slightly less responsive; we expect this is because these candidates were less likely to have been checking their campaign mailboxes regularly during the study period. We show in Fig. 3.4 that all our results hold for the most professionalized state legislatures and for sitting legislators.

To ensure that only candidates themselves completed the survey, the online survey contained a screener question that shut down the survey if the respondent identified himself or herself as someone other than the candidate.⁸ The paper version of the survey included large type and a screener question to encourage only candidates to complete it.

A follow-up online-only survey conducted in mid-November yielded 514 responses among the 1,907 respondents to the first wave of the study.

Among other questions, the surveys queried politicians for their perceptions of the opinions of the constituents in the districts they were running to represent on three issues: same-sex marriage, universal health care, and welfare. Specifically, we asked legislators "What percent of your constituents" would "agree with" three "statements" that had also appeared on large national public opinion surveys: "Implement a universal healthcare program to guarantee coverage to all Amer-

⁷We conducted blocked sampling on state and incumbency, retaining the probability that each individual candidate was selected but ensuring greater balance in the resulting sample on these variables.

⁸Fewer than 2.5% of survey takers identified themselves as non-candidates and were screened out.

icans, regardless of income,” “Same-sex couples should be allowed to marry,” and “Abolish all federal welfare programs.”⁹ (See Appendix Section C.3 for exact question wording.¹⁰)

We expected the public’s attitudes on same-sex marriage, universal healthcare, and welfare programs would provide reasonable cases to study broader principles of representation for several reasons. Most importantly, these issues were highly salient in both national and state mass politics in 2012, with both national and state legislators making high-stakes policy decisions on these issues that affected tens of millions of Americans.¹¹ Moreover, these issues tap into what many see as the two core ‘dimensions’ of public opinion: degree of economic redistribution and government involvement in the economy in the case of universal healthcare and welfare programs, and social conservatism and traditionalism in the case of same-sex marriage. These issues also present a wealth of available public opinion data, a matter to which we return in a moment. While the debate over same-sex marriage is only about a decade old, proposals for public healthcare programs and welfare reform have been around for much longer, suggesting that these issues might not all be “hard” for both elites and the public to offer positions on.

⁹Political scientists familiar with the work of Fenno (1978) may wonder whether the word “constituent” is excessively vague – e.g., Fenno (1978) refers to legislators’ “multiple constituencies.” Based on pilot testing with a number of current and former legislators we found that this word was the word of choice for legislators to refer to the residents of their legal electoral districts.

¹⁰Note that our instrumentation is also a more precise than that employed by Miller and Stokes (1963) and most other studies from the 1970s, which only gave legislators’ three options: “More of them are in favor,” “They are fairly evenly divided,” and “More of them are opposed.” With the rise of public polling in politics and arithmetic education we believe nearly all of our respondents – the vast majority of whom have college educations – would have no difficulty expressing their perceptions in percentage terms. Butler (2013) also shows that state legislators are exceptionally accurate when it comes to describing district demographic information in percentage terms, suggesting that our results are unlikely to contain a great deal of non-random measurement error due to innumeracy among respondents.

¹¹We expect readers are familiar with the significant policy battles being waged on each issue, but for the sake of unfamiliar readers and posterity we record the highlights here.

First, the fight over universal healthcare and the generosity of the welfare state have been one of the most enduring battles in American politics over the last century, recurring at all levels of government since the early 20th century and especially in the last two decades in the form of high-profile fights during the Clinton and Obama administrations. Recently, the Affordable Care Act and the Supreme Court’s decision pertaining to the Medicaid expansion associated with it have forced state governments to decide whether and how to expand their Medicaid rolls. Many of the regulations and subsidies built into the ‘Obamacare’ law flow through state governments, meaning that Americans’ health care will be significantly impacted by the decisions made by their state legislators. Health care captures about 15% of US GDP and determine the life changes of millions of Americans every year – needless to say, we believe the issue qualifies as politically and substantively significant by any standards.

In the case of same-sex marriage, the debate over government recognition of same-sex relationships has raged for more than a decade, and it has been a cross-cutting cleavage, pitting religion against partisanship in many cases (Camp 2008; Stone 2012). During the 2000s, many state legislatures voted to initiate statutory or constitutional bans on same-sex marriage (Lupia et al. 2010). Increasingly, some state legislatures have passed bills to legalize same-sex marriage. More such bills were on the agenda in 2013. Abortion represented another potential choice, although abortion is not on the agenda in many states, and there is reason to think that public opinion on abortion would be more difficult for politicians to ascertain as it is subject to more conflicting considerations.

Elsewhere in the survey, we also asked candidates whether they agreed or disagreed with eleven issue statements, including the statements about same-sex marriage and universal health care noted above (see Appendix Section C.3).

Measurement of Constituencies' Opinions

To compare candidates' perceptions of constituency opinion with actual opinion, we must estimate public opinion ourselves. As we detail below, our main findings do not depend upon precise estimates of opinion in particular districts. However, the large sample size of our survey still allows us to reach more precise estimates of opinion in individual districts than many existing studies.

Miller and Stokes (1963) had access to only a small number of respondents in each of their respondents' congressional districts, leaving their analysis open to significant critique on the grounds that high sampling error attenuated the relationships they observed (Erikson 1978). However, in the fifty years since Miller and Stokes's (1963) investigation, the costs of conducting public opinion polls have dropped precipitously. Nonetheless, it remains prohibitively expensive to collect enough survey data to reach reliable estimates in each of the nation's over 7,000 state legislative districts.¹² However, recent advances in public opinion estimation allow us to make reasonable estimates of opinion in each district nonetheless. Specifically, multi-level regression and poststratification (MRP) allows researchers to construct estimates of public opinion in small geographic units from responses to a national survey and US Census data on those units' demographic makeup. The method has been derived, applied, and validated extensively elsewhere (Ghitza and Gelman 2013; Lax and Phillips 2009*a*; *b*; 2012; Pacheco 2011; Park, Gelman and Bafumi 2004), including at the state legislative level (Warshaw and Rodden 2012). In this section we discuss the steps that we took to apply MRP to state legislative districts (e.g., Warshaw and Rodden 2012).

Our estimates of opinion in individual districts are based on a multi-level regression model for support for same-sex marriage and universal health care using a great deal of public opinion data originally assembled and graciously shared with these researchers by Warshaw and Rodden (2012). The healthcare model is estimated on data from the 2008 CCES, $N = 26,935$. The same-sex marriage model is estimated on data from the 2012 CCES, $N = 44,387$. The welfare question is from the (removed for peer review) university module on the 2012 CCES, $N = 1,015$.

Although our main findings do not rely on accurate estimates of opinion in any particular district, Appendix C.1 evaluates the accuracy of the estimates and the robustness and generalizability of our conclusions at greater length. To briefly review these points: As we discuss below, we find large deviations from mean opinion across many districts that we can detect without reaching precise estimates in any particular district. Moreover, subsetting the data to politicians running against each other in the very same districts produces similar results about the degree of candidate divergence in our studies. Next, the mean opinion we calculate in the model on same-sex marriage and universal healthcare is very similar to the mean opinion on these issues conducted in other contemporaneous national polls – there is little reason to believe the input data are systematically biased

¹²Indeed, many state legislative districts are not large enough to conduct such surveys given typical response rates.

in a liberal or a conservative direction. In addition, it seems unlikely our results are a spurious reflection of politicians having “better” information on public opinion than we do in our survey, both because comparisons of how politicians perceive the same constituents show that they still diverge in their perceptions and because, at least on the issue of same-sex marriage, evidence has shown there is little reason to believe that citizens are misrepresenting their support (Lax, Phillips and Stollwerk 2014). Finally, our results do not seem specific to unprofessionalized legislatures or unsuccessful candidates. The Appendix shows that these patterns look identical even for sitting legislators in the most highly professionalized legislatures and across a variety of sizes of districts, in upper and lower houses of state legislatures.

3.3 What Politicians Believe About Their Constituents

We first focus on the patterns for same-sex marriage and universal healthcare, the issues for which we had very large samples of public opinion data available. Throughout the paper, we present our data in the form of plots that depict relationships between politicians’ estimates of constituency opinion and actual district opinion with the raw data superimposed upon sensitive non-parametric smoothers that depict the conditional expectation functions.

Figure 3.2: Politicians’ Perceptions of Districts’ Opinions – Entire Sample

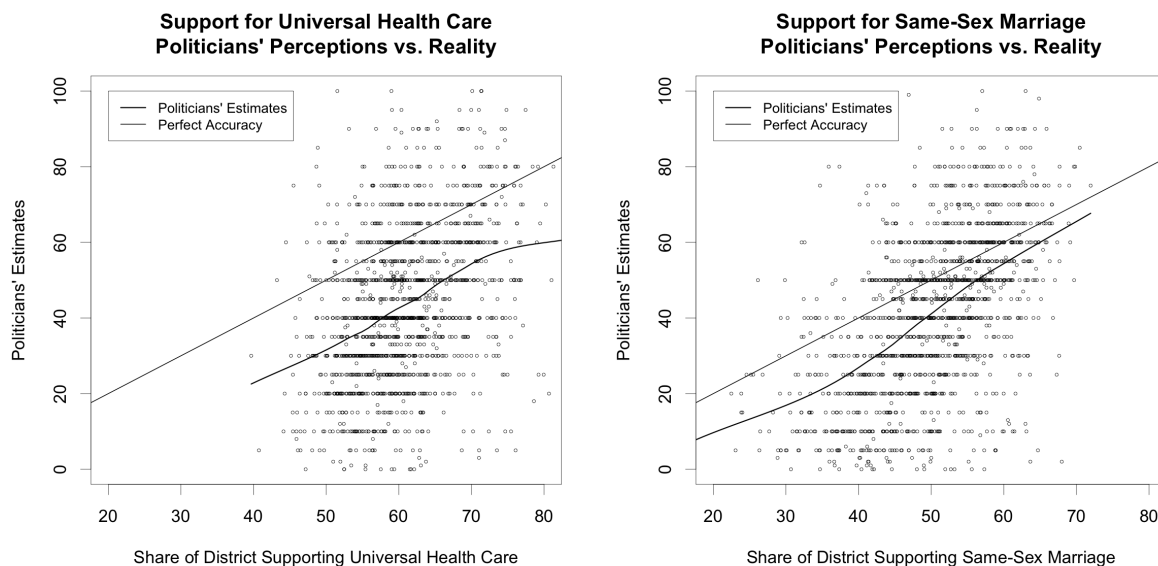


Figure 3.2 shows candidates’ perceptions of their constituencies’ opinions given varying levels of actual public opinion as estimated by MRP. The graph on the left shows the relationship between actual support for universal healthcare and candidates’ perceptions of this support. The graph on the right shows the same for same-sex marriage. The x-axes in these graphs correspond to the MRP

model's estimates of the share of politicians' constituents that support same-sex marriage and universal health care, while the y-axes correspond to politicians' perceptions of this opinion. Each dot represents an individual politician's response. The thick black lines show the conditional expectation functions of politicians' estimates for a given level of public support for these issues, while the straight, thinner 45-degree lines show what politicians would answer were their perceptions fully accurate.¹³

Figure 3.2 has relevance for two of the unresolved debates that have endured since the original controversy over Miller and Stokes's (1963) findings.

First, influential critiques of Miller and Stokes (1963) note that collective representation may be very robust even if dyadic representation in particular districts is weak (Weissberg 1978). Weissberg's (1978) insight raises questions about many analyses of dyadic representation, as policy is made at the level of entire legislatures, not legislative districts (e.g., Lax and Phillips 2009*b*; 2012). The prodigious sample size of our analysis puts us in a unique position to evaluate the possibility that collective perceptions are accurate when it comes to legislators' perceptions. In this regard, our results are not encouraging. A surprising pattern is clearly evident on both issues shown in Figure 3.2: as demonstrated by the intercept shift, politicians underestimate support for these policies by more than 10 percentage points on average.¹⁴ This pattern suggests that elected officials can maintain pervasive *collective* misperceptions about where the public stands. Not until districts tend to support universal healthcare by a 2 to 1 margin do a majority of candidates running to represent a district tend to expect a majority of their constituents to favor the policy, while politicians appear to believe that public opinion on same-sex marriage resembles what it looked like over a decade ago. The particular contours of these patterns may well differ for other issues; yet, when it comes to two of the most highly salient issues in national and state politics, we find little reason to believe that politicians' collective perceptions of public sentiment reliably approximate reality.

Second, these data provide a vivid demonstration of the possibility raised by Achen (1977). Achen (1977) noted that there might be a strong linear relationship between politicians' perceptions and reality even in the presence of large distortions. Our evidence illustrates just such a pattern that might be missed without attention to Achen's (1977) critique. Even though the relationship between politicians' perceptions and actual opinion is strong and linear, it is offset by a substantial intercept shift that implies politicians on average err by at least 10 percentage points. What might appear to be robust dyadic and collective representation on the basis of a correlation coefficient is, upon closer inspection, far less robust (e.g., Lax and Phillips 2009*a*).

Asymmetric Misperceptions by Political Ideology

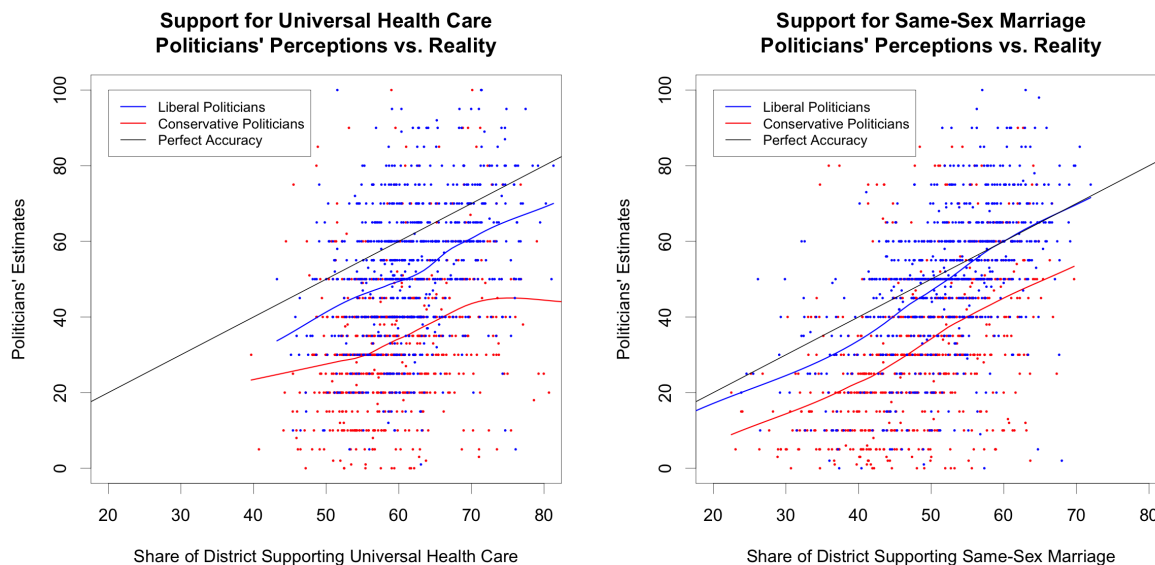
What leads some politicians to perceive their constituents more accurately than others? Our survey was designed to capture many factors that might lead politicians to develop more accurate perceptions of constituency opinion, but only one factor produced a clear influence on accuracy: political

¹³The data appear striated in bands of 5 percentage points because many candidates gave answers in multiples of 5 – e.g., “45%”.

