Is John McCain more conservative than Rand Paul?
Using activists' pairwise comparisons to measure ideology *

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Abstract

Political scientists use sophisticated measures to approximate the ideology of members of Congress, notably the widely used NOMINATE scores. These measures have known limitations, including possibly obscuring ideological positions that are not captured by roll call votes on the limited agenda presented to legislators. Meanwhile scholars often treat the ideology that is measured by these scores as known or at least knowable by voters and other political actors. It is possible that (a) NOMINATE fails to capture something important in ideological variation or (b) that even if it does measure ideology, sophisticated voters observe something else. We bring an alternative source of data to this subject, asking samples of highly involved activists to compare pairs of senators to one another or to compare a senator to themselves. From these pairwise comparisons, we can aggregate to a measure of ideology that is comparable to NOMINATE. We can also evaluate the apparent ideological knowledge of our respondents. We find significant differences between NOMINATE scores and the perceived ideology of politically sophisticated activists.

A central concept in our understanding of political behavior is that politicians reflect some sort of "ideology," either stemming from their personal political beliefs or induced by the need to reflect the political beliefs of activists, donors, or constituents. For many applications, what matters is not a political *true* ideology, which may not be knowable, but how the politician is viewed by other political actors. If voters, for example, are to choose between two candidates on the basis of their ideological placement, their beliefs about their placement are what we seek to measure. If activists and donors are aiding candidates or politicians on the basis of ideological affinity, it is again their perception that matters.

In this paper, we develop a measure of ideology that draws on the wisdom of political actors in evaluating the political ideology of legislators. We ask a sample of activists to report which candidate is more or less liberal and then develop a scale from those comparisons. The paper proceeds as follows. Section 1 discusses the criteria we should be considering in measuring ideology. Sections 2 and 3 introduce the survey data analyzed and the model used to generate an ideological scale. Section 4 presents the measure and compares it to the the widely used NOMINATE scores developed by Poole and Rosenthal. Section 5 briefly addresses issues raised by the new measure and looks forward to next steps in the project.

1 Ideology and Measurement Theory

The measurement of ideology is critical for a number of empirical projects in political science. In some cases, ideology is itself the critical dependent or independent variable of interest. Just as often, ideology represents one or more rival explanations that a scholar wishes to rule out or control for. In all of these cases, researchers require a well-developed and defensible measure of ideology.

The goal of this paper is to provide an alternative measure to those currently used. In most cases, no single measure is perfect, and we thus benefit from a menu of options with different strengths and weaknesses. To motivate our approach, we begin with a discussion of some of the key questions one should ask when developing a measure. We consider how existing measures answer these questions, and then provide answers that lead us to an alternative measure.

Following Babbie (1992) (see also Carmines and Zeller, 1979; Goertz, 2006),we treat measure-

ment as beginning with the conceptualization of the construct, followed by a nominal definition that describes the key features we wish to measure. This leads to an operational definition, a much more specific description of the phenomenon amenable to the last step, measurement itself. We are not suggesting that this or any other approach to measurement is necessary, only that it will help highlight the issues we wish to explore.

1.1   Conceptualization

For many political scientists, ideology is spatial (Jessee, 2009, 2012). Ideology represents a continuum with a Left and a Right pole, with most people holding political opinions somewhere along that continuum. In this, we might put socialism to the left of modern American liberalism, and fascism to the right of modern American conservatism.

It is not at all obvious that this is the correct conception. It might make more sense to think of ideologies as coherent collections of views, and those who are "between" different ideologies are picking and choosing from two (or more) perspectives, but they are not clearly more "moderate." (Noel, 2013; Broockman, N.d.). And there are still other conceptions (Converse, 1964; Rabinowitz and Macdonald, 1989).

It may be that some measures based on a spatial model can be interpreted in ways that are more flexible, but we focus on the spatial approach. So our measure should be a continuum. A spatial measure allows one to place various policy positions—and preferences over these positions—on this continuum. It is possible to model every issue as its own dimension, but ideology typically serves to reduce the dimensionality of the issue space. In these low-dimensional conceptions, ideology carries with it meaning for a variety of policy issues.

1.2   Nominal definition

The literature on spatial models (Hinich and Pollard, 1981; Enelow and Hinich, 1984, 1989; Hinich and Munger, 1994; Jessee, 2010, 2012) has developed a useful theory of predictive mappings that provides some precision to the concept. Some of its proponents argue that movements along an ideological dimension map to movements along various specific policy dimensions. From the point

of view of an observer evaluating political actors, an actor's ideology helps to predict their likely policy positions.

This view implies that ideology can be defined as the dimension or dimensions that predict, determine or organize the policy positions of a political actor. We don't need to make any assumptions about causal relationships here. It is enough that the ideology reliably (though not necessarily deterministically) is related to policy positions.

There are alternatives here as well. Perhaps ideology is primarily about identity, personality or other things that are largely unrelated to policy positions. This way of thinking might lead us toward survey-based measures that ask people how they think of themselves, or to place themselves or others on an continuum.

1.3 Operational definition

In practice, we do not know what most actors really believe about policy positions. We only know what they do or say. But for most purposes, that doesn't matter. A politician who "authentically" represents conservatism because she believes it philosophically is probably not that different from one who consistently represents it because she is attempting to reflect the preferences of their constituents or other politically influential actors. For our purposes, we do not need to know why someone is a conservative, only that she effectively behaves as one.

The gold standard for measurement of ideology in a legislature is Keith Poole and Howard Rosenthal's 1997 NOMINATE score. The score is based on an item-response model applied to the legislators' roll call record. Every vote is treated as a function of the ideology of the legislator. The method estimates how the vote is related to that ideology as well as the ideology itself.

Here the decisions we must make become more significant. For measures like NOMINATE, ideology is operationalized by treating a political decision - the roll call vote - as a stochastic function of one's ideology. Indeed, one can mathematically derive the model for NOMINATE or other roll-call based item-response theory measures by beginning with a random utility model in a low-dimensional space. Measures based on any other political action, including cosponsorship, endorsement, campaign donations, citing of political sources or taking a public position can similarly be connected

to a spatial model of choice (Barberá, 2014; Bonica, 2014).

