

Trump and the Shifting Meaning of “Conservative”: Using Activists’ Pairwise Comparisons to Measure Politicians’ Perceived Ideologies *

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June 23, 2021

Abstract

While prior scholarship has made considerable progress measuring politicians’ positions, it has only rarely considered voters’ or activists’ *perceptions* of those positions. Here, we present a novel measure of U.S. Senators’ perceived ideologies derived from 15,000 pairwise comparisons elicited from party activists in three 2016 YouGov surveys. By focusing on activists, we study a most-likely case for perceiving within-party ideological distinctions. We also gain empirical leverage from Donald Trump’s nomination and heterodox positions on some issues. Our measure of perceived ideology is correlated with NOMINATE but differs in informative ways: Senators with very conservative voting records were sometimes perceived as less conservative if they did not support Trump. A confirmatory test shows these trends extended into 2021. Even among activists, perceived ideology appears to be anchored by prominent people as well as policy positions.

*We would like to thank Seth Hill, Greg Huber, Stephen Jessee, Michele Swers, Jonathan Ladd, Chris Warshaw, and seminar participants at Texas A&M University, Miami University, Yale Law School, and Georgetown University for useful comments on earlier versions of this project. This paper was also previously presented at the Annual Meetings of the Midwest Political Science Association (April 2017), the American Political Science Association (San Francisco, California; August 2017), the European Political Science Association (Vienna, Austria; June 2018), and the National Capital Area Political Science Association (January 2019). Jacob Denenberg, Nick Fernandez, Matt Garber, Saleel Huprikar, and Bhavana Penmetta provided insightful research assistance. Delia Bailey, Ariel Edwards-Levy, and Joe Williams were instrumental in fielding these surveys. This research was approved by the Georgetown University IRB (2015-0652) and the University of Pennsylvania IRB (833033).

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Scholars have made important advances by measuring American politicians' positions (Poole and Rosenthal, 1997; Clinton, Jackman and Rivers, 2004; Bailey, 2007; Shor and McCarty, 2011; Barberá, 2014; Bonica, 2014). These low-dimensional scores have fostered many studies on policymaking (e.g. Poole and Rosenthal 1997; Theriault 2008) while also facilitating research on representation and the interplay between voters, activists, and elected officials (e.g. Caughey and Warshaw, 2018; Boudreau, Elmendorf and MacKenzie, 2019; Hill and Huber, 2019).

Yet for certain applications, what matters is not politicians' actual positions but their perceived positions. When assessing the extent to which citizens use candidates' ideologies when voting (e.g. Jessee, 2012), for example, these perceptions are a crucial intermediary. If voters cannot perceive ideological distinctions, they cannot vote on the basis of them. Similarly, if activists and donors support politicians based on ideological affinity, measuring those perceptions is key.

Here, we investigate the U.S. Senators' perceived ideologies in the critical year of 2016 and develop one-dimensional perceived ideology scores, with a confirmatory test from 2021. Throughout 2016, we conducted three surveys in which approximately 1,000 activists per survey—half Democrats, the other half Republicans—identified who within a pair of U.S. Senators was the more liberal or conservative. Activists are a critical intermediary in American politics. They are far larger in number than elected officials, meaning that they are found in communities nationwide and can shape the images of their respective parties and the vote choices of their neighbors (Stone and Rapoport, 1994; Han, 2014; Blum, 2020). They are also sufficiently knowledgeable about politics so as to be able to assess intra-party differences in ideology (Layman et al., 2010; Enos and Hersh, 2015; Adams et al., 2017; Marble and Tyler, 2021). If anyone is positioned to identify and police within-party ideological heterodoxy, it should be activists. From these 15,465 paired comparisons, we use the Bradley-Terry method to develop a one-dimensional perceived ideology measure.

The resulting measure has face validity, although it differs from the widely used NOMINATE scores of roll-call voting in instructive ways (Poole and Rosenthal, 1997). For one, whereas NOMINATE identifies no overlap between contemporary Republicans and Democrats, activists do perceive a small number of Democratic Senators to be more conservative than some Republicans. Democratic activists also discern more ideological variation among Democratic Senators than do Republican

activists when assessing Republican Senators.