¹⁴In this regard our findings echo surveys of other political elites suggesting that elites systematically overestimate the conservatism of the mass public (McGarrell and Sandys 1996; Kohut et al. 1998; Kull and Ramsay 2002).

ideology. We showed in Figure 3.2 that elites tend to overestimate their constituents' conservatism on these two issues. In Figure 3.3, we show that this overestimation is not symmetric between liberal and conservative politicians.¹⁵

Figure 3.3: Politicians' Perceptions of Districts' Opinions – By Politicians' Ideology

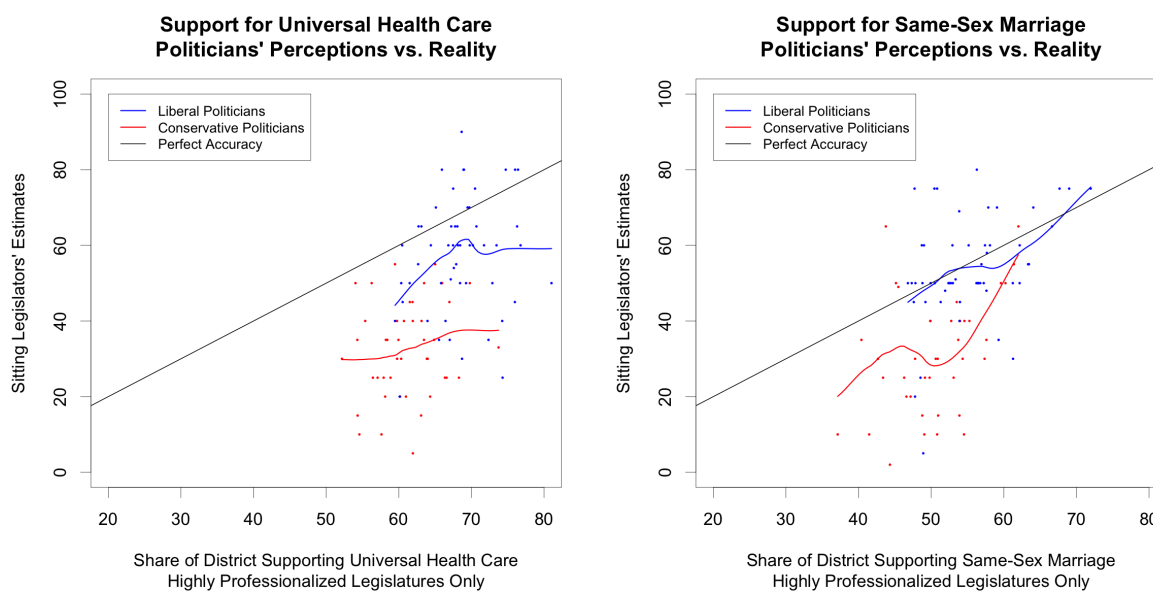


As Figure 3.3 shows, conservative politicians dramatically overestimate support for conservative policies in their districts. Indeed, although *both* liberals and conservatives tend to overestimate how conservative their constituents are, conservatives' perceptions in this regard are exceptionally strong – conservative politicians typically overestimate the conservatism of their constituencies by more than 20 percentage points on these issues. This difference is so large that nearly half of conservative politicians appear to believe that they represent a district that is as or more conservative on these issues than are the most conservative districts in the entire country. Inconsistent with Weissberg (1978), politicians' collective perceptions do not seem to reliably overcome deficiencies in their individual perceptions, as we see an entire group of legislators collectively perceiving their constituents as far more conservative than they are.

¹⁵Politicians' ideology was determined by their responses to issue questions other than universal health care and same-sex marriage. These questions appear in Appendix C.3. We calculate politicians' ideologies using a one-dimensional IRT model, estimated with the popular `MCMCpack` package in R (Martin, Quinn and Park 2011). Ideology and party correlate highly – indeed, our conclusions look essentially identical when separating candidates on the basis of their Democratic and Republican party affiliation instead of their ideologies or when using their ideological self-placement on a 7-point scale. We choose to discuss the differences in general ideological terms because we do not wish to imply any one causal theory about why these candidates tend to differ in this way. We speculate on these differences later in the paper but do not wish to implicitly 'attribute' these differences to any one factor such as party. This procedure results in 970 candidates being classified as liberal/left of center and 937 classified as conservative/right of center.

These patterns of systematic misperception do not seem confined to unsuccessful candidates or unprofessionalized legislatures, but are present for sitting politicians in highly professionalized legislatures as well. Although considerably less data is available when we subset our data very stringently, Figure 3.4 shows that these patterns persist even among sitting legislators in highly professionalized legislatures.¹⁶ Moreover, we find no meaningful statistical relationship between incumbency or professionalism and accuracy.

Figure 3.4: Estimates of Sitting Legislators in Highly Professionalized Legislatures

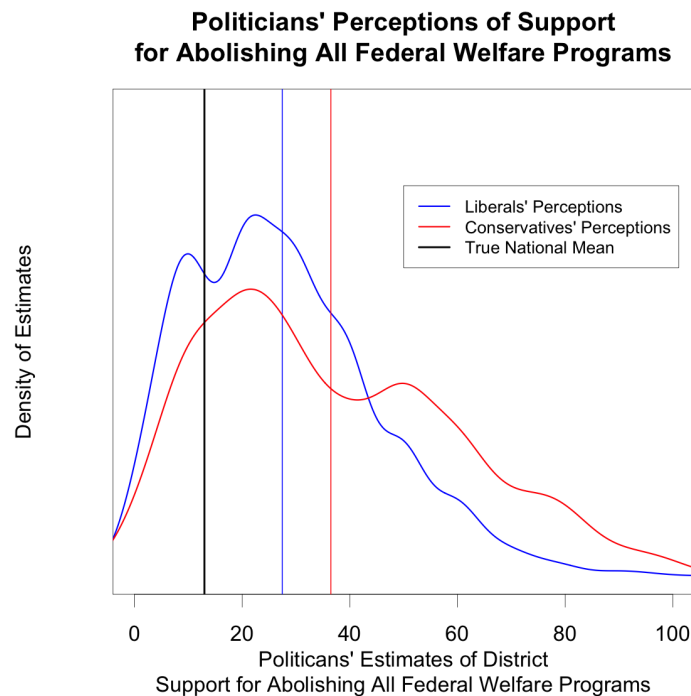


We also see similar patterns on the third issue we examined, whether politicians think their constituents would favor “Abolish[ing] all federal welfare programs.” Although we have insufficient data to reach reasonable estimates of particular legislators’ constituencies for this question, Figure 3.5 shows that we observe the same systematic bias when it comes to politicians’ perceptions of opinion on this issue when we examine overall trends in public support and elite perception. Very few Americans agree with this extreme statement – only about 13% – yet many American politicians believe that support for this view is quite widespread. Politicians’ collective perceptions of their constituents (Weissberg 1978) again fails to well-approximate where their constituents stand on this significant issue. Indeed, a sizable share of politicians believe a majority of constituents hold this view, even though it is very unlikely such an extreme view commands such widespread support in even the most conservative districts.

We also see further evidence for asymmetric misperceptions by politicians’ ideology on this issue. Liberal politicians typically believe that support is well above 25% in their districts, while conservative politicians typically perceive opinion on this issue closer to 40%. However, the true

¹⁶These are California, New York, Wisconsin, Michigan, Pennsylvania, Ohio, Illinois, New Jersey, and Arizona.

Figure 3.5: Politicians' Perceptions of Support for Abolishing All Federal Welfare Programs



mean across the districts in our survey on this question is considerably lower than nearly any politicians guessed. Conservative politicians again overestimate support for conservative positions by about 25 percentage points on this issue, while liberals substantially overestimate support for conservative positions as well.

It would clearly be premature to conclude whether and which politicians reliably see their constituents as more liberal or conservative than they are on issues in general based on these three issues alone. However, the stark differences we uncovered between politicians' collective perceptions and reality on these salient issues underscores what our findings indicate about the possibilities raised by Achen (1977) and Weissberg (1978). The simple slope of the relationship between politicians' perceptions of opinion and actual opinion is such that one might have been tempted to characterize both liberals' and conservatives' perceptions as collectively robust. However, our data suggest that a remarkably broad group of politicians – including a group that constitutes a majority of seats in a majority of state legislatures – maintain collective perceptions of the public on these consequential issues that vastly depart from the reality of voters' views. These findings suggest that the central linkage between public opinion public policy – legislators' perceptions of their constituents – does not seem guaranteed to function well even on highly salient issues.

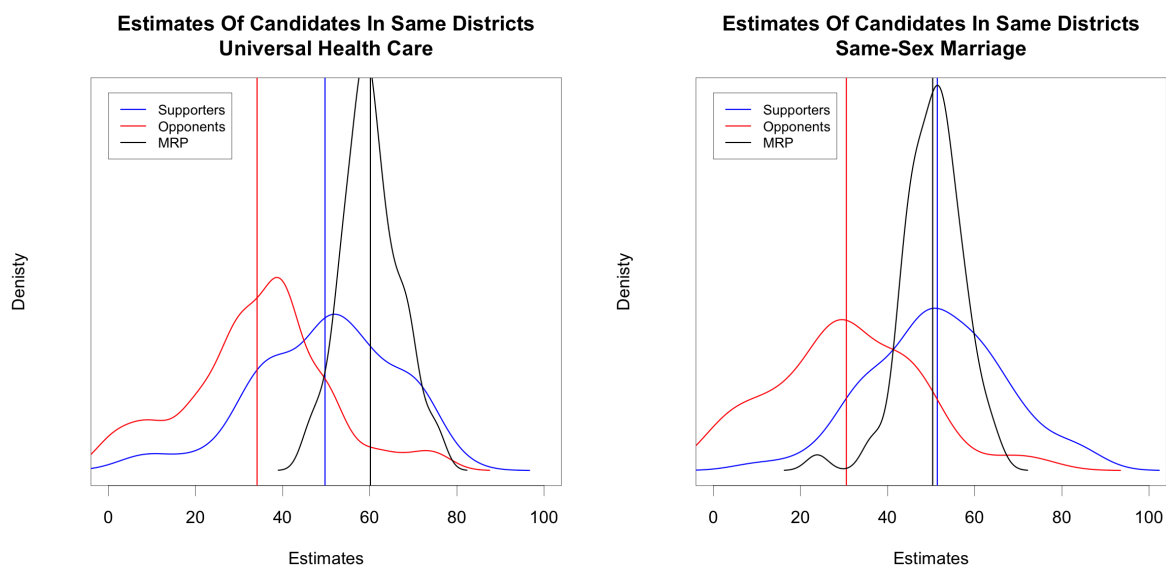
3.4 Robustness Check: How Different Candidates Evaluate the Same Constituents

Our results suggest politicians' perceptions of public opinion depart dramatically from reality. In light of this charge, one might wonder whether our estimates themselves might be prone to systematic bias – for example, perhaps politicians from districts where we mismeasured constituency opinion were particularly likely to respond to our survey; or, perhaps liberals and conservatives from different kinds of districts tend to respond, suggesting a bigger disconnect between their perceptions than exists. An aspect of our study's prodigious sample size offers a unique check on whether they are robust to these possibilities. Among the 1,907 respondents to the NCS, there are 91 pairs of candidates who ran for office in the same district. Analyzing their responses provides a unique window into the accuracy of politicians' perceptions.

Substantively, this analysis underscores Fenno's (1978) findings that two candidates can look at the same geographic constituency and see very different groups of constituents with different preferences and priorities. Indeed, we find that candidates running in the same districts have very different perceptions of their constituents' preferences on major issues.

Figure 3.6 depicts densities of the perceptions of candidates in districts where we have responses from both candidates running for office, separated into those who support and oppose each policy. We also depict the density of our estimates of the true opinion in these districts. A vertical line marks the mean of each distribution.

Figure 3.6: Responses of Candidates In Same Districts and MRP Predictions in Those Districts



Notably, even when looking within individual districts, conservative and liberal candidates' perceptions diverge markedly from each other (and from our estimates). In general, there is an approximately 20 percentage point gap between the supporters' and opponents' estimates, even though they are evaluating the same constituents. As the Figure implies, the difference in supporters' and opponents' candidates' estimates within these districts is highly statistically significant ($t = 6.26, p < 0.0001$).

This unique data also allows us to put a precise lower bound on politicians' average misperceptions without relying on public opinion data at all. As both candidates cannot be right when their perceptions diverge so greatly, that candidates differ by more than 20 percentage points in their estimates suggests that politicians are on average incorrect about their perceptions of their constituents by at least 10 percentage points.¹⁷

Figure 3.7 provides another look at this data, showing responses from dyads of candidates running against each other to provide a window into the thinking behind both sides of dozens of electoral contests nationwide. Each point in Figure 3.7 represents one pair of candidates who ran in the same district. The x-axis corresponds to the estimate of public opinion the supporter gave, and the y-axis corresponds to the estimate of public opinion the opponent gave. Strikingly, there is almost no relationship between how opponents and supporters of these policies who were running against each other believe about where the public stands.

Interestingly, the reason we uncover such striking misperceptions does not appear to be that politicians are reluctant to admit a belief that public opinion is not on their side – many do. Rather, it seems that the reality of where the public stands on these issues has such a weak influence on politicians' perceptions of public opinion that two candidates coming to judgments about the same constituents largely fail to have much more in common than would two candidates picked entirely at random.