It is here that we diverge most significantly from the approaches of other measures. We worry about two important things that roll call votes, as well as other behavior, may mask or misrepresent. First, it is probable that other factors than ideology contribute to political decisions. For legislative behavior, logroll agreements, most notably the large-scale logroll that is a partisan agenda, might lead someone to vote against her ideology. That is, roll call votes may be a function of something more than just ideology, such as partisan pressure or loyalty (Lee, 2010; Noel, 2013, n.d.). In that case, the ideology recovered from roll call votes is contaminated by other considerations.

Second, and more important for our considerations, the roll call agenda might not fully reflect everything that we would want to know about an actor's ideology. It is well understood that the legislative agenda is not random. In particular, the majority often restricts the agenda to avoid votes on issues that would split the majority party. So items that would distinguish moderates and extremists in the majority party may be systematically censored.

Moreover, many issues are not voted on at all. Members may take positions in public addresses, writings and campaign appearances. The decision to back or oppose other politicians can tell us something about a member's political beliefs. All of this behavior is absent from roll calls, although there have been useful attempts to incorporate such information in some models.

If ideology matters for voter or activist evaluations of candidates, those actors might make use of more or different information than the roll call record to evaluate candidate ideology. This includes both not knowing or using all of the roll call record (weighting different votes differently) as well as incorporating behavior that is not reflected in the roll call agenda.

We attempt to operationalize ideology in a way that is consistent with these considerations. We argue that, as the literature suggests, politically sophisticated actors work to learn politician's ideology and use it to predict their behavior. Many voters might not know that much about politicians, but activists and others who spend their life in politics do. In fact, these activists may well be engaged in an activity quite similar to ours: they are likely to be aggregating politicians' public statements, fundraising behavior, and legislative behavior into something like a one-dimensional score. So they can tell us something about who is more liberal or more conservative. We thus

operationalize ideology as being a characteristic of a politician's public reputation that is known by other political actors and by which they can be compared to one another.

1.4 Measure

This leads us to a new measure.

For NOMINATE and other item response models (Clinton, Jackman and Rivers, 2004), the measure is based on the pattern of roll-call votes. Specifically, the binary roll call vote is a function of the voters' ideology and features of the things they are voting on. In a generalized form:

$$y_{ij} = f(\theta_j, x_i) \tag{1}$$

where y_{ij} is the ith legislator's vote on the jth roll call, and each roll call has some item-specific parameters (θ_j). It is thus possible to estimate x for every legislator.

Our alternative measure is explained in the next two sections.

2 The Data

If ideology has varied manifestations, no one indicator will capture it all. But it is possible that highly attentive observers may be able to parse those differences—and that they may be engaged in an effort to score and rank politicians similar to our own. We thus ask political activists to tell us who is more liberal or conservative than whom. Our reasoning is that political activists, who are participating in politics, will be well informed about the politics of other political actors (see also Stone and Rapoport, 1994).

Specifically, we use a survey of political activists conducted by the Huffington Post via YouGov. In consultation with the authors, the Huffington Post conducted three surveys of activists during the lead-up to the 2016 nomination process. The survey interviewed three separate samples of 500 Republicans and 500 Democrats. It was in the field January 14-20, 2016, July 11-18, 2016, and October 28 to November 5, 2016.[1]

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[1] The survey was also fielded July 8-12, 2015, and September 22-28, 2015, but without the items used here. For the October/November sample, the N is 515 Republicans and 553 Democrats

To take the survey, potential respondents had to clear a set of filter questions to determine if they met our definition as an activist. One way to qualify was to report having done at least two of the following:

- Contributed money to a political candidate;

- Attended a political campaign event such as a fundraiser or rally;

- Done volunteer work for a political campaign; or

- Made phone calls to voters asking them to support a political candidate;

Alternately, respondents are considered activists if they reported having been at least one of the following:

- A paid staffer for a political campaign or an elected public official;

- A candidate for or someone who has held elected public office; or

- An official in a political party (such as a local party chair or a precinct representative);

The activists in this sample thus clear a slightly higher bar than is often used to identify activists in mass-level surveys like the American National Election Studies. Those who qualify only through the first set of criteria (about 62 percent) report having done much more than wearing a button or placing a yard sign. The second criteria (about 38 percent) are genuine politicians, albeit probably at the very bottom of the hierarchy.

The main question analyzed here is the respondents' answers to five questions about the ideology of current United States Senators. Specifically, the question asked: "[f]or the following section, we will be providing you with the names of two members of the U.S. Senate. We would like you to indicate which Senator of the pair is more liberal/conservative than the other." Respondents were then presented the names of two senators from the 114th Congress.

We structured the questions as pairwise comparisons based on extension research in survey methodology and psychology emphasizing the relative ease of pairwise comparisons (Hainmueller,

Hangartner and Yamamoto, 2015). Respondents may well struggle to provide cardinal measures of ideology or to rank large numbers of Senators. But for a given pair, the task is straightforward.

Self-identified Democrats were asked about pairs drawn from all Democrats, as well as the 10 most liberal Republicans, determined using their first dimension NOMINATE score. They were asked to report which of the pair is more liberal. Republicans are asked which of a pair from all Republicans and the 10 most conservative Democrats[2] is the more conservative.

We limit the pairs to senators from the respondents' own sides of the ideological divide on the grounds that they will know the nuances of their own co-partisans better. This also helps to avoid wasting time on the survey by asking for a comparison between extreme or even median members of opposite parties, where answers are likely to follow straightforwardly from partisanship. A case can be made, however, that some of those comparisons would still be useful, and we may include them in the future.[3]

Thus two groups of 1,000 people and third group of 1,068 are asked to make five comparisons each, giving us a total of 15,340 potential comparisons. Of those, the respondents reported they were unfamiliar with one or both senators in 6,056 of the comparisons, or about 39 percent. This gives us a total of 9,284 comparisons to work with.

3   The Model

Our data are in the form of records of how often a given senator was judged more or less conservative than the others senators with whom they were randomly paired. This might be analogous to the win-loss record of a sports team or other competitor across many contests. Given that, one simple way to sort the senators would be to calculate the percentage of the time they are chosen as more liberal or most conservative, sort of a win-loss percentage. But this ignores the information inherent in the senators against whom they were compared. To again turn to the sports metaphor, beating a highly regarded opponent provides more information about one's ability than beating a weak opponent. While the opponents in this case are randomly selected, there can still be some

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[2]including Independent Angus King of Maine

[3]Respondents were also asked to compare themselves to each of five randomly selected senators. These data are not analyzed in this draft.

irregularities. And since only some moderates are paired against everyone, the "more conservative than" record of a right-leaning Republican may be similar to that of a right-leaning Democrat.