The 2016 campaign provides us with unusual leverage, as GOP nominee Donald Trump adopted heterodox positions on certain policies and was sometimes at odds with the GOP’s conservative wing. Nonetheless, our results illustrate that Republican Senators with very conservative voting records were viewed as much more moderate if they did not support Trump. As a follow-up test shows, these trends were even more apparent in spring 2021. For these activists, to be conservative is partly to support Trump, whether he was the Republican frontrunner, nominee, or former president.

At both the elite and mass levels, researchers debate the extent to which contemporary partisan divisions are grounded in ideology and policy positions as opposed to partisanship and group affinity (Dawson, 1995; Lee, 2010; Sniderman and Stiglitz, 2012; Kinder and Kalmoe, 2017; Achen and Bartels, 2017; Goggin and Theodoridis, 2018; Mason, 2018; Iyengar et al., 2019). These factors are typically difficult to disentangle. The evidence presented here informs that debate. Activists know more about politics and are more likely to think in ideological terms than other citizens (Barber and Pope, 2018). Yet, even their perceptions of ideology appear to reflect factors beyond position-taking, such as Senators’ relationship to benchmark figures such as Trump.

Data: Eliciting Perceived Ideology via Pairwise Comparisons

Prior research has measured ideology based on Congressional voting, political donations, or other elite-level behaviors. We focus instead on how political activists *perceive* Senators’ ideologies (see also Eady and Loewen, 2021). Our rationale is that activists are high-knowledge political observers; if they cannot distinguish Senators’ ideologies, it seems unlikely other citizens will (Stone and Rapoport, 1994).

Specifically, we use surveys of political activists conducted for the Huffington Post by YouGov. There was no deception or intervention in political processes; respondents were aware they were participating in a research study and consented to voluntarily provide anonymous responses at empanelment, aware that they could decline participation. More details are in the Appendix. In consultation with the authors, the Huffington Post administered three surveys during 2016. The surveys interviewed three separate but potentially overlapping samples of approximately 500

Republicans and 500 Democrats. They were fielded January 14-20 (n=989), July 11-18 (n=972), and October 28 to November 5 (n=1,068). Table 2 provides descriptive statistics, demonstrating that the 2016 samples are disproportionately White (85%-87%). Respondents are relatively evenly divided by gender (48%-50% female), and between 46% and 49% have a bachelor's degree.

To participate, potential respondents had to meet our definition of an activist. One way to qualify was to report having done at least two of the following in the prior four years: contributed money to a candidate; attended a campaign event; done volunteer work for a campaign; or made campaign calls to voters. Alternately, respondents were considered activists if they reported having ever been at least one of the following: a paid staffer for a campaign or elected public official; a candidate for elected office; or an official in a political party (such as a local party chair). Thus those who qualify only through the first set of criteria (62 percent) report having done significant activism. Those meeting the second criteria (38 percent) are genuine politicians, albeit at the bottom of the hierarchy.

The outcome is respondents' answers to five questions about the ideology of United States Senators. Specifically, the questions asked: "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." The Senators were drawn from the 114th Congress (2015-16). Figure 5 provides an image of a sample question, showing that Senators were listed with their state but not party affiliation. Respondents could choose either Senator or reply they weren't familiar with one or both.

We structured the questions as pairwise comparisons based on extensive 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 rank many Senators. But for a given pair, the task is more straightforward.

Democratic activists were asked who in a pair was more liberal, with pairs drawn from all Democratic Senators, as well as the 10 most liberal Republicans, identified via NOMINATE. Republicans were asked which of a pair from all Republicans and the 10 most conservative Democrats¹ is more

¹Maine's Angus King and Vermont's Bernie Sanders are classified as Democrats.

conservative.²

We initially limit the pairs to Senators from the respondents' own ideological sides on the grounds that they will be more familiar with their co-partisans. This also helps to avoid wasting time asking about comparisons between extreme members of opposing parties, where answers may follow straightforwardly from partisanship. Nonetheless, to confirm that this choice does not unduly influence the estimates, we remove this restriction for the 2021 survey.