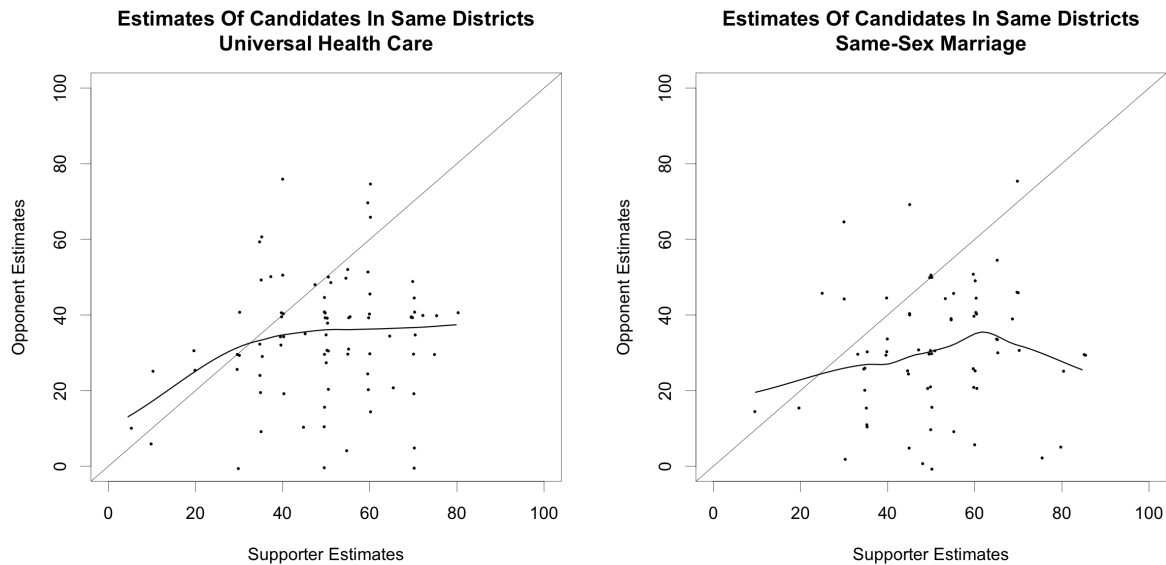
3.5 Do Candidates Learn From Campaigns and Elections?

Our findings so far thus suggest that politicians' perceptions of public opinion reflect large and systematic misperceptions. Considering the neglected debates inspired by Miller and Stokes (1963), our results provide among the clearest evidence to date that even on highly salient issues politicians maintain severe collective misperceptions about public opinion.

But these findings come from surveys collected in mid-August of an election year, before the bulk of the fall campaign when politicians have their closest contact with voters and may be the most likely to conduct political polls. One thus might expect that political campaigns themselves would inform politicians about prevailing voter opinion, just as campaigns seem to inform voters about politicians' (e.g., Gelman and King 1993; Lenz 2012; Hirano et al. 2014).

¹⁷To appreciate why this follows, consider a district where one candidate estimates that 40% of constituents support a policy and her opponent believes that 60% support the same policy. No matter whether true support is 40%, 50%, or 60%, the average error of these candidates is 10%. And if true support is greater than 60% or lower than 40%, the true average error is even larger.

Figure 3.7: Responses of Candidates In Same Districts



Note: Unlike in the other Figures, both axes here represent candidates' estimates: the x-axis the estimate of the supporter of these policies, and the y-axis the estimate of the opponent.

To examine what politicians learn about constituency opinion from their campaign activities and election results, we conducted a follow-up survey in mid-November 2012, two weeks after the general election. Among other questions, this survey asked politicians the same questions about their perceptions of public opinion as we had asked three months earlier, after they had just experienced the height of the campaign and observed the election results themselves.

Prominent theories of representation might lead one to expect politicians to learn about opinion during campaigns for at least two reasons. First, voters are often depicted as selecting candidates on the basis of their issue positions (e.g., Brody and Page 1972), generating strong incentives for politicians hoping to win over voters to learn about their preferences. Indeed, our survey suggests that the typical politician spent on average more than 25 hours every week interacting with voters in public meetings, at events, and one-on-one as a part of campaigning. With same-sex marriage and the debate over government-supported healthcare occupying such prominent roles in the 2012 campaign, one might expect politicians to come to a more accurate view of constituents on these issues. Moreover, the election result itself could have provided politicians some insight into their constituencies' political preferences.

The widespread availability of public opinion polls and their use in political campaigns also suggests that politicians might perceive their constituents more accurately today than when Miller and Stokes (1963) conducted their investigation. Indeed, politicians' use of opinion polls in forming their positions and political strategies is a flourishing research agenda in itself (e.g., Jacobs

and Shapiro 1995; Herbst 1993). To the extent politicians deem it necessary to be informed about public opinion to win elections, it seems today's politicians have significant advantages over those who came under study by Miller and Stokes (1963).

Figure 3.8 shows politicians' perceptions of their constituents' opinions in our first survey and this follow-up survey among those who answered both. We again split the answers by politicians' political ideology to ascertain to what extent the democratic process would correct the collective misperceptions we observed earlier.

Data from the post-election survey provides little evidence of legislator learning. As Figure 3.8 demonstrates, politicians who completed both waves of the survey show no discernible improvement in accuracy between the pre- and post-election surveys. Politicians' responses to our survey in August are shown in light green, while those same candidates' responses in November are shown in dark green. The 45-degree line in black shows where politicians' responses should tend to cluster on average were their collective perceptions accurate.

Were politicians to learn from elections, one would expect the darker green lines to be closer to the black 45-degree line, indicating increasing accuracy. However, we do not observe such movement; politicians' perceptions of district opinion do not become more accurate after elections. Indeed, if anything, politicians' perceptions appear to become slightly less so. (These patterns are similar for those who actually won office; we see no evidence that successful candidates tend to have learned where the public stands.)

These longitudinal results regarding politicians' perceptions underscore the implications of our findings for representation. One of the principle benefits of democratic competition is thought to be incentivizing politicians to take close account of the public's views so as to guide their policymaking toward the public's wishes. Although we see politicians are not entirely unaware of public opinion, their perceptions leave much to be desired. Even after working tirelessly to win public office for months on end, candidates do not seem to become more accurate about public opinion on the whole. Rather, as a group, American politicians seem to possess fairly durable beliefs that the citizens they represent hold significantly different views than they do.

3.6 Discussion: Implications for Theories of Constituency Control

The notion that politicians should closely attend to public sentiment is a hallmark of traditional conceptions of democratic governance. Yet, representative institutions rely on politicians to perceive public opinion in order to translate it into policy, and to what extent politicians can be relied upon to do so accurately remains dimly understood. In this paper we provided a uniquely clear window into this crucial mechanism linking public opinion and public policy with among the most extensive documentations to date of politicians' positions, their perceptions of public opinion in their constituencies, and estimates of public opinion in their constituencies across three salient issues.

Comparing how politicians perceive their constituents to where their constituents stand allowed us to advance a tradition dating back to Miller and Stokes (1963). Our results suggested that politicians have some idea of where their constituents stand, but that these perceptions reflect large and systematic inaccuracies. As Achen (1977) warned, what at first appears to be relatively decent congruence based on a simple linear correlation concealed severe bias. Politicians appeared to err from true opinion by more than 10 percentage points on average, a figure we can reach without relying on public opinion data at all based on responses from candidates running against each other in the same districts. In this regard, our results sit well with Miller and Stokes's (1963) pessimism about politicians' perceptions, yet for different reasons than their work identified.

Our results also cast doubt on the notion that collective representation reliably ameliorates deficiencies of dyadic representation that Miller and Stokes (1963) identified (e.g., Weissberg 1978). In addition to finding that individual politicians tend to err on average, we found that an entire ideological group of politicians tends to believe public support for their positions is more than 20 percentage points greater than it is on average. These misperceptions cast doubt on the notion that politicians can be relied upon to accurately perceive public opinion on salient issues in a collective manner, despite their individual failings.

Finally, our results help evaluate the possibility that the advent of public opinion polling and other changes in American politics would have allowed politicians to perceive public opinion more accurately. With public opinion polls now widely available (e.g., Herbst 1993), and with partisan sorting stronger than ever (e.g. Nall 2014), one may well expect to find different results after today's elections than those Miller and Stokes (1963) reached in 1958. However, our findings suggest politicians can maintain strong collective misperceptions of public opinion even when a wealth of public opinion polling is readily available.

Thanks to the prodigious sample size of our study, we were also able to conduct a variety of robustness checks on our main findings. First, all our findings stand among sitting legislators in highly professionalized legislatures, where legislators should have the most resources to gather information about public opinion. Second, because in many instances we have responses from candidates running against each other to represent the very same district, we can document that candidates hold perceptions that diverge from each other (and thus must, on average, from the truth) without relying on our public opinion data at all.¹⁸ Next, we show that many politicians do admit that public opinion is not on their side and that even these politicians do not provide accurate perceptions, suggesting that social desirability bias or a desire to avoid appearing out of step do not account for our results – for example, many liberal politicians who represent districts that almost certainly favor same-sex marriage and universal healthcare and who support these policies themselves nevertheless indicated that they thought their constituents stood opposed. In addition, it seems unlikely our results are a spurious reflection of politicians having “better” information on public opinion than we do in our survey, both because comparisons of how politicians perceive the same constituents show that they still diverge in their perceptions and because, at least on the

¹⁸To appreciate why this follows, consider a district where one candidate estimates that 40% of constituents support a policy and her opponent believes that 60% support the same policy. No matter whether true support is 40%, 50%, or 60%, the average error of these candidates is 10%. And if true support is greater than 60% or lower than 40%, the true average error is even larger.

issue of same-sex marriage, evidence has shown there is little reason to believe that citizens are misrepresenting their support (Lax, Phillips and Stollwerk 2014). Finally, even though our estimates of public opinion in individual districts reflect sampling variability, the aggregate ‘intercept shift’ we find such that politicians overestimate opposition to these policies does not rely on these district-level estimates and can be reproduced with other national polls.

How would these results generalize to other contexts? A focus on candidates for state legislatures allowed us to collect a large amount of data on a level of government where significant policy decisions are being made on the most publicly salient issues (Lax and Phillips 2012; Rogers 2014*b*). We see this focus as a reasonable starting point, but readily allow that our results may differ at other levels of government and in other national contexts. Propitious for the generalizability of our results, our findings do not seem limited to unsuccessful challengers or unprofessionalized legislatures, as they hold up well when we examine the perceptions of sitting legislators in highly professionalized legislatures. Nevertheless, we would welcome more data on the matter of other how politicians at other levels of government and in other countries perceive their constituents. Likewise, we believed these issues would provide a reasonable basis for investigating the broader principles of representation but look forward to seeing how well these patterns hold up on other issues.

The implications of these findings bear on a number of broader questions. First, the patterns we discovered on these issues are noteworthy in and of themselves. In recent years, state legislatures nationwide have rejected federal funds for universal healthcare programs and blocked measures to open up marriage to same-sex couples despite collective public support for universal healthcare and same-sex marriage in many of their states. Our results provide a unique window into the thinking of legislators who made these decisions: it appears the legislators making them believed their constituents supported their decisions overwhelmingly, even as public support in many of these districts and states is better characterized as split. Politicians as a whole and entire ideological groups of politicians in particular appear able to maintain pervasive misperceptions of the public on even the most publicly contentious issues of the day.

Our findings also highlight the need for more research on the question of how politicians do come to reach the perceptions of their constituents that they have. Since Fenno (1978), relatively few scholars have taken up the charge of understanding how politicians see voters. Prominent exceptions include work by Miler (2007; 2009), who on the basis of structured interviews, similarly concludes that legislators generally think of their constituencies in a fragmented and inaccurate way, recalling only a small subset of relevant constituencies on any given topic.¹⁹ Our findings highlight the importance of this work, as they underscore that politicians cannot be relied upon to accurately perceive their constituents, individually or in aggregate.

Most of all, our findings prompt us to revisit a theoretical question first raised by Miller and Stokes (1963): what accounts for politicians’ widespread inaccuracy about their constituents? The conclusions we can reach on this matter differ a great deal from those one would reach in 1958, when Miller and Stokes (1963) conducted their study of constituency representation. In their era, the question of how politicians might even go about reaching reasonable perceptions of public

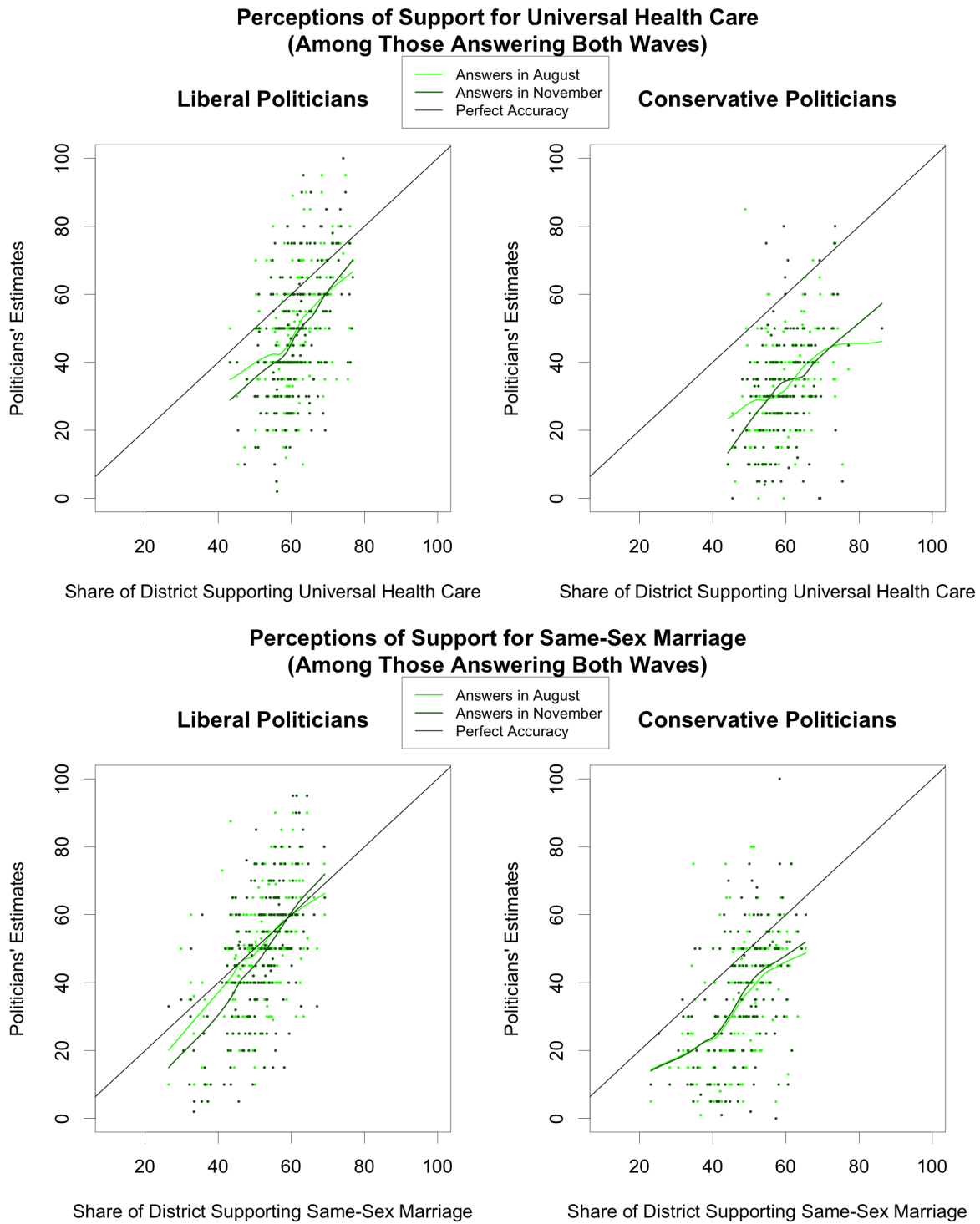
¹⁹See also Bergan (2009); Kollman (1998); Butler and Nickerson (2011); Broockman and Ryan (2014).

opinion represented a perplexing quandary, as public opinion polls were still a relatively new technology that most politicians could not easily deploy. Miller and Stokes (1963) thus focused on how politicians might come to estimates of public opinion based on who participates, such as by attending public meetings or writing to them directly. Reaching the same findings in today's political environment suggests a different conclusion. If today's elites viewed congruence with public opinion as an essential goal, we might expect them to possess more accurate knowledge of opinion on salient issues than they appear to, as such knowledge is fairly inexpensive to obtain relative to the cost of modern campaigns, especially in highly professionalized legislatures.²⁰ As with voters' typically low level of motivation to learn about their representatives (Downs 1957, ch. 13), it thus seems politicians may have limited desire to accurately ascertain public opinion on political issues of the very highest salience. Politicians clearly do respond to information about the political consequences of their actions when taking political positions (Kollman 1998; Bergan 2009; Bergan and Cole 2014; Butler and Nickerson 2011), but accurately ascertaining the state of constituency opinion does not appear to rank fairly highly on their priorities necessary for maintaining their positions. Only when constituency opinion is relatively unambiguous do representatives appear to reliably see reason to take notice – yet as most districts are relatively moderate in aggregate (Fiorina, Abrams and Pope 2005), such conditions are rare.