Instead, we employ a Bradley-Terry (Bradley and Terry, 1952) model to estimate a latent ideological trait.[4] The model assumes that the outcome of any pairing is probabilistic, with the base probability determined by the relative traits of the compared senators, which we will interpret as "conservatism." In other words, the probability that the ith senator is seen as more conservative than the jth senator is

$$P(i > j) = \frac{p_i}{p_i + p_j} \tag{2}$$

Bradley and Terry parameterized this model with an exponential form, which allows for a convenient interpretation of its base parameters:

$$P(i > j) = \frac{e^{\lambda_i}}{e^{\lambda_i} + e^{\lambda_j}} \tag{3}$$

$$logit(P(i > j)) = \lambda_i - \lambda_j \tag{4}$$

In this model, λ_i can be directly interpreted as the latent ability or trait of the ith case and λ_j is the same for the jth case. In our application, this is the ideology (conservatism) of each senator. The exact values of the estimated λ's will depend on which senator is the left out comparison observation, which in our application is Al Franken of Minnesota. We thus rescale the measure to the unit interval. We term these rescaled λ_i's "pairwise ideology."

4   Results

The procedure produces measures of ideology that broadly fit most of our expectations about members of the U.S. Senate. Figure 1 presents the estimated pairwise ideology scores. As expected, there appear to be two broad clusters, one to the left for Democrats and one to the right for Republicans. However, one way these estimates do not match up with our expectations is that there is overlap between Senators from the two parties, something that has disappeared from

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[4]For a recent use of the Bradley-Terry model in political science, see Loewen, Rubenson and Spirling (2012), which used it to study the effectiveness of political arguments.

estimated NOMINATE scores in this century.

4.1 Divergence from NOMINATE

One way to explore what is happening is to more closely compare the results with NOMINATE scores. Figure 2 plots NOMINATE against our Pairwise Ideology. Figure 3 plots the same, with the names of the senators. The two measures are closely related. They are correlated with one another at 0.898, and the correlations are 0.674 among only the Democrats and 0.615 among only Republicans. There are, nevertheless, significant divergences.

As noted in figure 1, there is no overlap between the parties in NOMINATE, while there is in the pairwise measure. This is because Democrats like Joe Manchin of West Virginia and Joe Donnelly of Indiana are estimated to be more conservative than Republicans like Susan Collins of Maine or Lisa Murkowski of Alaska. It is not at all obvious that this is wrong. Both Manchin and Donnelly are pro-life, while both Collins and Murkowski are pro-choice.

Other Republicans in the overlap include Shelley Moore Capito of West Virginia and Mark Kirk of Illinois, who along with Collins (and John McCain of Arizona, himself close to the overlap), are the senate members of the centrist Main Street Partnership. Democrats Martin Heinrich and Joe Tester are both pro gun rights. And while our surveys were conducted in 2016, notice that the list of centrist GOP senators includes several of the GOP senators who voiced opposition to the various Republican health care proposals during the summer of 2017.

We think there are two related reasons for the divergence between our metric and NOMINATE. First, it may be that respondents care more about some issues over others, and the hotly contested social issues like abortion and gun rights may be both better known and more important to their evaluations of senator ideology. In fact, these issues that make these senators more moderate rarely appear on the Senate agenda.