In all, groups of 989, 972, and 1,068 were asked to make five comparisons each, giving us a total around 15,000 evaluated pairs. However, once we remove pairs in which respondents were unfamiliar with one or both Senators, we are left with 9,030 rated pairs.

Modeling Pairwise Comparisons

Our data are in the form of records of how often a given Senator was judged more or less conservative than the Senator with whom they were randomly paired. This might be analogous to a sports team's win-loss record. One simple way to sort the Senators would be to calculate the percentage of the time they are identified as more liberal. However, this ignores the information in the Senators against whom they were compared. In sports, beating a highly regarded opponent provides more information than beating a weak opponent.

Instead, we employ a Bradley-Terry 1952 model to estimate a latent ideological trait (see also Loewen, Rubenson and Spirling, 2012). The model assumes that the outcome of any pairing is probabilistic, with the base probability determined by the relative position of the compared Senators. In other words, the probability that the i^{th} Senator is seen as more conservative than the j^{th} Senator is

$$P(i > j) = \frac{p_i}{p_i + p_j} \tag{1}$$

Bradley and Terry parameterize this model with an exponential form, allowing for a convenient

²In the second and third surveys, a programming error led to the omission of the seven Senators from the GOP list—five Republicans, two Democrats—who were last in alphabetical order.

interpretation of its base parameters:

$$P(i > j) = \frac{e^{\lambda_i}}{e^{\lambda_i} + e^{\lambda_j}} \quad (2)$$

$$\text{logit}(P(i > j)) = \lambda_i - \lambda_j \quad (3)$$

In this model, λ_i can be interpreted as the i^{th} case’s latent trait. In our application, this is each Senator’s perceived conservatism. The exact values of the estimated λ ’s will depend on which Senator is the omitted reference point (John McCain here), but we rescale the measure to the unit interval. We term these rescaled λ_i ’s “perceived pairwise ideology.”

Results: Perceived Ideology in 2016

The procedure produces measures of perceived ideology that broadly fit our expectations. Figure 1 presents the estimated pairwise ideology scores, with standard errors discussed in the Appendix. Appendix Table 3 lists each Senator’s score. As expected, there are two broad clusters, one (left) for Democrats and one (right) for Republicans. However, there is overlap between Senators from the two parties, something that has disappeared from 21st-century NOMINATE scores. It is also noteworthy that Democratic activists are able to more clearly distinguish ideological distinctions among Democrats than Republican activists are among their co-partisans—while the perceived ideology measure has a standard deviation of 0.15 for Democrats, it’s 0.09 for Republicans.

Even knowledgeable activists aren’t likely to have strong opinions about every Senator—and indeed, respondents answered “don’t know” or said they were unfamiliar with at least one of the Senators 40% of the time. For that reason, the measure we present does not differentiate a number of less prominent Senators, especially when its uncertainty is taken into account (see Appendix Figure 10). Still, extremity is not simply a function of familiarity, as Senators Harry Reid and John McCain are well-known and estimated to be relatively centrist. See the Appendix and Table 5 for a discussion of which activists are less likely to rate pairings.

One way to explore this new measure is through a comparison with NOMINATE. Figure 2 plots NOMINATE against perceived pairwise ideology. The two measures are closely related. They

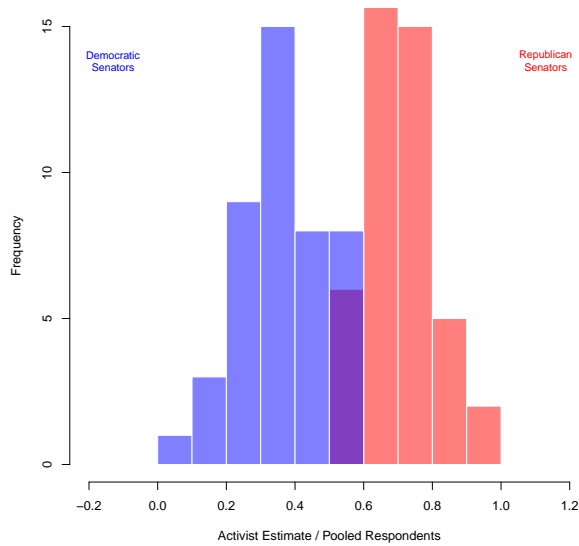


Figure 1: Distribution of Estimated Pairwise Ideology, 2016. Democrats in Blue. Republicans in Red.