Throughout this study, we have investigated the origins of public policy with a single-mindedly dyadic view of the process of representation, with its undifferentiated mass of voters on one side and a representative seeking to represent their opinions on the other (Miller and Stokes 1963). Why take such a limited approach, when we know other factors matter? Our approach willfully ignored the other ingredients in policymaking so as to help appraise just how much of politicians' decisions might be understood on the basis of public opinion alone. The issues we considered represented a relatively easy test for the hypothesis that maintaining congruence with public opinion is a chief concern of contemporary American politicians, yet politicians appeared generally unaware of their constituents' opinions. Such patterns do not bode well for the conception of democracy as the aggregation of individual voters' preferences.

²⁰The average State Senate campaign spent \$165,937 in 2012, while the average State House campaign spent \$69,797 National Institute on Money in State Politics (2014). An opinion poll with a smaller than 10% margin of error (the lower bound on candidates' misperceptions we established) would cost a small fraction of either sum.

Figure 3.8: Politicians Learn Nothing About Constituents' Views From Campaigns Or Elections



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Appendix A

A.1 Survey Item Wordings

Questions with Multiple Responses

The below questions were delivered to both the mass public and state legislators. The order of the questions was randomized, but the answer options within each question were always presented to respondents in the order shown below. Answer choice 1 is sometimes the most conservative choice and sometimes the most liberal choice in the below questions; however, for ease of interpretation the data in the paper reverse codes some questions such that 1 is always the most liberal choice and 7 is the most conservative choice.

- Which statement comes closest to describing your views on gun control?
 1. Sales of firearms of any kind should be completely banned in the United States.
 2. Weapons with high-capacity magazines of all kinds should be banned in addition to fully automatic weapons, and those wishing to buy other kinds of guns should always have to pass a background check. Ammunition should be heavily regulated, with certain types (e.g., armor-piercing bullets) banned outright. Additionally, it should be illegal for civilians to carry concealed guns in public.
 3. Weapons with high-capacity magazines of all kinds should be banned in addition to fully automatic weapons, and those wishing to buy other kinds of guns should always have to pass a background check. Ammunition should also be heavily regulated, with certain types (e.g., armor-piercing bullets) banned outright.
 4. Fully automatic guns like high-powered machine guns should be extremely difficult or illegal for civilians to purchase. Those wishing to buy other kinds of guns should always have to pass a background check, except when buying guns from friends and family.
 5. Fully automatic guns like high-powered machine guns should be extremely difficult for civilians to purchase. Other firearms should be free to be bought and sold at gun shows and in other private transactions without restrictions.

6. All Americans should be allowed to buy any kind of gun they want, including automatic guns. No background checks or licenses should be required.
 7. Certain Americans who are not in law enforcement (e.g., teachers and school staff) should be REQUIRED to own a gun to protect public safety.
- Which statement comes closest to describing your views on the issue of health care?
 1. The United States should move to a system like Great Britain's, where the government employs doctors instead of private companies and all Americans are entitled to visit government doctors in government hospitals free of charge.
 2. The government should expand Medicare to cover all Americans, directly providing insurance coverage for all Americans free of charge.
 3. The government should guarantee full private health insurance coverage to all Americans, regardless of their age or income.
 4. The government should help pay for all health care for vulnerable populations like the elderly, children, and those with low incomes. Other Americans should only receive assistance in paying for catastrophic illnesses.
 5. The government should help pay for some health coverage for vulnerable populations like the elderly and those with very low incomes, including prescription drugs. However, other individuals should not receive government assistance. The government should primarily pursue market reforms (e.g., tort reform, increasing tax deductions, allowing citizens to buy across state lines) to make insurance more affordable.
 6. The government should only help pay for emergency medical care among the elderly and those with very low incomes. Other individuals and any routine care should not be covered. Instead, the government should pursue market reforms to make insurance more affordable.
 7. The government should spend no money on health care for individuals. Those who cannot afford health care should turn to their families and private charity for help.
 - Which statement comes closest to describing your views on immigration?
 1. The United States should have open borders and allow further immigration on an unlimited basis.
 2. Legal immigration to the United States should greatly increase among all immigrant groups, regardless of their skills. Immigrants already in the United States should be put on the path to citizenship.
 3. Immigration of highly skilled individuals should greatly increase. Immigration by those without such skills should continue at its current pace, although this immigration should be legalized.

4. Immigration of highly skilled individuals should greatly increase, and immigration among those without such skills should be limited in time and/or magnitude, e.g., through a guest worker program.
 5. The United States should admit more highly skilled immigrants and secure the border with increased physical barriers to stem the flow of other immigrants.
 6. Only a small number of highly skilled immigrants should be allowed into the United States until the border is fully secured, and all illegal immigrants currently in the US should be deported.
 7. Further immigration to the United States should be banned until the border is fully secured, and all illegal immigrants currently in the US should be deported immediately.
- Which statement comes closest to describing your views on taxes?
 1. Establish a maximum annual income, with all income over \$1,000,000 per year taxed at a rate of 100%. Decrease federal taxes on the poor and provide more services benefiting the middle class and poor.
 2. Increase federal income taxes on those making over \$250,000 per year to pre-1990s levels (over 5% above current rates). Use the savings to significantly lower taxes and provide more services to those making less and to invest in infrastructure projects.
 3. Increase federal income taxes on those making over \$250,000 per year to 1990s rates (5% above current rates). Use the savings to lower taxes and provide more services to those making less while also paying down the national debt.
 4. Maintain current levels of federal spending and federal income taxes on the rich, middle class, and poor.
 5. Decrease all individuals' income tax rates, especially high earners who pay the most in taxes now, accomplished by decreasing government services.
 6. Move to a completely flat income tax system where all individuals pay the same percentage of their income in taxes, accomplished by decreasing government services.
 7. Move to a flat consumption tax where all individuals pay the same percentage of their purchases in taxes, banning the income tax, even if this means the poor pay more in taxes than the rich. Significantly decrease government services in the process.
 - Which statement comes closest to describing your views on abortion?
 1. Abortions should always be legal, and the government should pay for all abortions.
 2. Abortions should always be legal, and the government should help women pay for abortions when they cannot afford them.
 3. Abortions should be legal in the first two trimesters at least, and the government should require private insurers to cover abortions.

4. Abortions should be legal in the first two trimesters, though the government should not play any role in financially supporting abortions.
 5. Abortion should only be legal if the life of the mother is in danger or in cases of rape and incest.
 6. Abortion should only be legal if the life of the mother is in danger.
 7. Abortion should always be illegal.
- Which statement comes closest to describing your views on pollution and the environment?
 1. The government should institute a carbon tax or cap and trade system that would significantly decrease US carbon emissions over the next several decades.
 2. The government should institute a carbon tax or cap and trade system that would keep US carbon emissions at or just below their current levels.
 3. The government should discourage the use of energy sources that contribute most heavily to global warming (e.g., coal) and subsidize the use and development of solar, wind, and nuclear energy. However, there should be no general cap on or market for carbon emissions overall.
 4. The government should enact regulations encouraging energy efficiency and subsidize the use and development of solar, wind, and nuclear energy.
 5. The government should encourage energy efficiency but not subsidize the development of 'green' energy.
 6. The government should allow for further oil drilling offshore and/or on federal lands, prioritizing American energy independence and low prices over environmental concerns.
 7. The government should both allow AND subsidize increased domestic production of fossil fuels (i.e., coal, oil, and gas).
 - Which statement comes closest to describing your views on Medicare, the government's program for covering the elderly's health care costs?
 1. Replace Medicare with government-run hospitals and clinics for the elderly that directly employ doctors, nurses, and surgeons.
 2. Increase spending on Medicare, allowing the program to provide even more benefits than it does today, although retain its current structure.
 3. Maintain the current annual growth in Medicare spending and all other aspects of the program in their current form.
 4. Reduce the rate of growth in Medicare funding over time, though continue to leave the program as structured.

5. Reduce the rate of growth in Medicare funding over time and transition towards a voucher system that helps seniors to buy private insurance instead of directly covering health costs.
 6. Significantly reduce funding for Medicare so that it helps seniors only with catastrophic health costs like expensive surgeries, leaving other costs to be paid for by their savings, their families, and private charities.
 7. The government should not assist the elderly in paying for any health expenses.
- Which statement comes closest to describing your views on rights for gays and lesbians?
 1. Same-sex couples should be allowed to marry and adopt children; the government should prosecute companies for firing individuals because they are lesbian or gay; the government should require corporations to offer the same benefits to partners of gay and lesbian employees as they do to straight employees' partners; and, government should require that all schools teach children about gay and lesbian relationships.
 2. Same-sex couples should be allowed to marry and adopt children; the government should prosecute companies for firing individuals because they are lesbian or gay; and, the government should require corporations to offer the same benefits to partners of gay and lesbian employees as they do to straight employees' partners.
 3. Same-sex couples should be allowed to marry and adopt children; and, the government should prosecute companies for firing individuals because they are lesbian or gay.
 4. Same-sex couples should be allowed to marry each other and adopt children.
 5. Same-sex marriage should not be legal, although the government should not regulate homosexual conduct or ban gays and lesbians from adopting children.
 6. Gay sex should be permitted, but same-sex marriage should be illegal and known gays and lesbians should not be allowed to adopt children.
 7. Gay sex should be illegal and punishable by imprisonment, similar to the penalties for committing incest and bestiality.
 - Which statement comes closest to describing your views on affirmative action in higher education?
 1. All public and private universities should be required by law to admit applicant pools that fully represent their state's broader racial makeup, with racial minorities composing the same share of students as they do in the overall population.
 2. Public universities only should be required to admit applicant pools that fully represent their state's broader racial makeup, with racial minorities composing the same share of students as they do in the overall population.
 3. Public universities should be sure admit a certain number of underrepresented minorities each year so as to counteract any biases in the admissions process.

4. The government should not dictate whether public universities will consider race in admissions decisions, although discrimination against racial minorities should remain illegal and carefully monitored.
 5. Public universities should not be allowed to consider race in admissions one way or the other. Race should be completely irrelevant to admissions decisions.
 6. Both public and private universities should not be allowed to use race in admissions decisions one way or the other. In order to receive federal funds universities must not consider race at all.
 7. Non-discrimination laws should be repealed; if universities prefer to have particular racial makeups, that is their right.
- Which statement comes closest to describing your views on unions?
 1. The government should periodically administer union elections in all workplaces where a union has not been formed.
 2. The government should automatically recognize unions in instances when over 50% of a workplace's employees indicate interest in forming a union.
 3. Workers should be allowed to attempt to form unions that charge mandatory dues, by secret ballot. If a company's workers form a union, new employees may be compelled to join.
 4. Workers should be allowed to attempt to form unions with voluntary dues and membership. Unions should only be formed through secret ballots. Corporations should not be allowed to fire workers for starting them.
 5. Workers should be allowed to attempt to form unions with voluntary dues and membership. Unions should only be formed through secret ballots, and unionized workplaces must hold recertification elections regularly. Corporations should not be allowed to fire workers for starting them.
 6. Workers should be allowed to attempt to form unions with voluntary dues, but corporations should have the right to fire workers for attempting to start such unions and/or the power of the National Labor Relations Board to issue directives to unionized companies should be significantly curtailed.
 7. Workers should not be allowed to form unions, just as corporations are not allowed to form cartels.
 - Which statement comes closest to describing your views on birth control?
 1. The government should help pay for birth control pills for all women AND other forms of contraceptives for women who cannot afford them.
 2. The sale of birth control pills should be allowed. Pharmacists should be required to sell them and the government should cover their cost.

3. The sale of birth control pills should be allowed. Pharmacists should be required to sell them and insurance companies should be forced to cover their cost.
 4. The sale of birth control pills should be allowed and pharmacists should not be allowed to refuse selling birth control pills. However, employers and insurance companies may decline to cover birth control.
 5. The sale of birth control pills should be allowed to people of all ages. However, insurance companies, pharmacists, and employers should be allowed to refuse selling or covering birth control.
 6. The sale of birth control pills should be allowed, but only to women over 18 years of age. Insurance companies, pharmacists, and employers should be allowed to refuse selling or covering birth control.
 7. Birth control pills should be banned.
- Which statement comes closest to describing your views on public funding for private school education?
 1. All children should attend public schools. Private schools perpetuate economic inequality and should be banned.
 2. Private schools should be legal but the government should play no role in funding private education – for example, private schools should not be exempt from taxes.
 3. Private schools should be legal and retain tax exempt status, but government should play no active role in funding private education.
 4. The government should create private school voucher programs in school districts where regular public schools are failing so all families in such areas can send their children to a private school if they wish.
 5. The government should create a voucher program in all school districts, paying private school tuition for families so that they always have the choice to send their children to private schools.
 6. The education system should be fully privatized, although the government should still provide support for private school tuition.
 7. The education system should be fully privatized, with government playing no role in paying for families' education expenses. However, private school tuition should be tax deductible.

Binary Questions for Ideological Scale

These items were delivered to both the mass public and state legislators.