Second, these senators will often vote "against" their ideology on party votes. At the bare minimum, our respondents may not be keeping up with how often senators vote with their party on procedural votes (Cox and McCubbins, 1993; Theriault, 2008; Lee, 2010). Moreover, our respondents would probably be correct in determining that those votes are not principally about ideology,
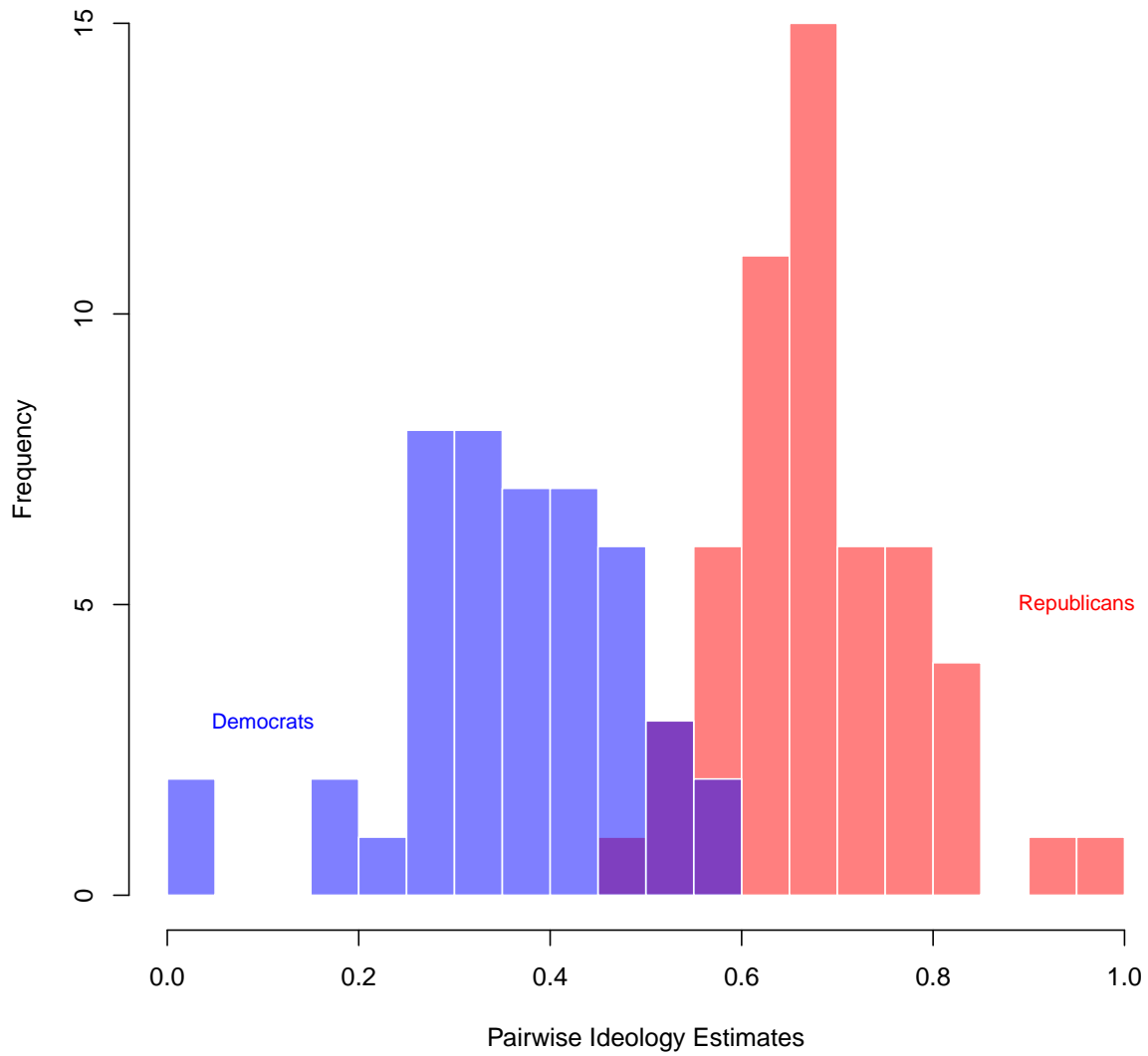
Figure 1: Distribution of Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.
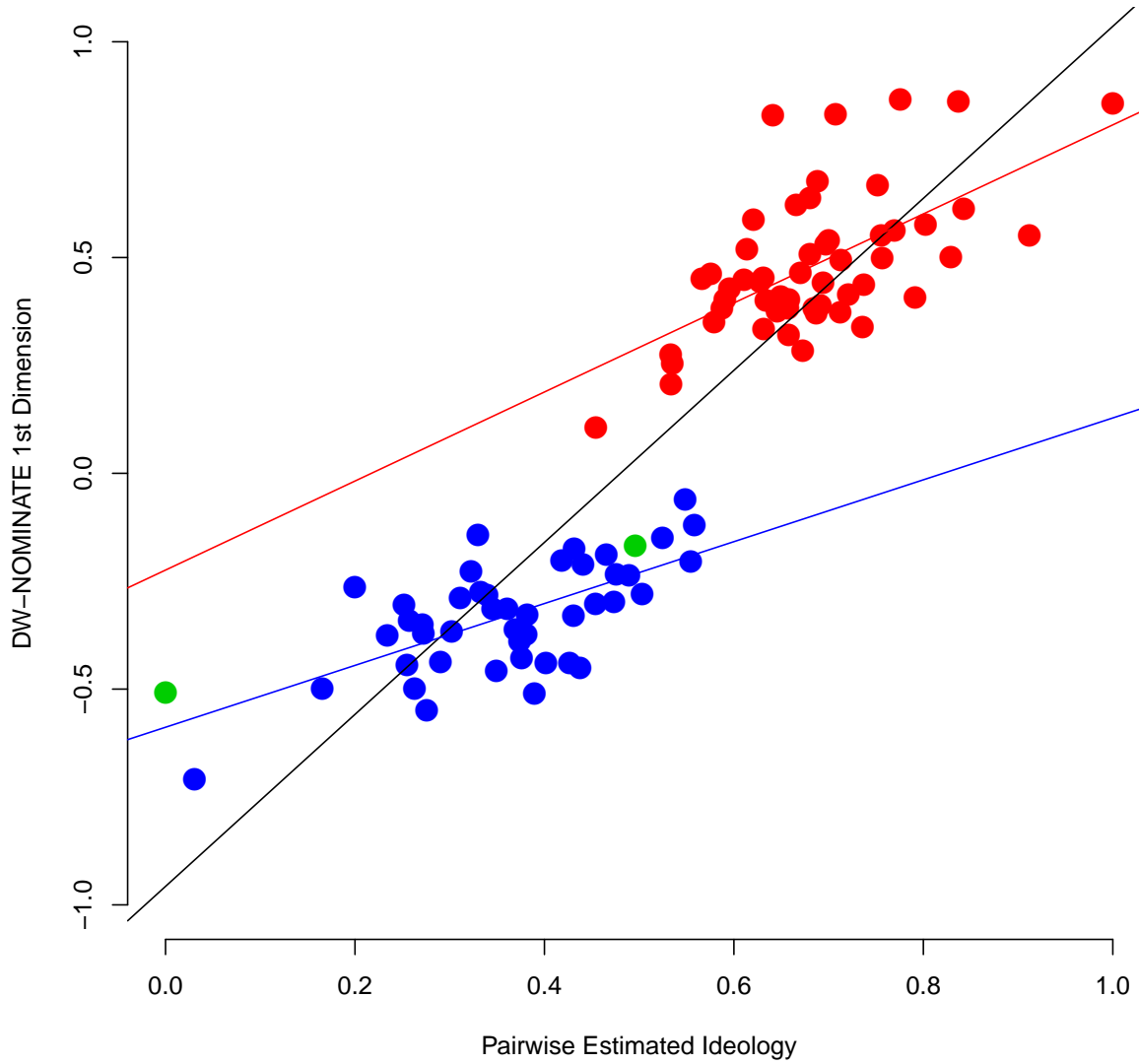
Figure 2: First Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.
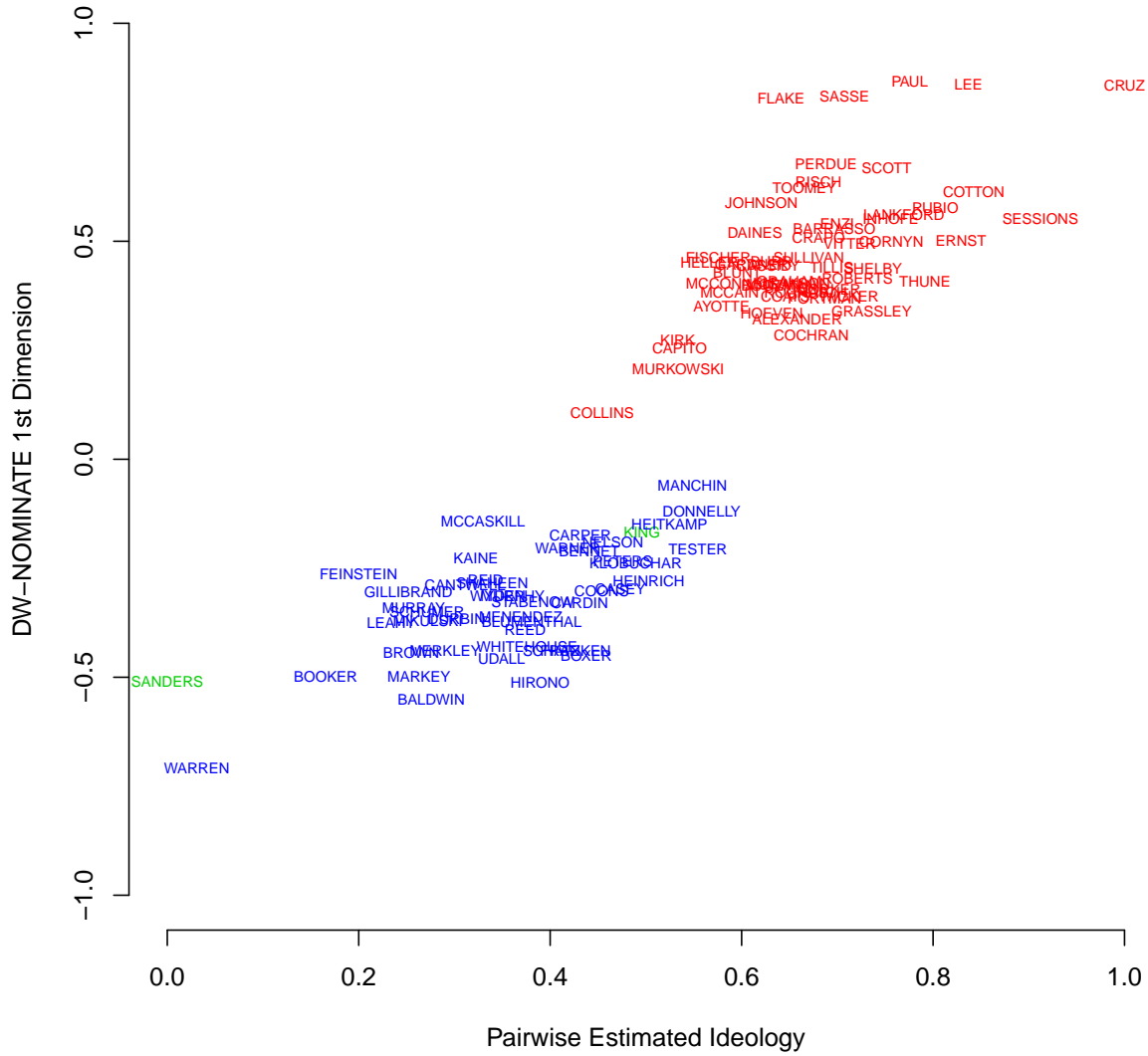
Figure 3: First Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.