are correlated at 0.90, with correlations of 0.63 among Republicans and 0.77 among Democrats. Nevertheless, there are significant divergences.

As Figure 1 shows, while there is no overlap between the parties in NOMINATE, there is in the pairwise measure. This is because Democrats like Joe Manchin, Jon Tester, and Joe Donnelly are estimated to be more conservative than Republican Susan Collins—and Tester and Donnelly are more conservative than Lisa Murkowski. Such scores are defensible. Both Manchin and Donnelly are pro-life, while Collins and Murkowski are pro-choice; Tester is pro-gun rights. And while our surveys were conducted in 2016, notice that the list of centrist GOP Senators includes some of the Senators who voiced opposition to the various Republican health care proposals in 2017.

There are two related reasons for the divergence between our metric and NOMINATE. First, respondents may care more about some issues than others, and hotly contested social issues like abortion and gun rights may be both better known and more important to their evaluations of Senators’ ideologies. These issues 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

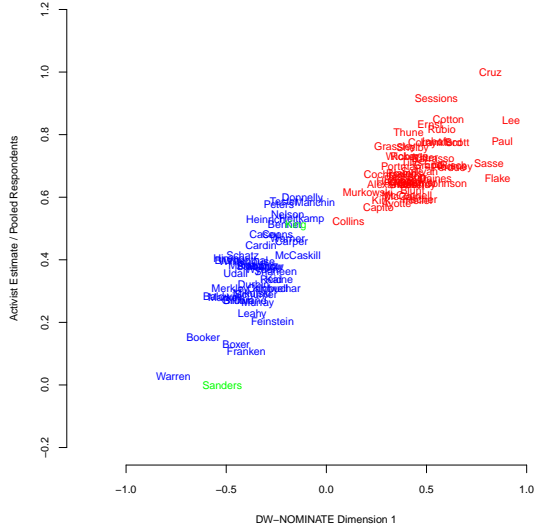


Figure 2: First Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.

on procedural votes (Theriault, 2008; Lee, 2010). Moreover, our respondents would probably be correct in determining that those votes are not principally about ideology, and so should contribute less to Senators’ perceived ideology.

There are other divergences. 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 and Jeff Flake were among NOMINATE’s most conservative Senators. But our respondents do not view them as such. In Flake’s case, the Senator’s high-profile support for immigration reform may be part of the explanation. But both Flake and Sasse also shared their vocal opposition to then-Republican nominee Trump. Others who opposed Trump, like McCain and Kelly Ayotte, are also perceived to be more moderate than expected.

Meanwhile, Jeff Sessions had only a moderately conservative voting record according to NOMINATE. But Sessions was one of the first Senators to back Trump. Other outspoken Trump supporters like Joni Ernst and Tom Cotton are also rated more conservative than their voting records would suggest. Just as conservative respondents adopt policy positions when they are told Trump supports them (Barber and Pope, 2019), conservative activists evaluate politicians in terms of their

	All	All	Democrats	GOP	GOP	GOP	GOP
Intercept	0.50*	0.51*	0.62*	0.54*	0.54*	0.55*	0.55*
	(0.01)	(0.01)	(0.04)	(0.03)	(0.03)	(0.03)	(0.03)
NOMINATE, D1	0.42*	0.41*	0.77*	0.33*	0.34*	0.32*	0.33*
	(0.02)	(0.02)	(0.10)	(0.06)	(0.06)	(0.06)	(0.06)
NOMINATE, D2		0.12*			0.07*		0.03
		(0.03)			(0.03)		(0.04)
Anti-Trump						-0.05*	-0.04*
						(0.02)	(0.02)
R ²	0.81	0.83	0.56	0.36	0.41	0.47	0.48
Num. obs.	100	100	46	54	54	54	54

* $p < 0.05$

Table 1: This table reports OLS models fit to different subsets of the data set predicting Senators’ perceived ideology scores.

relationship to the former president.