Do you agree or disagree with the following statements? (Please pick the option that most accurately represents your views.) [*Question order randomized.*]

- The federal government should pay for the elderly's medical care.
- The government should provide parents with vouchers to send their children to any school they choose, be it private, public, or religious.
- Allow doctors to prescribe marijuana to patients.
- Increase taxes for those making over \$250,000 per year.
- Overturn *Roe v. Wade*.
- Allow workers to invest a portion of their payroll tax in private accounts that they can manage themselves.
- Same-sex couples should be allowed to marry.
- Implement a universal healthcare program to guarantee coverage to all Americans, regardless of income.
- Limit the amount of punitive damages that can be awarded in medical malpractice lawsuits.
- There should be strong restrictions on the purchase and possession of guns.
- Illegal immigrants should not be allowed to enroll in government food stamp programs.
- Include sexual orientation in federal anti-discrimination laws.
- Prohibit the use of affirmative action by state colleges and universities.
- The US should contribute more funding and troops to UN peacekeeping missions.
- The government should not provide any funding to the arts.
- I support the death penalty in my state.
- Repeal taxes on interest, dividends, and capital gains.
- Prohibit the EPA from regulating greenhouse gas emissions.
- Health insurance plans should be required to fully cover the cost of birth control.
- The federal government should subsidize student loans for low income students.

Political Knowledge Battery

These items were delivered to the mass public only.

[Question order randomized.]

1. Do you happen to remember which party controls the United States House of Representatives – that is, which party has a majority of members in the United States House of Representatives? *[First two responses rotated.]*
 - Republicans
 - Democrats
 - Neither
 - I'm not sure
2. Do you happen to remember which party controls the United States Senate – that is, which party has a majority of members in the United States Senate? *[First two responses rotated.]*
 - Democratic Party
 - Republican Party
 - Neither
 - I'm not sure
3. Do you happen to remember what job John Boehner holds? *[First four responses rotated.]*
 - Speaker of the US House
 - Governor of Texas
 - Chief Justice of the US Supreme Court
 - Prime Minister of Canada
 - Vice President of the United States
 - I'm not sure
4. Do you happen to remember what job John Roberts holds? *[First five responses rotated.]*
 - Speaker of the US House
 - Governor of Texas
 - Chief Justice of the US Supreme Court
 - Prime Minister of Canada
 - Vice President of the United States
 - I'm not sure

5. Do you happen to remember what industry the Dodd-Frank Act regulates? *[First four responses rotated.]*
 - Finance
 - Healthcare
 - Insurance
 - Oil and Natural gas
 - I'm not sure

6. Do you happen to remember what political party President Franklin Roosevelt was a member of? *[First two responses rotated.]*
 - Democratic Party
 - Republican Party
 - Whig Party
 - Some other party
 - I'm not sure

7. For how many years is a member of the United States Senate elected – that is, how many years are there in one full term of office for a US Senator?
 - Two
 - Four
 - Six
 - Eight

8. Do you happen to remember how much of a majority is required for the US House and Senate to override a Presidential veto?
 - A majority, or one half (1/2)
 - Two thirds (2/3rds)
 - Three fifths (3/5ths)
 - I'm not sure

A.2 Details of Mass Survey Procedures

Main Survey

The data for most of the paper's results come from an April 2013 survey administered by Survey Sampling International.

Representativeness and Weighting

Participants were recruited via Survey Sampling International, a reputable online survey firm. The SSI sample looks very similar to the ANES, GSS, and other surveys on key demographic and political benchmarks. Table A.1 shows a number of demographic benchmarks in the ANES and the unweighted SSI Survey. Table A.2 compares the ANES and the SSI survey on a number of political benchmarks.

The results presented in the text are weighted using the `anesrake` package in R (Pasek 2013). Gender, age, and race are weighted to the most recent US Census. Personal ideology and educational attainment are weighted to the most recent General Social Survey. Party ID is weighted to the 2012 ANES. Unweighted results are available on request and are very similar to the weighted results.

Screener Question

In order to ensure that individuals in the survey read the questions and selected support for more extreme policies genuinely, individuals were shown a screener question at the beginning of the survey to ensure they were paying attention. Individuals who did not fill out the below question correctly were removed from the survey immediately.

What kind of things do you typically look for in friends? To demonstrate that you've read this much, just go ahead and select both kindness and good looks among the alternatives below, no matter what your actual answer to the question is. Yes, ignore the question below and select both of those options. What kind of things do you most look for in a friend?

- *kindness*
- *compassion*
- *humor*
- *good looks*
- *money*
- *happiness*
- *friendliness*
- *none of these*

Suggesting that this question was successful, over 97% of the remaining respondents correctly answered the question below, which was inserted later in the survey.

We are interested in information about you. Specifically, we are interested in whether you actually take the time to read the directions; if not, some results may not tell us very much about decision making in the real world. To show that you have read the instructions, please ignore the

Table A.1: Demographic Sample Statistics in 2012 ANES and SSI Survey

Study	2012 ANES (Weighted)	SSI Survey (Unweighted)
		Gender
Male	48%	46%
Female	52%	54%
		Age Group
17-20	4%	5%
21-24	6%	7%
25-29	10%	10%
30-34	8%	11%
35-39	7%	8%
40-44	9%	6%
45-49	7%	10%
50-54	10%	10%
55-59	10%	10%
60-64	8%	11%
65-69	7%	7%
70-74	5%	3%
75+	6%	2%
		Race
White Non-Hispanic	71%	73%
Black Non-Hispanic	12%	13%
Hispanic	11%	11%
Other	6%	4%
		Education
Less than high school	10%	2%
High school or equivalent	30%	20%
Some college	30%	41%
Bachelor's degree	19%	24%
Graduate degree	11%	13%
		Annual Household Income
Below \$30,000	30%	28%
\$30,000-\$40,000	11%	15%
\$40,000-\$50,000	8%	12%
\$50,000-\$60,000	9%	11%
\$60,000-\$70,000	8%	7%
\$70,000-\$80,000	7%	6%
\$80,000-\$90,000	5%	4%
\$90,000-\$100,000	4%	4%
Over \$100,000	19%	13%

question below about how you are feeling and instead check only the "none of the above" option as your answer. Thank you very much. How are you feeling?

- *Interested*
- *Distressed*

Table A.2: Political Sample Statistics in 2012 ANES and SSI Survey

Study	2012 ANES (Weighted)	SSI Survey (Unweighted)
Self-Reported Ideology		
Extremely liberal	3%	5%
Liberal	11%	16%
Slightly liberal	11%	12%
Moderate	34%	35%
Slightly conservative	16%	12%
Conservative	19%	15%
Extremely conservative	5%	4%
Party ID		
Strong Democrat	20%	24%
Not very strong Democrat	15%	20%
Lean Democrat	12%	9%
Independent	14%	15%
Lean Republican	12%	7%
Not very strong Republican	12%	12%
Strong Republican	15%	13%
Political Knowledge		
Knows Senators Elected To 6-Year Terms	34%	46%
Knows Democrats Control US Senate	51%	44%
Knows Republicans Control US House	58%	50%

- *Excited*
- *Upset*
- *Strong*
- *Guilty*
- *Scared*
- *Hostile*
- *Enthusiastic*
- *Proud*
- *Irritable*
- *Alert*
- *Ashamed*
- *Inspired*

- *Nervous*
- *Determined*
- *Attentive*
- *Jittery*
- *Active*
- *Afraid*
- *None of the above*

A.3 Measurement Error and Test-Retest Correlations Among Higher and Lower Knowledge Respondents

It may be of interest whether test-retest correlations and inter-issue correlations are higher or lower for subjects with different levels of political knowledge. Table A.3 reports the average correlations from 1.3, discussed in the paper, and those same correlations when computed and subjects above or below the median on a political knowledge scale. Figures A.1 and A.2 replicate Figure 1.3 in the paper for subjects above and below the median in political knowledge as well.

Table A.3: Polychoric Correlations Within and Across Issues, by Knowledge

	Entire Sample (In Paper)	Above Median Knowledge	Below Median Knowledge
Mean Correlation Within Issues, Over Time	0.56	0.63	0.48
Mean Correlation Across Issues, Over Time	0.13	0.19	0.06

High-knowledge subjects clearly have higher test-retest correlations both within and across issues. Importantly, high-knowledge subjects still have significantly higher correlations within issues than across issues.

Theoretically, it is unclear what to make of the higher correlations within and across issues for high-knowledge subjects (a pattern that has been reported previously). One source of the higher correlations across issues is likely to be the greater ideological consistency of engaged voters (e.g., Kinder and Sears 1985). On the other hand, their higher test-retest correlations within issues is likely due to lower levels of measurement error in their responses. This is not certain, however; it is also possible that more engaged citizens also have fewer conflicting considerations in particular issue areas (Zaller 1992) or that they are likelier to have thought through issues thoroughly enough

to decide where they stand Alvarez and Brehm (2002). These latter two interpretations are significant because they change how we should interpret the pattern that many citizens offer extreme responses to survey questions. To see this, imagine the limiting case of complete survey instability when it comes to a truly horrific policy that originally motivated the study of extremism in public opinion (Adorno et al. 1950). Imagine that everyone in Weimar Germany had a 10% probability of, when asked “should the government kill all the Jews?” answering in the affirmative. Does the fact that their responses are unstable mean that we should dismiss them? Or, rather, would the fact that the entire population was willing to endorse this policy sometimes make us more fearful of the potential for demagogues to pursue this policy than if it were only confined to a firm 10% against a firm 90%? These conceptual issues point to fundamental unresolved issues with interpreting public opinion data (Bartels 2003), not only statistical concerns.

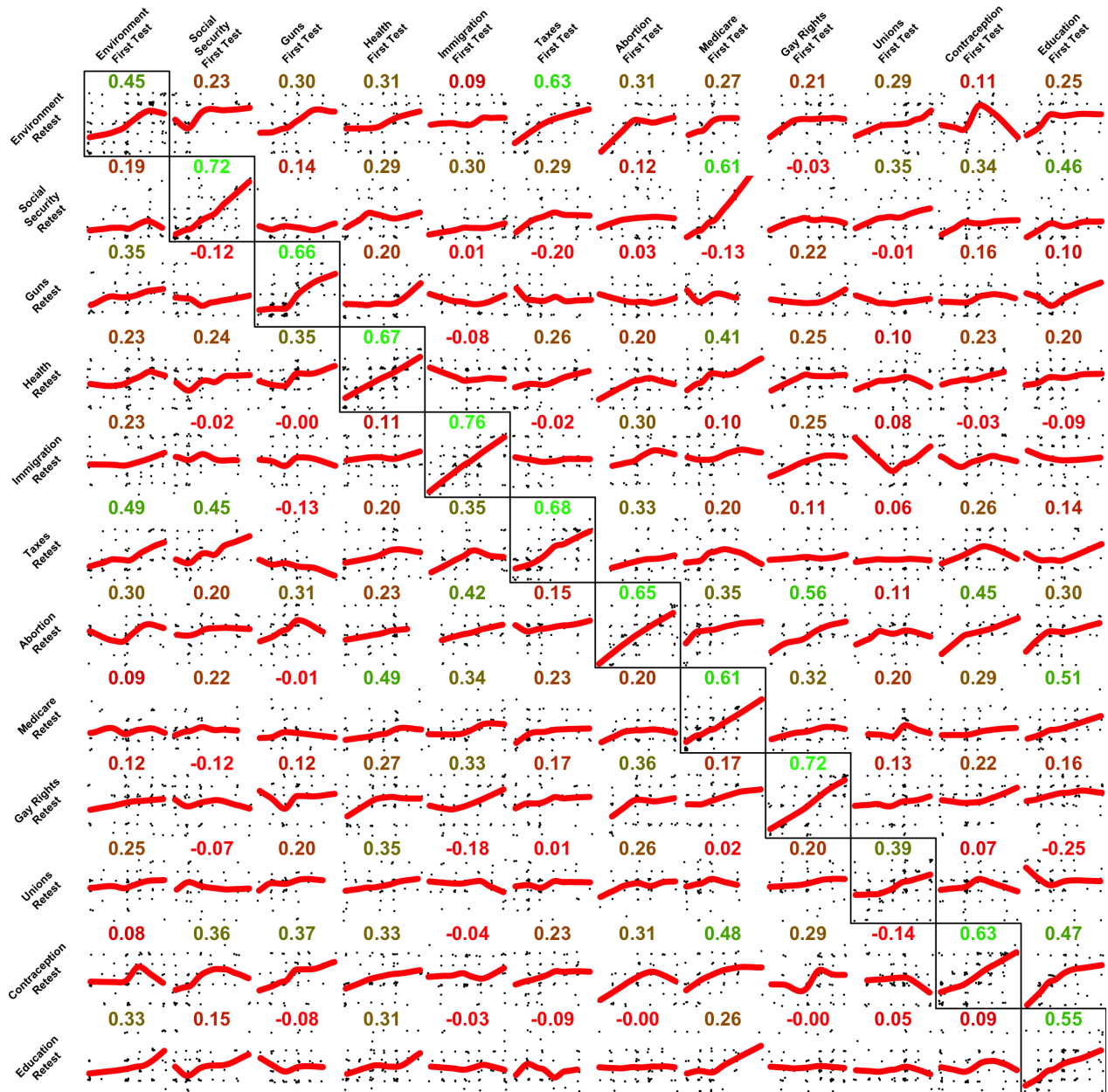
A.4 Measurement Error and Application 1

There is likely to be more measurement error in citizens’ responses to survey questions than in elites’ choices in roll call votes. As a result, citizens’ extremism is likely to be overstated in the 7-point scales as measurement error buffets some citizens towards the extreme options. Principled measurement error models that rely on repeated measures alone require at least three survey waves, and models that allow for correlated errors usually require five (Palmquist and Green 1992). Only two waves are available here and so it is not possible to apply a standard measurement error model. Nevertheless, here I use two simple strategies to examine whether measurement error would reverse the findings. (To be clear, future work could significantly improve upon these preliminary strategies if more data were available.)

The results of the first strategy is shown in Figure A.3. First, I averaged citizens’ responses to each item on Wave 1 and Wave 2 of the survey: $x_{ij} = \frac{x_{ij1} + x_{ij2}}{2}$ is computed. Figure A.3 shows the histogram of those citizen-issue observations, the x_{ij} s. About 51% of the density is between 3 and 5, while 49% is between 1 and 2.5 or 5.5 and 7. This actually suggests greater extremism among citizens than reported in Figure 1.2 in the paper.

A second strategy considers the ‘worst case’ upper bound of the most citizen moderation one could possibly conclude based on any measurement error model applied to the data. To do so, I take the most moderate of each citizens’ response on each issue at Wave 1 and Wave 2 and call this their response: $x_{ij} = \min(x_{ij1} - 4, x_{ij2} - 4) + 4$ is computed. Figure A.4 plots the histogram of these x_{ij} s. Unsurprisingly, this very conservative approach yields more apparent moderation: 34% of citizen-issue responses were more extreme than the parties twice. 36% of elites’ responses were in this range. This 2 percentage point difference is well within the boundaries of sampling error; and, it remains clearly higher than the 10% estimated by (Bafumi and Herron 2010) and similar ideological approaches.