and so should contribute less to their ideological score.

The divergences don't end with the overlap. There are several senators who are estimated to be much more moderate by the respondents than by NOMINATE, and others who are much more extreme. For instance, Ben Sasse of Nebraska and Jeff Flake of Arizona are among the most conservative senators according to NOMINATE. But our respondents view them as very moderate. In Flake's case, the senator's high-profile support for immigration reform as a member of the Gang of Eight may be part of the explanation. But another thing that both Flake and Sasse have in common is vocal opposition to then Republican nominee Donald Trump, in Flake's case particularly in part over the issue of immigration. Others who opposed Trump, like McCain and Kelly Ayotte of New Hampshire, are also estimated to be more moderate than expected.

Meanwhile, Jeff Sessions from Alabama has only a moderately conservative voting record, as scaled by NOMINATE. But Sessions was one of the first in the Senate to back Trump, and he has been closely associated with the president, being the one to formally enter Trump's name into nomination at the Republican National Convention and speaking on the first day of the event. Other outspoken Trump supporters like Joni Ernst of Iowa and Tom Cotton of Arkansas are also more conservative than their voting records. In short, there is a pro-Trump / anti-Trump element to the activists' pairwise scores that is absent from NOMINATE.

These differences can be seen just be looking at the figures, but we should look systematically. In Table 1, we use regression to do so.

Several of the impressions from the figures are born out in table 1. First, as expected, the measure is closely related to NOMINATE scores, a point we return to in the next section. Second, a senator's attitude toward Trump predicts a shift in her ideology, once NOMINATE is accounted for. The PRO-TRUMP variable codes the position the senator took on Trump during the nomination precess. It is a 1 if she publicly supported Trump, for example by speaking at the Republican National Convention or endorsing his campaign. It is a −1 if she publicly repudiated Trump, for example by skipping the convention or by explicitly declining to endorse him. Figures with a mixed record, such at Ted Cruz, Marco Rubio and Mitch McConnell are coded as 0. This relationship is slightly stronger among Republicans. This is consistent with our interpretation that for many of

14

Table 1: Explaining variation in activist-based pairwise ideology

	Dependent variable: Pairwise Ideology				
	All Senators				Republicans Only
	(1)	(2)	(3)	(4)	(5)
1ST DIM. NOMINATE	0.389***	0.438***	0.549***	0.568***	0.366***
	(0.020)	(0.056)	(0.098)	(0.097)	(0.060)
2ND DIM. NOMINATE	0.092***	0.091***	0.080***	0.049	0.032
	(0.027)	(0.028)	(0.029)	(0.030)	(0.034)
MALE				0.034*	
				(0.020)	
PRO TRUMP				0.048**	0.052**
				(0.021)	(0.020)
1ST DIM. NOMINATE × GOP			−0.165	−0.220*	
			(0.121)	(0.120)	
GOP		−0.045	−0.054	−0.086*	
		(0.048)	(0.048)	(0.050)	
CONSTANT	0.500***	0.519***	0.554***	0.580***	0.514***
	(0.009)	(0.022)	(0.034)	(0.043)	(0.031)
Observations	100	100	100	100	54
R^2	0.827	0.829	0.832	0.845	0.506
Adjusted R^2	0.824	0.824	0.825	0.835	0.476
Residual Std. Error	0.082 (df = 97)	0.082 (df = 96)	0.081 (df = 95)	0.079 (df = 93)	0.071 (df = 50)

Note: *p<0.1; **p<0.05; ***p<0.01

the respondents, affiliation with Trump is an indicator of conservatism, even if many elite actors don't think the president is a "real" conservative. Third, there is a significant interaction of 1st dimension NOMINATE with PARTY, so that Democrats are a little more conservative by this measure and Republicans are a little more liberal. This is consistent with the interpretation that part of what NOMINATE is capturing is partisanship above and beyond ideology (see also Lee, 2010). Finally, we test whether gender seems to provide a signal to our respondents. There is a small tendency for men to be rated as more conservative, holding NOMINATE constant. There are probably other similar signals, including race, which we have not yet explored.