In Table 1 and Figure 3, we use regression to estimate these differences systematically. We regress the perceived ideology measure for each Senator on the first-dimension NOMINATE score for all Senators and then separately by party. One thing to note is the substantial differences by party, with NOMINATE having markedly more predictive power for Democrats ($\beta = 0.77$) than Republicans ($\beta = 0.33$).

Using the model from Table 1’s fourth column, Figure 3 illustrates that for Republicans, perceived ideology appears to deviate from NOMINATE in that anti-Trump Senators are estimated to be less conservative than their voting records while pro-Trump Senators are estimated to be more so. In Table 1’s sixth column, we formalize this test by showing that among Republicans, a measure of Senators’ relationship to Trump in 2016 is a meaningful predictor of perceived ideology beyond NOMINATE.³ For example, as compared to a GOP Senator who clearly supported Trump, an anti-Trump Senator had a lower perceived ideology score by 0.05, more than a half of a standard deviation.⁴

³The Trump Support variable codes the position the Senator took on Trump during the 2016 campaign. It is 1 if she publicly supported Trump (for example by endorsing him) and -1 if she publicly repudiated Trump (for example by declining to endorse him). Figures with a mixed record, such as Ted Cruz and Mitch McConnell, are coded 0.

⁴As Table 1’s second, fifth, and seventh columns show, NOMINATE’s second dimension is also meaningfully associated with our perceived ideology measure, although more so among Democrats. Among Republicans, its inclusion or exclusion does not markedly change the coefficient for the Trump support measure. Our respondents remain affected by Senators’ relationship to Trump even accounting for roll-call votes scaled in two dimensions.

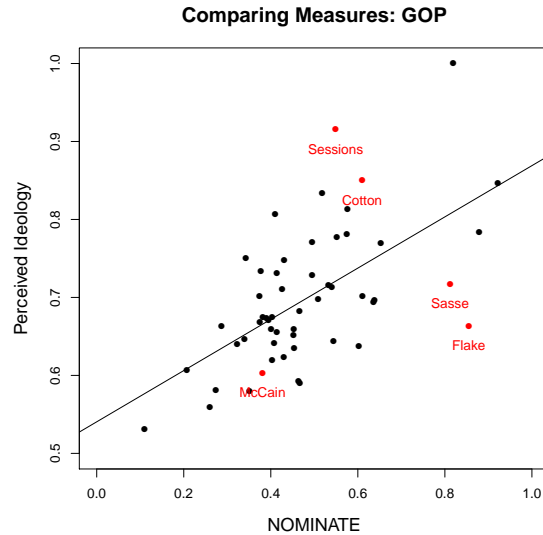


Figure 3: This figure illustrates the relationship between NOMINATE scores and 2016 perceived ideology scores for GOP Senators, with notable pro- and anti-Trump Senators labeled.

Alternative Measures

Certainly, NOMINATE is only one ideology-related measure. Appendix Table 4 provides Pearson’s correlations between the pairwise ideology measure and various alternatives. Appendix Figures 7 and 8 show that the relationships are broadly similar when instead comparing the pairwise measure to two campaign contribution-based measures of Senator ideology (Bonica, 2014). As with NOMINATE, these measures produce no partisan overlap.⁵

We also consider the pairwise measure relative to another measure of *perceived* ideology derived from the 2016 Cooperative Congressional Election Study (CCES) (Eady and Loewen, 2021). The CCES samples citizens rather than just activists, asking respondents to place their own Senators on a 1-7 scale. Figure 9 presents the results. Overall, the two measures are correlated at 0.89. But there are important differences—as with NOMINATE, CCES respondents perceive no partisan overlap.

⁵These measures correlate with perceived ideology at 0.85 and 0.82, respectively.