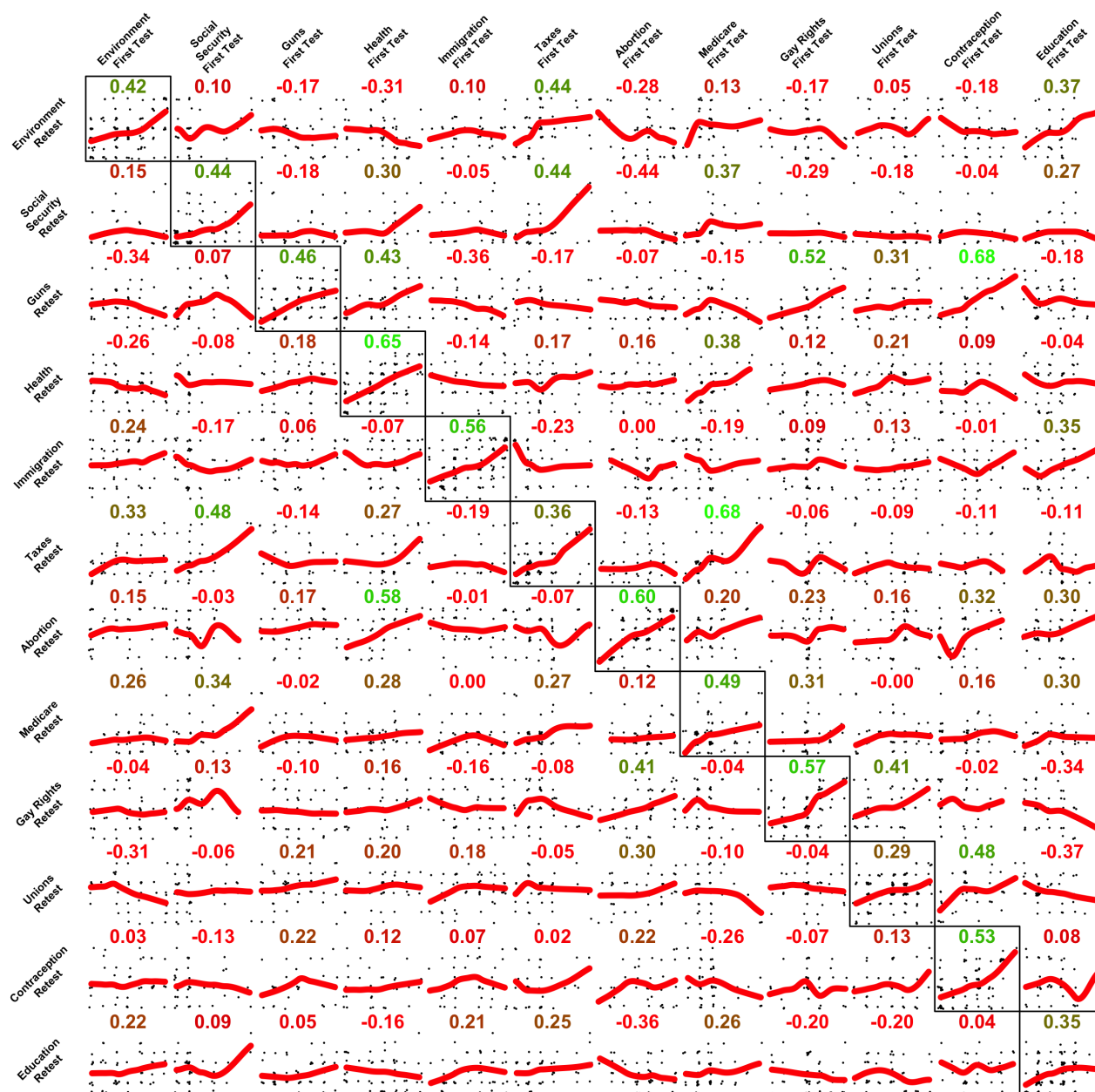
Figure A.1: Wave 1 and Wave 2 Responses: High Knowledge Respondents



A.5 Measurement Error and Application 2

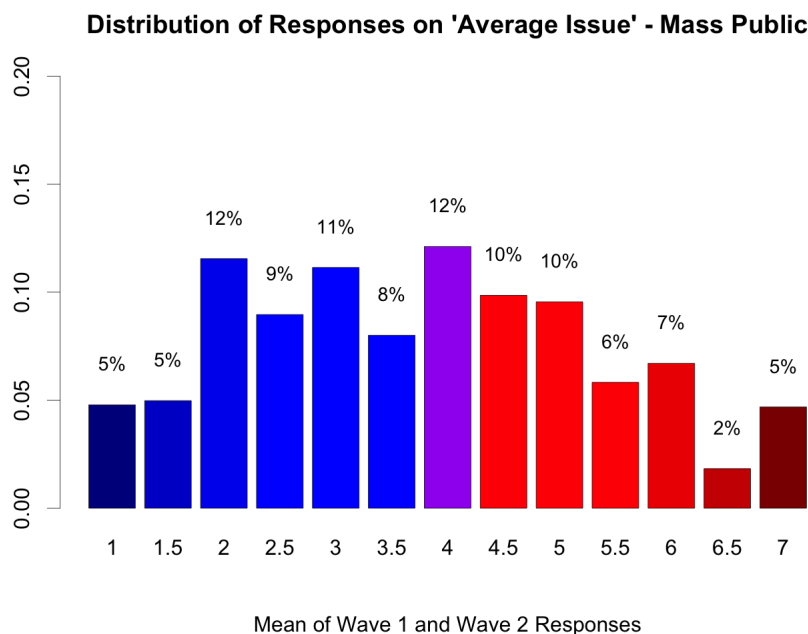
Here I report the results of replicating the finding that political sophisticates are less likely to support ‘extreme policies,’ defined as policies at 1, 2, 6, and 7 on the 7-item scales, in the second

Figure A.2: Wave 1 and Wave 2 Responses: Low Knowledge Respondents



sample and with the approaches to reducing measurement error from Section A.4 above. Among those who completed the first wave of the panel, the association is negative, just as in the paper’s evaluation of the April 2013 one-wave survey ($t = -5.2, p < 0.001$). Among those who completed the second wave as well, the association is also negative using their second wave responses ($t =$

Figure A.3: Citizen-Issue Means of Wave 1 and Wave 2 Responses



Notes: Citizens' responses to each item on Wave 1 and Wave 2 of the survey were averaged. Above is the histogram of those citizen-issue observations. (This is identical to computing the marginals for each issue first and then averaging the marginals, the metaphor in the main text of the paper.)

$-3.4, p < 0.001$; there are fewer observations but the point estimate is the same). Averaging these respondents' wave 1 and wave 2 responses, the result remains significant ($t = -2.5, p = 0.01$). Using the 'lower bound' measurement error model, taking the least extreme of the responses used in either wave, the result remains significant as well ($t = -2.3, p = 0.02$). As in the previous section, additional panel waves would allow the application of a formal measurement error model that may change these findings. However, it is unlikely to reverse them without relying on non-traditional assumptions.

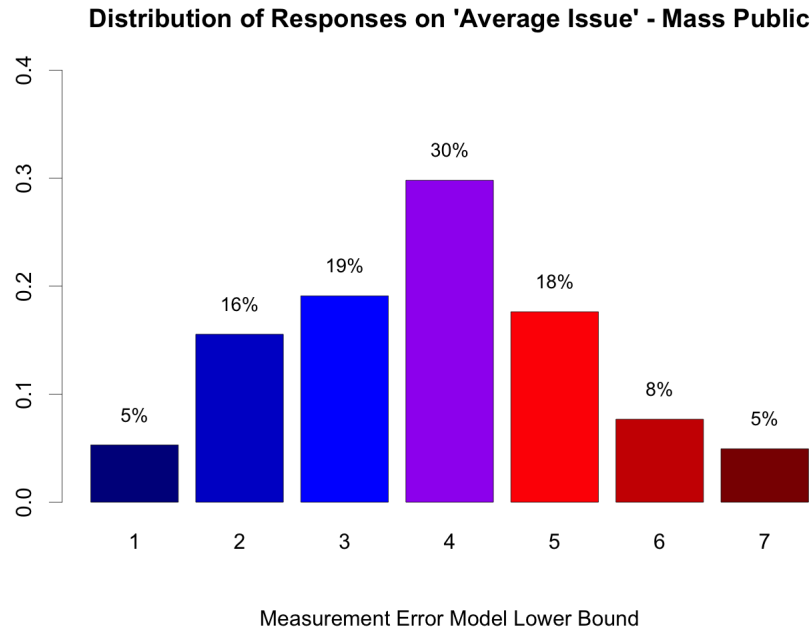
A.6 Coding of Senators

Figures A.5 and A.6 show the codings of Democratic and Republican Senators.

A.7 Other Figures

Two other supplementary figures were referenced in the main text.

Figure A.4: Most Moderate of Wave 1 and Wave 2 Responses



Notes: The most moderate of each citizens' responses to each item across the two waves is found and these responses are plotted above.

Figure A.7 shows the relationship between ideological self-placement and support for 'extreme policies.' The key point is that self-described ideological moderates are only slightly more likely to support moderate policies.

Figure A.8 shows that the distribution of legislators' and citizens' IRT-estimated ideal points in these samples can replicate the conclusion in the literature that citizens are typically moderate while legislators tend to be more extreme.