4.2 Systematic relationship with NOMINATE

We think many of the more interesting things in the measure are the ways in which it diverges from existing measures. But it is also systematically related to NOMINATE - although not as straightforwardly as one might expect.

The most common interpretation of NOMINATE scores is that the first dimension captures something like "ideology" or economic issues, and the second dimension picks up something else, possibly regional variation or some social issues. In fact, in the original text introducing the measure, Poole and Rosenthal discuss the second dimension as arising from members being cross-pressured between their ideology and their party loyalty. They write (emphasis ours):

> The three-party system of the mid-twentieth century: The period from the late New Deal unto the mid-1970s saw the development of the only genuine three-political-party system in American history. The southern and northern Democrats may have joined together to organize the House and Senate, but as the plots of the 83rd Senate (1953-54) and the 80th House (1947-48) show, they were widely separated on the second dimension. This dimension picked up the conflict over civil rights. The approximate inclination of 45° for the two parties reflects the high degree of conservative-coalition voting (southern Democrats and Republicans vs. northern Democrats) that occurred through this period on a wide variety of non-race related matters.
>
> In the three-party-system period , it is useful to think of a *major-party loyalty dimension as defined by the axis through the space that captures party-line votes*. This dimension can be thought of as ranging from strong loyalty to the Democrats to weak loyalty to either party and to strong loyalty to the Republicans. (In other periods, when party cutting lines are vertical, the horizontal dimension can be thought of as both a party-loyalty

dimension and an economic dimension.) An axis *perpendicular to the party-loyalty dimension would then express a liberal/conservative dimension* that is independent of party loyalty. Votes with cutting lines that are on neither the party-loyalty axis nor the independent liberal/conservative axis represent votes in which legislators make a trade-off – instead of voting on their liberal/conservative positions, they maintain some loyalty to their parties Almost all votes reflect, to some degree, this type of tradeoff. (Poole and Rosenthal 1997, p. 45-46; 2007, p. 54-55).

This interpretation appears sensible for especially the period in the middle of the 20th century (see also Noel (2013, n.d.)). More recently, the second dimension has been interpreted as an insider/outsider dimension or a compromise dimensions (Noel, 2016*a*; Poole, Rosenthal and Hare, 2015). That is, the main difference between the more "extremist" members of the Tea Party or the House Freedom Caucus and the rest of the Republican Party, or between the Progressive Caucus and the rest of the Democratic Party, is not so much on policy as on strategy and tactics (Noel, 2016*b*; Drutman, 2015).

But our respondents may not see that as very different. We've already argued that they view loyalty to Trump as an indicator of conservatism. Perhaps they also view outsider status as such an indicator. In fact, as seen in Table 1, the second dimension of NOMINATE also predicts our measure. Figure 4 shows the bivariate relationship between our measure and the second dimension. And Figure 5 shows the variation across both dimensions, with the most liberal members coded in blue and the most conservative in red.

Notably, the role of the second dimension in our models goes away when we account for the candidate's support for Trump, further suggesting that outsider status is part of what is driving the way in which the second dimension informs respondents' views of ideology.

4.3 Standard Errors

Finally, we note that the Bradley-Terry model produces standard errors, and the estimates are about as precise as those produced by NOMINATE. Figure 6 repeats figure 2 but with confidence ellipses to present the uncertainty in our estimates, and to compare that uncertainty with the bootstrapped standard errors of NOMINATE. The figure indicates that, at the scale at which we wish to make comparisons, our measure is just about as precise as NOMINATE is. In some cases,
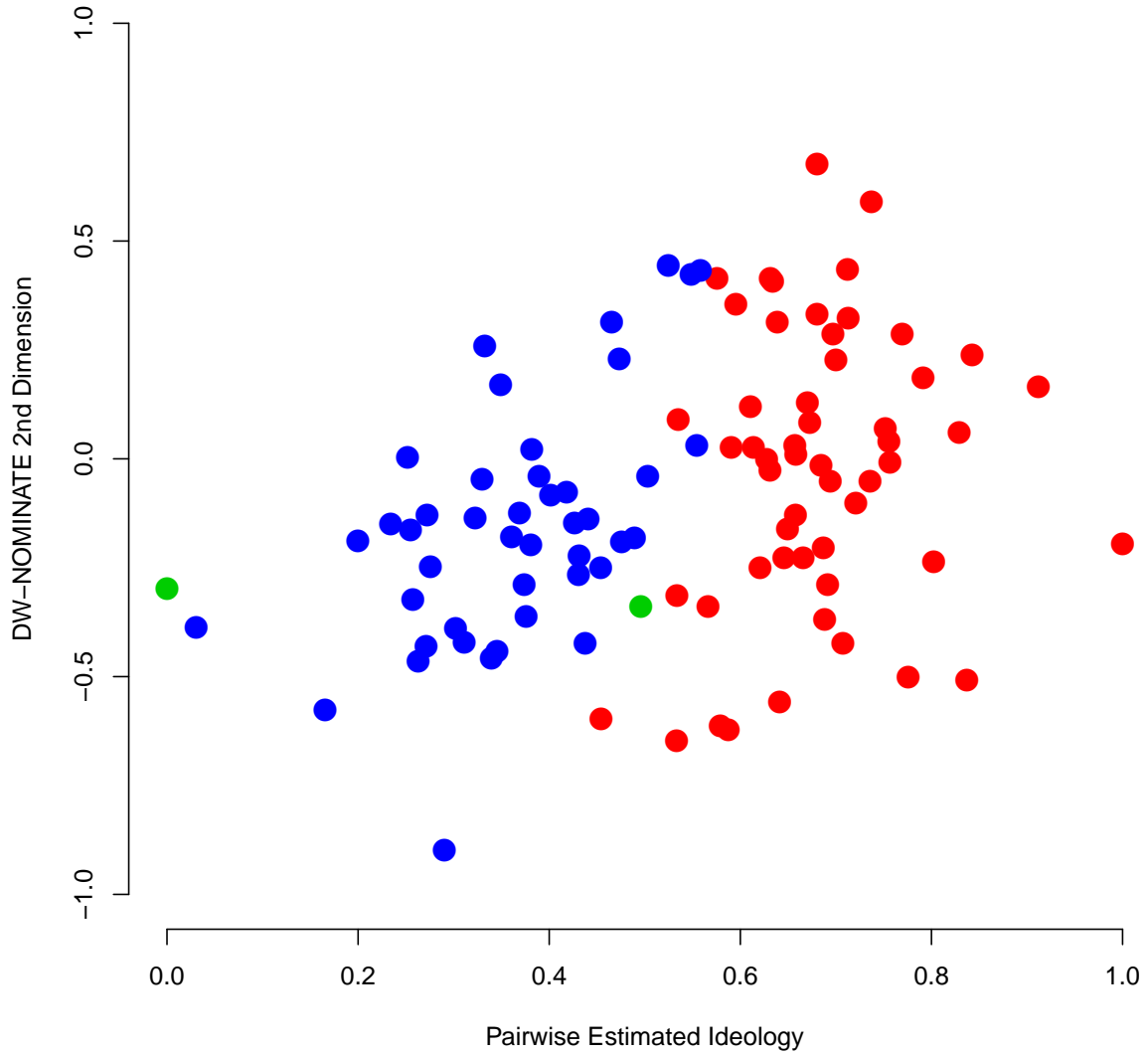
17