2021 Survey

The surveys employed above were from 2016, before Trump took office—and they primarily asked activists about senators from their own party. To see how stable these results prove, we conducted a follow-up YouGov survey in late April 2021 (n=1,110). The set-up was similar to that described above, with a few exceptions: activists assessed 12 pairs of politicians from both parties, including not just senators but 14 other prominent figures such as Trump, Ron DeSantis, Joe Biden, and Kamala Harris.

The results are depicted in Figure 4. In broad strokes, they confirm and extend the patterns observed in 2016. First, we detect meaningful overlap, with Republicans such as Collins and Murkowski (and Mitt Romney) again more liberal than Democrats.⁶ Also, we can see how Trump’s influence persists, with Trump himself rated more conservative than 82% of the Republicans queried and Trump’s allies (DeSantis, Hawley, Tuberville, Cotton, and Pence) among the most conservative. Kamala Harris is perceived as the most liberal politician, outpacing Elizabeth Warren and Bernie Sanders and raising questions about the role of race and gender in such perceptions we will pursue in future research (Huddy and Terkildsen, 1993; Sanbonmatsu and Dolan, 2009).

These results confirm that the core findings from 2016 were not the product of asking Democrats and Republicans primarily about in-party Senators. Here, too, we see clear evidence of overlap between the parties. These results also strongly reinforce the substantive claim that Trump reoriented definitions of “conservative.”

⁶Such overlap is also visible in the initial pairings. In 20% of all cross-party pairings, respondents identified the Democrat as more conservative; for Lisa Murkowski, the figure was 35%.

Discussion and Conclusion

Can activists perceive ideological differences among Senators? Here, we present a novel measure of perceived ideology derived by asking activists to make pairwise assessments of Senators. The resulting measure is strongly associated roll-call-based NOMINATE, especially among Democrats. Among Republicans, this new measure is also associated with Senators' orientation toward Trump in 2016, a strong indication that activist perceptions of ideology are shaped by personality and procedure as well as policy. Evidence from 2021 confirms these patterns.

This research has important limitations, but also opens avenues for future research. One downside to survey-based measures is that they are only available when researchers conduct surveys, and so cannot be generated retroactively. These activists were surveyed in just two separate years, leaving questions about whether these results generalize. Even if one were able to conduct surveys repeatedly over time, the population of activists itself may shift in response to changing party dynamics. In addition, survey-based measures will be more precise for high-profile Senators who are widely known.

Still, this novel measure of perceived ideology provides a critical link between elite-level actions and the imprint they leave outside Congress. It also illustrates that a figure like Trump can re-orient a party's definition of ideology. Even for activists, ideology is to some extent inflected by whom Senators support or oppose. Moving forward, assessing whether such Trump-oriented divisions persist into the Biden presidency is a central question.

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Appendix

Surveys

Our respondents were empaneled and recruited by the survey firm YouGov. YouGov respondents consent to take periodic, anonymous surveys under the terms described here: <https://today.yougov.com/about/faqs/>. Consent occurs at empanelment. Respondents' participation in response to any specific survey invitation is voluntary and anonymous. Respondents to YouGov surveys are compensated via points which can be redeemed for cash or non-cash rewards as described here: <https://mena.yougov.com/en/account/panel-rewards/>.

	Jan. '16	July '16	Oct./Nov. '16	April '21
Democrat	0.502	0.503	0.524	0.502
Has BA	0.462	0.475	0.489	0.507
Black	0.052	0.049	0.047	0.116
Hispanic	0.027	0.042	0.023	0.062
Race: Other	0.052	0.060	0.062	0.014
White	0.870	0.849	0.868	0.774
Female	0.495	0.483	0.480	0.517

Table 2: Descriptive statistics by survey.



Figure 5: This figure displays a sample pairing as displayed to respondents from the 2021 survey.