Figure A.5: Coding of Democratic Senators

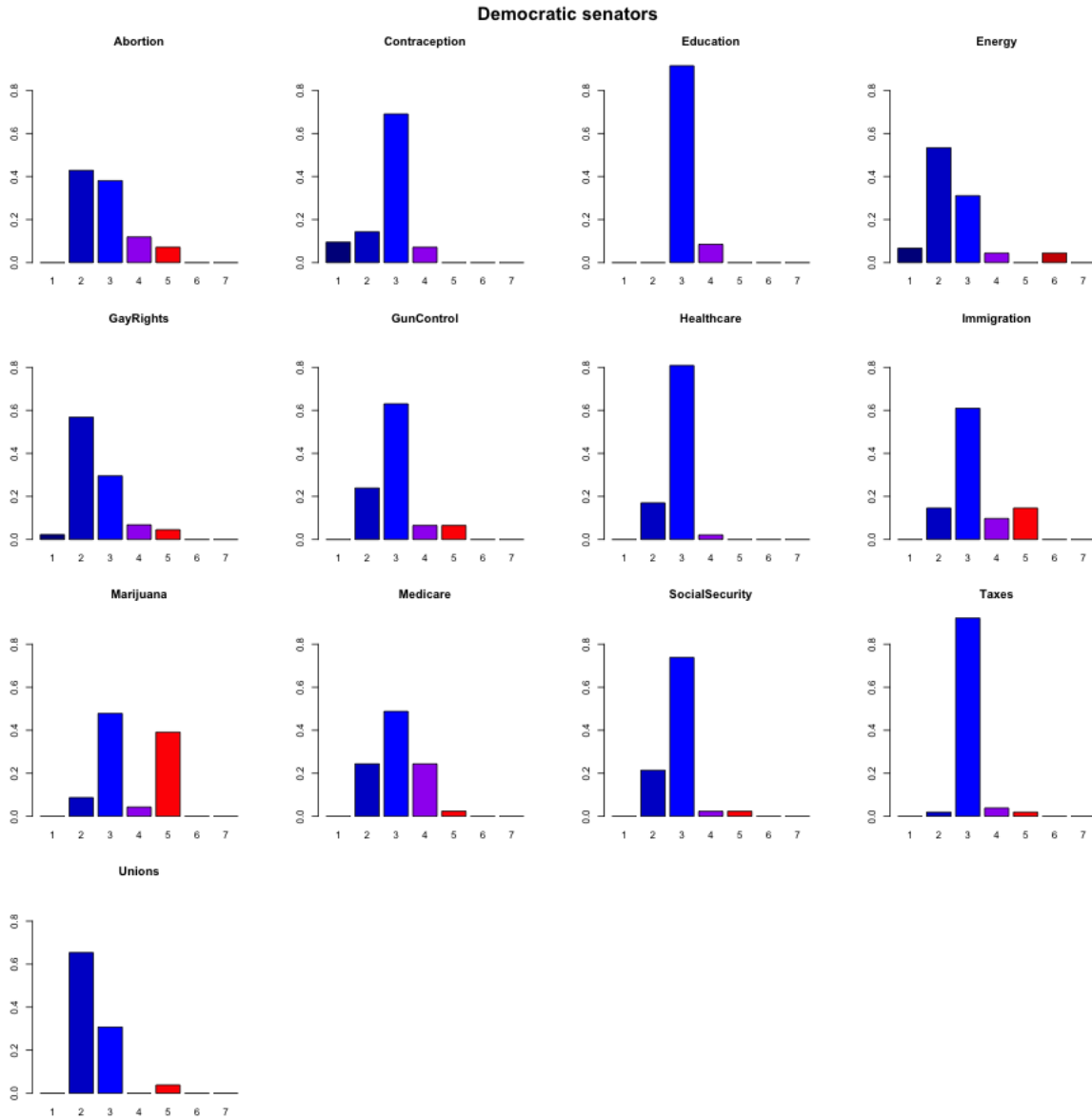


Figure A.6: Coding of Republican Senators

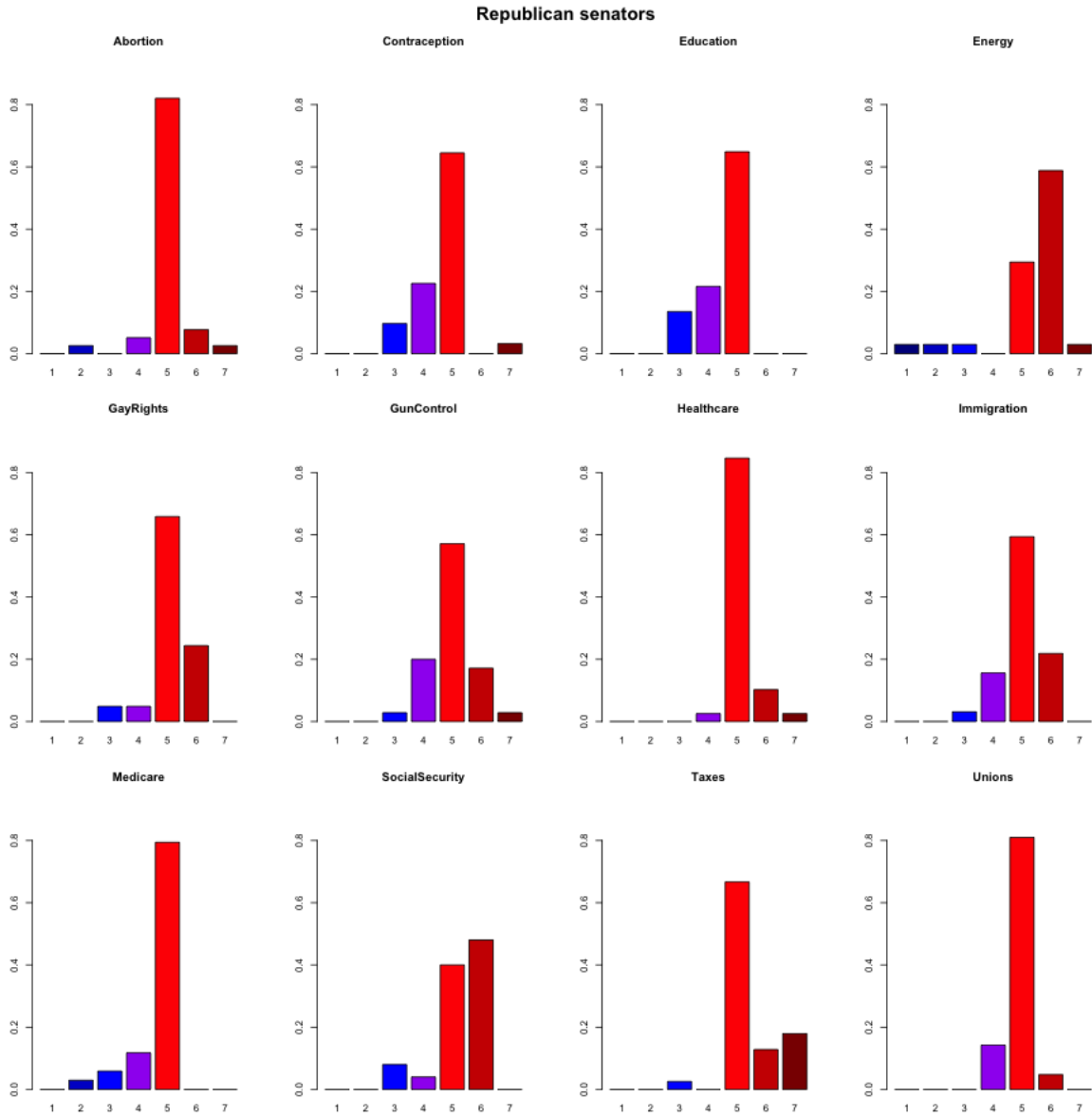
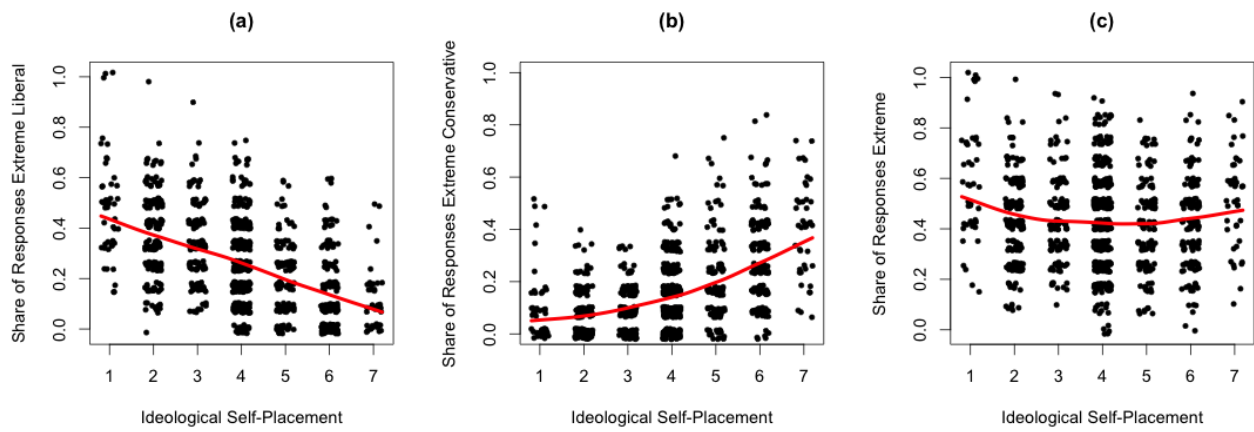
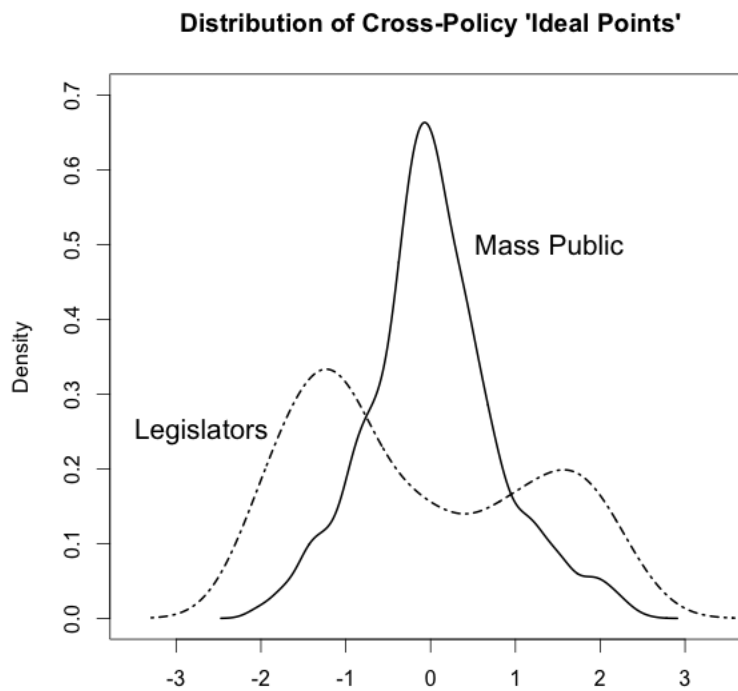


Figure A.7: Ideological Self-Placement Barely Predicts Support for Extreme Policies



Notes: Raw data shown with jitter. Self-described ‘ideological moderates’ are barely more likely to support extreme policies than self-described ‘ideological extremists.’

Figure A.8: Elite and Mass Opinion on IRT Scales



Notes: Legislators and the mass public's responses to the battery of binary issue questions were jointly scaled using a standard IRT procedure (Martin and Quinn 2002). The resulting estimates replicate the pattern of results familiar in other datasets: legislators are nearly all more extreme than the largely moderate public. Because prevailing methods do yield similar results in these samples, it is unlikely that the contrary findings reached with other methods as described in the paper are due to idiosyncrasies of the samples.

Appendix B

B.1 Robustness Checks for Study 2

Study 2A: No Order Effects for Vote Choice and Spatial Perception Items

In Study 2A we find that participants' ideological perceptions of the hypothetical politicians correlate positively and significantly with the actual estimated ideal points for these hypothetical politicians. We further find that this trend holds when we fold both measures, implying that citizens do have some sense of how positions fit together in terms of elite ideology. However, we asked some participants for their ideological perceptions of these politicians before they voted while we asked others to do so after. Here, we show that there are no significant differences in the groups' predictive abilities based on whether they voted first or reported perceptions first.

In particular, if there was an order effect, we would expect to see a significant coefficient associated with the interaction between question order and estimated ideal point when we regress ideological perceptions on these two variables plus their interaction. As the table below shows, we fail to observe such a coefficient, either in the analysis of perceived ideology or implied perceived extremity (folded perceptions).¹

Table B.1: Can Citizens Infer Ideology from Issue Positions?

	DV: Perceived Ideology
Estimated politician ideology	0.92*** (0.13)
Order: Vote First	0.09 (0.11)
Order x Estimated Ideology	-0.13 (0.16)
Constant	3.66*** (0.09)
R ₂	0.15
SER	1.68
Respondent-politician Pairs	772

Robust standard errors, clustered at the respondent level, reported in parentheses. * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

¹Note that the apparent positive correlation between perceived extremity and estimated extremity falls out of conventional ranges of statistical significance, but also that this is because the standard error rises (compared to Table 3 in the paper) because we are effectively cutting the data in half by estimating the correlation separately for the two groups (those who voted first and those who reported perceptions first). The strength of the correlation is largely unchanged.

Study 2A: Ideological Perceptions of “Spatially Correct” and “Spatially Incorrect” politicians

To further demonstrate that the apparent correlation between respondents’ ideological perceptions of the hypothetical politicians and those politicians’ estimated ideal points is robust, we show that the correlation appears for both “spatially correct” and “spatially incorrect” politicians separately.

Table B.2: Can Citizens Infer Ideology from Issue Positions? (“Spatially Correct” Politicians Only)

	DV: Perceived Ideology
Estimated politician ideology	0.95*** (0.14)
Constant	3.63*** (0.09)
R ₂	0.11
SER	1.71
Respondents	386

Robust standard errors reported in parentheses. * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

Table B.3: Can Citizens Infer Ideology from Issue Positions? (“Spatially Incorrect” Politicians Only)

	DV: Perceived Ideology
Estimated politician ideology	0.76*** (0.08)
Constant	3.83*** (0.09)
R ₂	0.17
SER	1.65
Respondents	386

Robust standard errors reported in parentheses. * = $p < 0.10$, ** = $p < 0.05$, *** = $p < 0.01$.

B.2 Robustness Checks for Study 3

Study 3: Distribution of Opinion Across All 7-Point Policy Scales

See the appendix in the paper for the corresponding policy positions.

Table B.4: Opinion is Dispersed and Not Always Moderate in Central Tendency

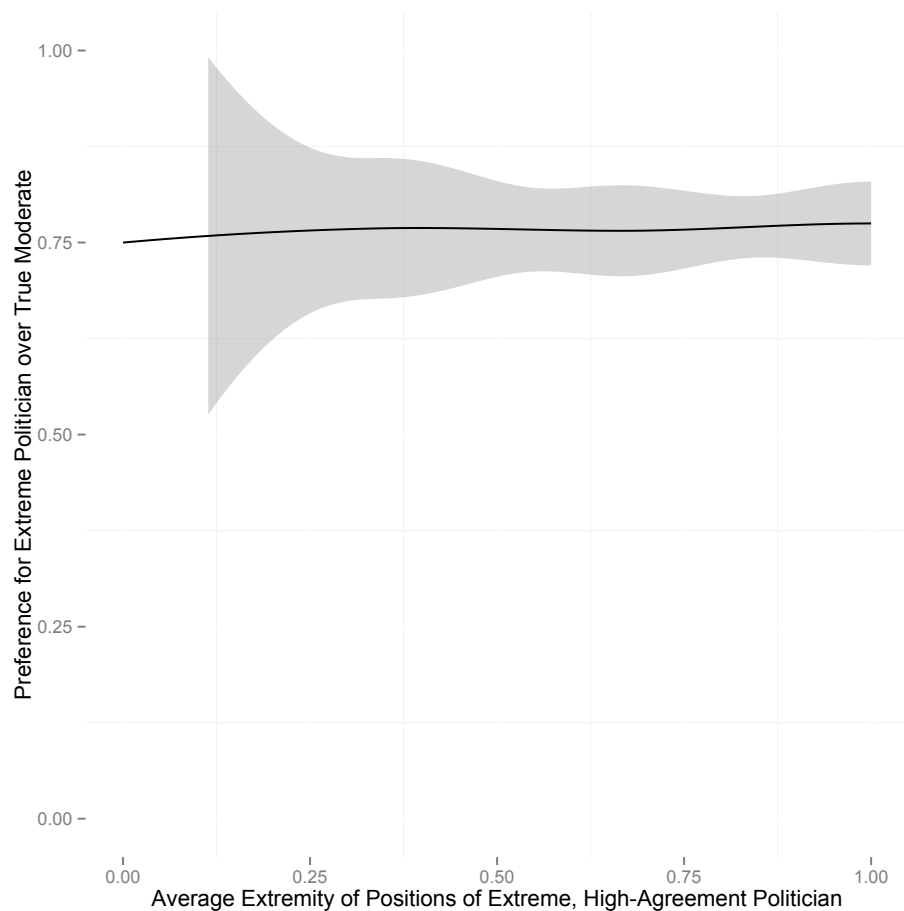
Issue	1	2	3	4	5	6	7
Marijuana	26.7%	23.2%	18.7%	6.7%	4.1%	9.8%	10.9%
Energy/Environment	16.0%	6.8%	7.4%	26.8%	15.3%	14.1%	13.6%
Social Security	23.4%	36.8%	16.1%	5.3%	7.0%	9.8%	1.5%
Gun Control	4.0%	21.2%	22.8%	20.5%	17.2%	7.9%	6.4%
Health Care	17.5%	6.6%	19.4%	17.22%	21.7%	10.3%	7.3%
Immigration	4.7%	17.4%	10.8%	12.0%	17.0%	13.8%	24.4%
Taxes	11.7%	26.22%	28.6%	10.9%	1.4%	13.3%	7.9%
Abortion	1.0%	9.8%	9.2%	19.4%	30.4%	13.1%	17.1%
Medicare	14.7%	32.7%	30.3%	9.6%	8.7%	1.6%	2.5%
Gay Rights	6.9%	13.4%	2.1%	32.2%	20.9%	14.1%	10.5%
Unions	5.8%	14.1%	5.0%	19.0%	32.1%	13.7%	10.3%
Contraception	20.7%	5.2%	25.3%	18.7%	11.6%	16.7%	1.7%
Education	6.4%	29.3%	17.0%	25.1%	10.9%	1.4%	9.9%

B.3 Robustness Checks for Study 4

Study 4A: Extremity of the Extreme Politician Fails to Affect Choices

In Study 4A, we asked respondents to choose between two tailored politicians: one who took the four most immoderate positions they expressed in Wave 1, and one who took the moderate positions on those issues. As the figure below shows, the ideological implications of the “immoderate” politician appears not to influence respondents’ choices. Since just 6.8% of respondents took four or more outside-the-mainstream positions and roughly 30% took none at all, we observe variation in the overall extremity of the “extreme” politician. However, we find no difference in respondents’ willingness to support the extreme politician across the extremity of this politician.

Figure B.1: Choice of Extreme Politician, by Extremity of Extreme Politician



Appendix C

C.1 Details of MRP Estimation Procedure

Estimation of an MRP model proceeds in two stages. First, a hierarchical logistic choice model is estimated for the opinion item being studied. Our models include predictors at three different levels. At the individual level, we include random effects for the respondent’s education, gender, and race/ethnicity. At the state-house and -senate district level, we include individual district random effects, fixed effects for the districts’ median household income, Obama’s share of the 2012 Presidential vote in the district,¹ and, for the gay marriage model, percentage Mormon or evangelical (see Lax and Phillips (2009b; 2013)). State random effects, centered around regional random effects, complete the individual model.²

The general form of the model is a varying intercept, varying slope model:

$$\theta_j = \text{logit}^{-1}(X_j\beta + \sum_s \alpha_{S(j)}^S) \quad (\text{C.1})$$

where j indexes cells, each of which is identified by the unique combination of race, gender, education, and district, and S represents subsets of the grouping variables. β represents the fixed effects and is modeled with a uniform prior distribution. α^S are random effects, modeled with hierarchical Gaussian priors.