Figure 4: Second Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.
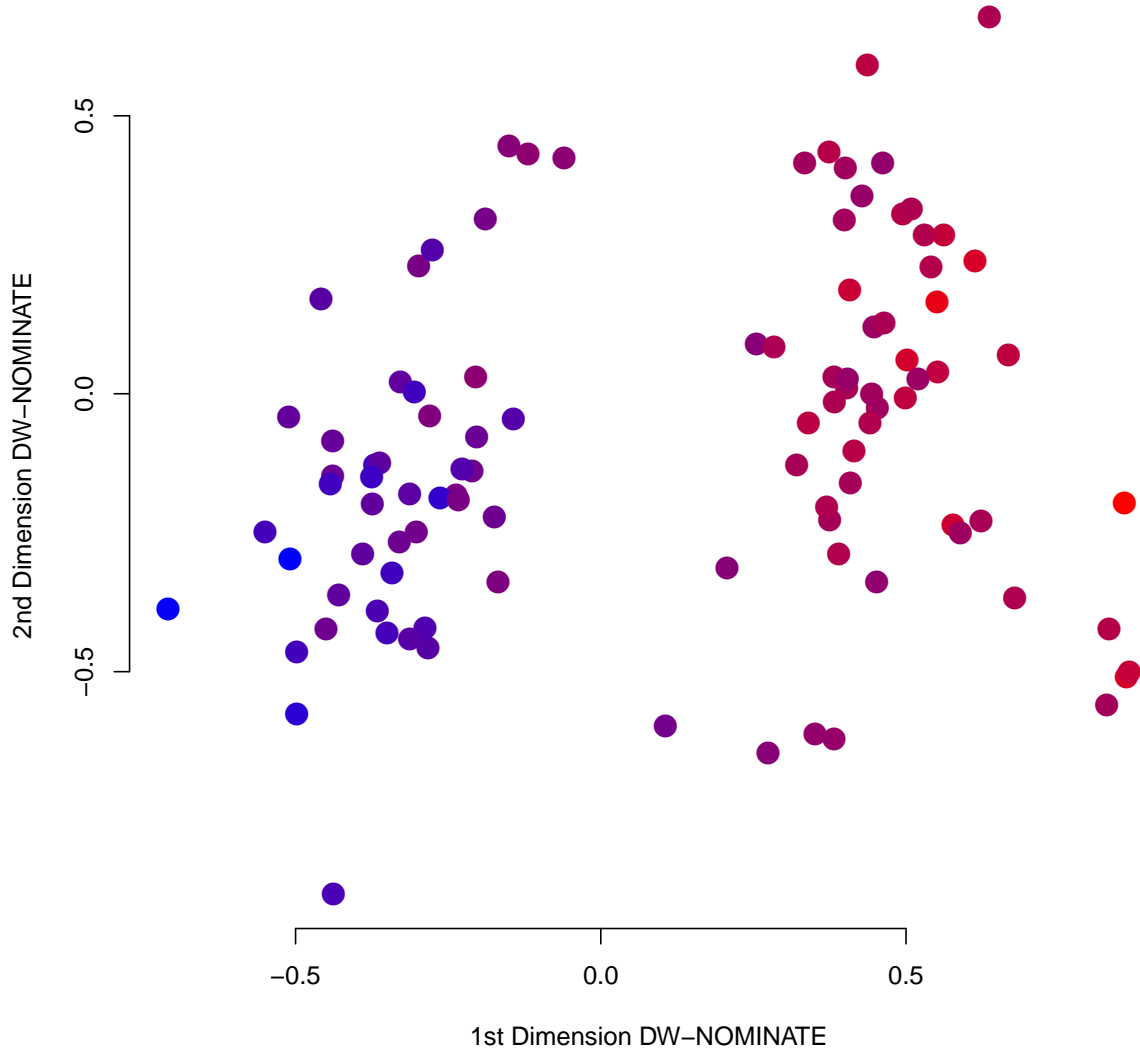
Figure 5: First and Second Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate. Pairwise Liberals in Blue. Pairwise Conservatives in Red.

cases, NOMINATE appears to be more precise. In other cases, the Pairwise measure is.

A more thorough discussion of this uncertainty is forthcoming, but we make two initial observations. First, NOMINATE's uncertainty is in part a function of extremity. More extreme cases can be harder to estimate, because there may be little in the roll call record to clarify just how extreme they are. Uncertainty in the Pairwise measure is a function of how well known the senator is. Better known actors will be rated more often, and more extreme members may even be better known.
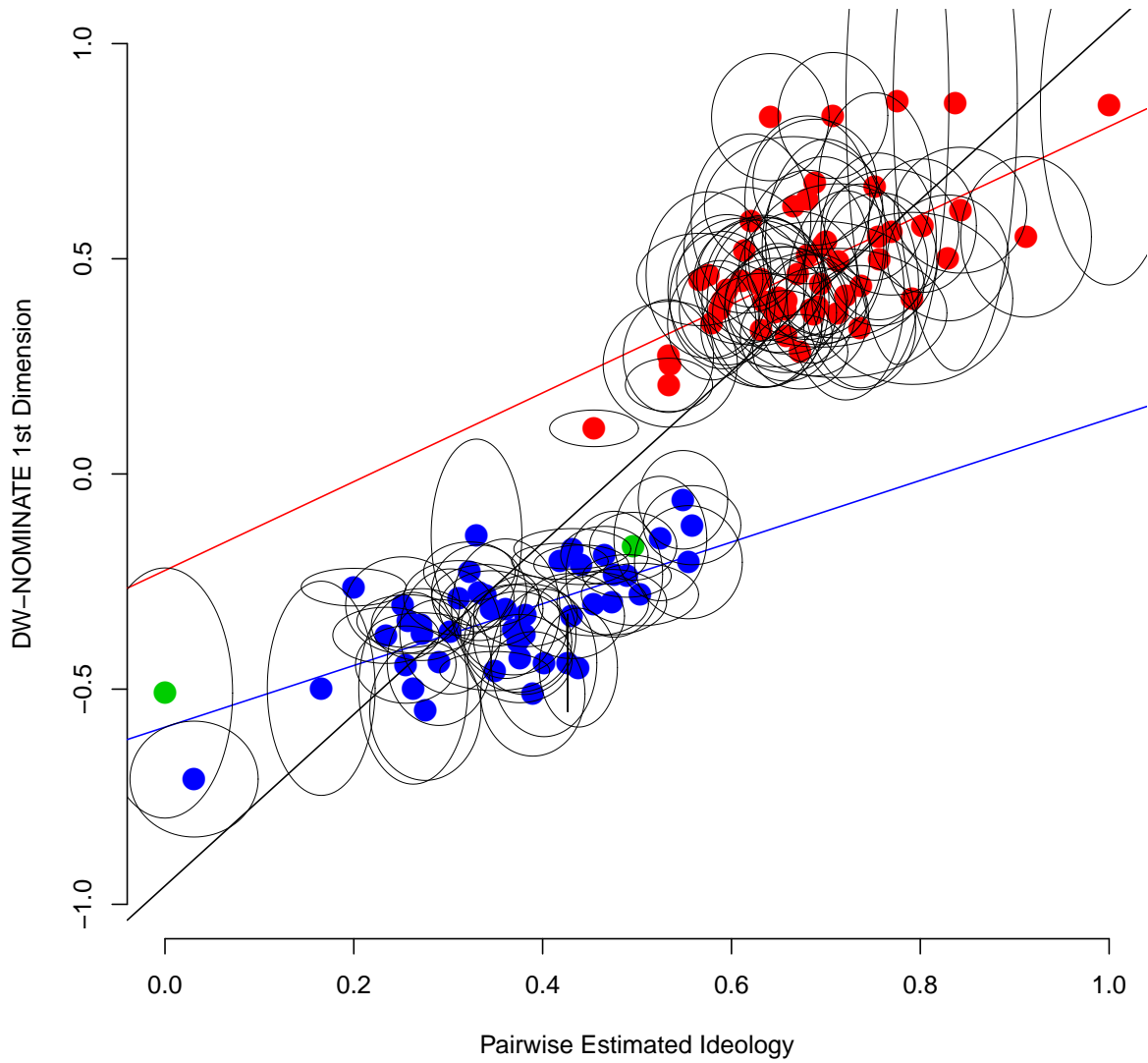
Figure 6: First Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate with 95% confidence ellipses.

5   Discussion

We have presented an alternative measure of legislator ideology that does not rely on roll call votes. It thus has none of the systematic effects of agenda setting or strategic behavior that a roll call-based measure would have. It also lacks the advantages, in transparency and objectivity, that a roll call-based measure has.

We do not argue that this measure is superior, because the appropriateness of a measure depends on its application. But this measure does have some systematic differences from NOMINATE that may make it more useful. First, our respondents appear to differentiate between party and ideology. Partisan roll call behavior may drive a wedge between the parties in Congress, so that there is no overlap in NOMINATE scores, but there is an overlap in the activist-based Pairwise Ideology. Second, our respondents appear to view Trump as a new referent for conservatism. Opposing Trump is a predictor of moderation, even for members whom we would not consider moderate by other standards. This observation slightly contrasts with the previous point. On the one hand, our respondents are not overly influenced by which partisan team the member is on, but they are influenced by which intra-party team the senator has aligned with. This is consistent with the finding that our measure is correlated with the second dimension of NOMINATE, which some have interpreted as an insider-outsider dimension. Third, this suggests that ideology is perhaps as much about identity as it is about policy.

5.1   Future directions

This project is very preliminary. We plan to do a few things in the near future.

We have primarily compared our measure to the well-known and widely used NOMINATE scores. It would make sense to compare the measure to other ideological measures as well, notably Adam Bonica's DIME scores (Bonica, N.d.).

We have also asked our respondents to compare themselves to the senators. This is not only a new source of information, but it may also help to identify whether moderate or extreme respondents are having differential effects on the estimates.

We have a number of individual-level measures for our respondents. We can test whether, for

example, the apparent effect of supporting or opposing Trump is driven by respondents who report supporting Trump themselves, which we would expect if the mechanism we described is correct.

The data are in three waves. We can explore whether there appears to be any movement in the ideological locations over time, particularly as the 2016 presidential nomination and general election unfolded.

In addition, senators vary markedly in how well known they are, so in future work we plan to account for those differences in our modeling. We welcome suggestions for further avenues to explore as well.

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