The response model for same-sex marriage support is specified as:³

$$Pr(y = 1) = \text{logit}^{-1}(\beta_0 + \alpha_{j[c]}^{gender} + \alpha_{k[c]}^{race} + \alpha_{l[c]}^{edu} + \alpha_{m[c]}^{gender \times race} + \alpha_{d[c]}^{district} + \alpha_{s[c]}^{state} + \alpha_{r[c]}^{region}) \quad (\text{C.2})$$

The individual-level random effects are modeled as:

$$\alpha_j^{gender} \sim N(0, \sigma_{gender}^2) \text{ for } j = 1, 2 \quad (\text{C.3})$$

¹We lack this data in Alabama, Indiana, Maryland, Missouri and Mississippi.

²The models are estimated using the `bgfmer()` function in R. Respondents are matched to state legislative district using their ZIP codes. Nearly all respondents are matched to districts with certainty, though to avoid biases from dropping respondents that do not match with certainty we down-weight these observations based on the certainty with which they are matched to the correct district.

³The healthcare support model is the same except that it does not use the fixed effects for district percent Mormon and evangelical.

$$\alpha_k^{race} \sim N(0, \sigma_{race}^2) \text{ for } k = 1, 2, 3 \quad (\text{C.4})$$

$$\alpha_l^{age} \sim N(0, \sigma_{age}^2) \text{ for } l = 1 \dots 4 \quad (\text{C.5})$$

$$\alpha_m^{edu} \sim N(0, \sigma_{edu}^2) \text{ for } m = 1 \dots 4 \quad (\text{C.6})$$

The district, state and region effects are modeled:

$$\alpha_d^{district} \sim N(\alpha_{s[c]}^{state} + \beta_{mormon} + \beta_{evang} + \beta_{presvote} + \beta_{income}, \sigma_{district}^2) \text{ for } d = 1 \dots 4335 \quad (\text{C.7})$$

$$\alpha_s^{state} \sim N(\alpha_{[r]}^{region}, \sigma_{state}^2) \text{ for } s = 1 \dots 50 \quad (\text{C.8})$$

$$\alpha_r^{region} \sim N(0, \sigma_{region}^2) \text{ for } r = 1 \dots 4 \quad (\text{C.9})$$

This model yields predictions for the share of individuals in any given state legislative district who support same-sex marriage or universal health care in all possible combinations of race, gender, and education. For illustrative purposes, of all the over 100,000 possible combinations of cells that these estimates yield, we expect that the most supportive group of individuals of gay marriage are well-educated, white women living in San Francisco, California. On the other hand, a white, male college dropout living in East Texas appears most likely among all varieties of individuals to be opposed to government recognition of same-sex relationships.⁴

Poststratification

The final step in constructing district-level estimates is poststratification. We first use data from the US Census American Community Survey 2012 5-Year file to calculate the share of individuals in each state legislative district that fall into each ‘cell’: for example, of all the individuals living in California’s 17th State Assembly district, what share of them are white college-educated white women? These official US Census estimates are exceptionally accurate.

We then merge these cell-level district proportion estimates from the Census with our cell-level opinion estimates from the multilevel regression model to construct the district-level opinion estimates. This poststratification process is a straightforward aggregation process by which estimates for each cell θ_j in each district are summed in proportion to the share of the district that they represent. Note that the cells in each district are exhaustive and mutually exclusive.

$$\theta_{district} = \frac{\sum_{j \in J_{district}} N_j \theta_j}{\sum_{j \in J_{district}} N_j} \quad (\text{C.10})$$

⁴We would of course not place a great deal of stock in these two particular predictions but describe them to aid intuition in understanding the estimation procedure.

The result of this poststratification process are estimates of district support for universal health-care and same-sex marriage for each of the nation's state legislative districts.

Allocation of Survey Respondents to Districts and MRP Weights

In fitting the multilevel choice models, respondents were matched to 2012 state legislative districts using ZIP codes. Because some ZIP codes straddle state legislative boundaries, we estimated the likelihood that each respondent had been assigned to the correct upper and lower house district by taking the percentage of the zip code contained in that district. The vast majority of respondents can be assigned to districts deterministically, but some might have been in multiple districts. For these respondents, we calculated the probability that they were in each district given their race, using data from the US Census on the racial composition of each state legislative districts. We then weighted responses by these values, such that every response in the original data represented one or more rows in the estimation data with weights that summed to one. The multilevel regression takes these weights into account.

Uncertainty in MRP Estimates

As we note in the paper, none of the main findings rely upon the accuracy of the MRP estimates for individual districts. Nevertheless, we recognize this will be of interest for some readers and so provide estimates of these quantities here.

Following Lax and Phillips (2013), we characterize the uncertainty in our estimates of district opinion by simulating many sets of parameter estimates from the multilevel choice models and poststratifying many times. Lax and Phillips use this process to evaluate MRP performance at the state level. Our task in estimating district level support is a bit more complicated, as the uncertainty in our estimates varies considerably from district to district. We fit separate models for upper and lower house districts. Even so, we have many more parameters in our models, with thousands of district-level random effects depending on the model. While we have survey responses in most districts, some districts (like the very small ones in New Hampshire) are estimated from little to no data from the district, while large ones (like California Senate districts, which are more populous than US House districts) are estimated quite precisely with a great deal of data.

For each model, we simulate new parameter estimates from the posterior distributions of each parameter 50 times, then we use these 50 sets of cell estimates (θ_j) to poststratify, giving us 50 sets of simulated MRP estimates in each district. Fig. C.1 and Fig. C.2 plot densities of the empirical standard deviations of our MRP estimates for lower house districts in the two models. In the marriage model, the standard deviations range from about 2 to 8 percentage points, with a median and mean of 4.7 percentage points. The uncertainty in the healthcare estimates is virtually identical. This level of imprecision in the estimation of district opinion cannot account for the stark patterns of inaccuracy and bias that we observe in politicians' perceptions, which persists even when we consider only candidates running in the same districts.

Figure C.1: Density of standard deviations of MRP estimates for lower house districts in the health-care model.

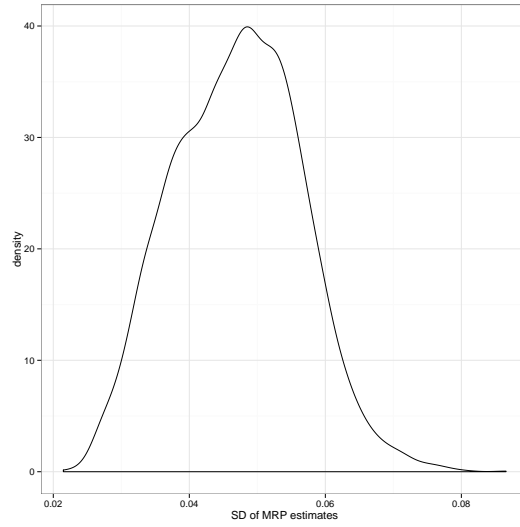
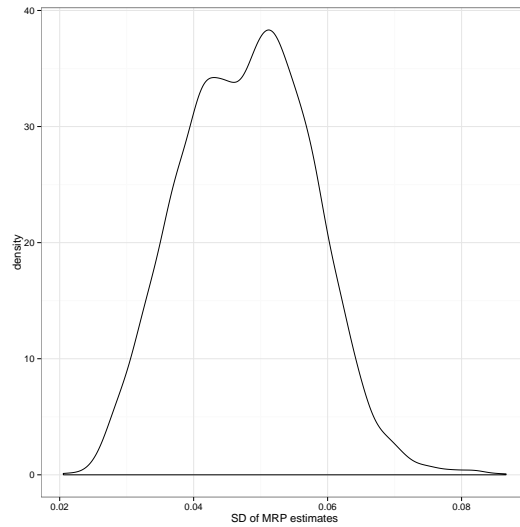


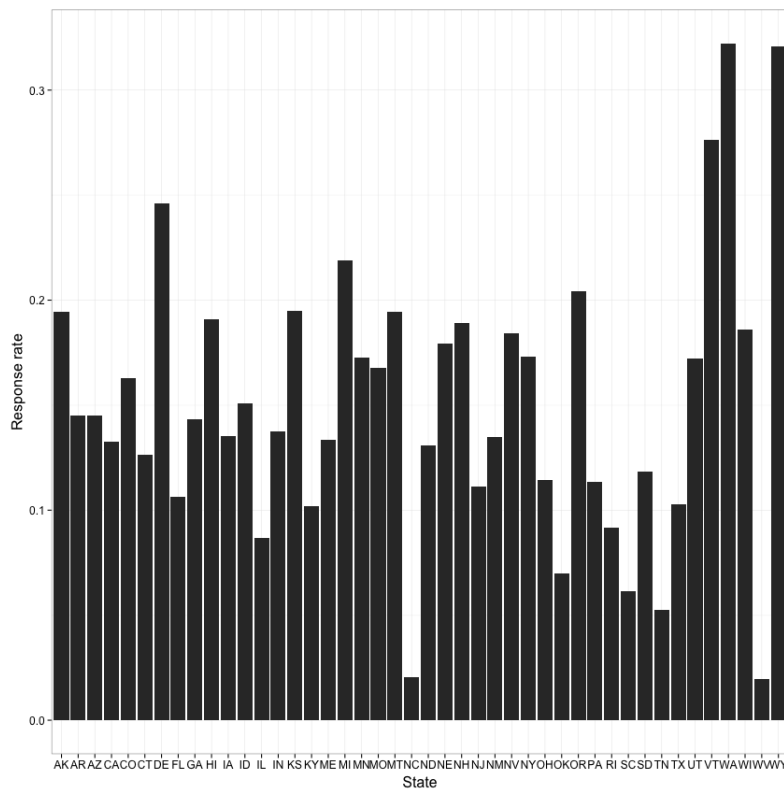
Figure C.2: Density of standard deviations of MRP estimates for lower house districts in the marriage model.



C.2 National Candidate Study Response Rate and Responsiveness

As mentioned in the main text, we were unable to find biases in response rates across a number of context variables. While information that could potentially identify respondents' districts is confidential, we provide further details on the sample in this section by presenting some basic descriptive statistics about the districts from which we have responses. As expected, we have more responses from states with large, less professionalized legislatures, but there is considerable coverage in more professionalized states as well. Fig. C.3 shows the distribution of response rates by state and Fig. C.4 plots a density of response rate by state Squire (2007) index.

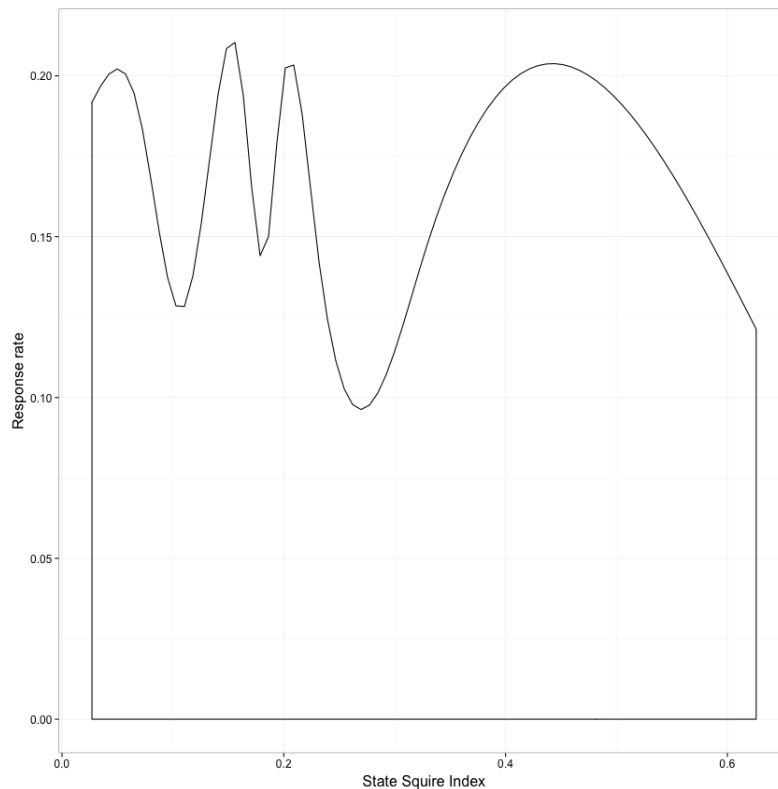
Figure C.3: Response rate to the NCS by state.



C.3 National Candidate Survey Questionnaire Item Wording

The key questions from the National Candidate Study used in this paper were worded as follows:

Figure C.4: Density of response rates to the NCS by state's Squire index. Most of our responses are from relatively unprofessionalized legislatures, but a sizable number are from professional legislatures, and response rates do not systematically differ with legislative professionalism. Subsetting to these responses, as shown in the main text, does not affect our key findings.



CANDIDATE IDEOLOGY BATTERY

Items from this battery were used to construct the estimates of candidate ideology that we use to separate candidates into liberals and conservatives in the analysis. Responses to these questions were used to fit a one-dimensional IRT model (Clinton, Jackman and Rivers 2004) to determine the respondent's ideology.

Do you agree or disagree with the following statements? (We have kept these choices simple and realize there are shades of gray on many issues. Please check the option that most accurately reflects your views.) *All questions had response options of "Agree" or "Disagree."*

- Implement a universal healthcare program to guarantee coverage to all Americans, regardless of income.
- Same sex couples should be allowed to marry.

- Make President Bush's tax cuts permanent.
- Reduce government regulation of the private sector.
- Reduce government regulation of the private sector.
- The government should regulate greenhouse gas emissions.
- Providing healthcare is not a responsibility of the government.
- Abolish all federal welfare programs.
- Law enforcement agencies should have discretion to monitor domestic communications to prevent future terrorist attacks.
- Abortions should always be illegal.
- School sexual education programs should teach abstinence only.
- The government should consider race and gender in government contracting decisions.
- The government should consider race and gender in government contracting decisions.
- Allow workers to invest a portion of their payroll tax in private accounts that they can manage for themselves.

CAMPAIGN ACTIVITY BATTERY

How many hours per week do you typically spend on the following campaign activities?

- Personally contacting voters one-on-one (e.g., knocking on their doors): [BLANK] hours
- Raising money: [BLANK] hours
- Attending public community meetings to speak to groups of voters (e.g., at civics clubs): [BLANK] hours
- Meeting voters one-on-one at public events (e.g., county fairs): [BLANK] hours
- Meeting privately with community leaders (e.g., civic club Presidents, church pastors): [BLANK] hours

DISTRICT PERCEPTIONS BATTERY

If you had to guess, what percent of your constituents do you think...

- Agree with this statement: “Implement a universal healthcare program to guarantee coverage to all Americans, regardless of income.” [BLANK] %
- Agree with this statement: “Same-sex couples should be allowed to marry.” [BLANK] %
- Agree with this statement: “Abolish all federal welfare programs.” [BLANK] %