Standard Errors

The Bradley-Terry model produces standard errors, and the estimates are about as precise as those produced by NOMINATE. Appendix Figure 6 provides 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,

Sanders	0	Menendez	0.389	Tester	0.584	Crapo	0.692
Warren	0.026	Reed	0.39	Fischer	0.585	Portman	0.694
Franken	0.108	Whitehouse	0.398	Donnelly	0.587	Toomey	0.696
Boxer	0.132	Blumenthal	0.404	McCain	0.594	Risch	0.7
Booker	0.154	Hirono	0.409	McConnell	0.603	Enzi	0.7
Feinstein	0.205	Schatz	0.419	Alexander	0.607	Sasse	0.705
Leahy	0.231	Cardin	0.455	Graham	0.616	Tillis	0.706
Murray	0.265	Carper	0.464	Cochran	0.618	Vitter	0.721
Brown	0.273	Casey,	0.484	Blunt	0.619	Barrasso	0.722
Gillibrand	0.276	Coons	0.489	Corker	0.629	Roberts	0.726
Markey	0.279	McCaskill	0.49	Hatch	0.631	Wicker	0.73
Baldwin	0.286	Heinrich	0.537	Cassidy	0.633	Shelby	0.751
Schumer	0.292	Warner	0.538	Johnson	0.635	Grassley	0.755
Mikulski	0.296	King	0.538	Moran	0.641	Cornyn	0.768
Merkley	0.311	Collins	0.543	Gardner	0.642	Scott	0.772
Klobuchar	0.312	Bennet	0.558	Hoeven	0.645	Scott	0.772
Cantwell	0.312	Capito	0.56	Coats	0.647	Lankford	0.774
Durbin	0.325	Peters	0.564	Daines	0.654	Paul	0.774
Reid	0.341	Heitkamp	0.565	Burr	0.655	Inhofe	0.777
Kaine	0.341	Nelson	0.567	Flake	0.656	Thune	0.808
Udall	0.36	Manchin	0.571	Boozman	0.656	Rubio	0.814
Shaheen	0.367	Murkowski	0.576	Isakson	0.662	Ernst	0.832
Wyden	0.372	Kirk	0.577	Rounds	0.671	Lee	0.844
Stabenow	0.382	Ayotte	0.58	Sullivan	0.68	Cotton	0.849
Murphy	0.383	Heller	0.583	Perdue	0.689	Sessions	0.915
						Cruz	1

Table 3: This table lists the perceived ideology score for each US Senator included in at least one of our three 2016 surveys.

our measure is just about as precise as NOMINATE. In some cases, cases, NOMINATE appears to be more precise. In other cases, the Pairwise measure is more precise.

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. See also Appendix Figure 10.

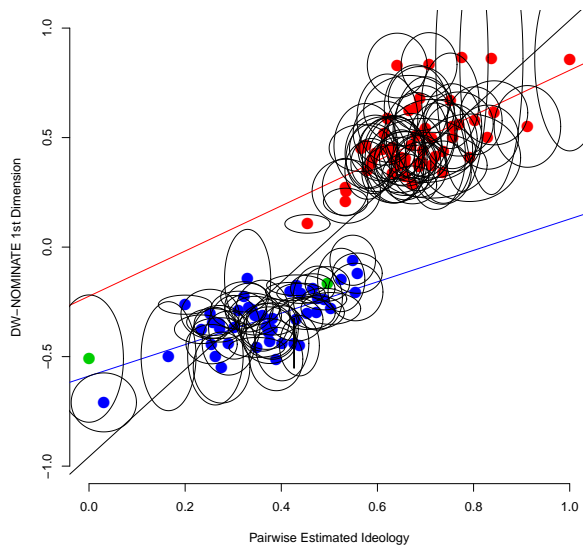


Figure 6: First Dimension NOMINATE vs. Estimated Pairwise Ideology in the 114th Senate with 95% confidence ellipses.

Correlations with Alternate Measures

	PERCEIVED	PERCEIVED wave 1	PERCEIVED wave 2	PERCEIVED wave 3	Dem. PERCEIVED	Dem. PERCEIVED wave 1	Dem. PERCEIVED wave 2	Dem. PERCEIVED wave 3	Rep. PERCEIVED	Rep. PERCEIVED wave 1	Rep. PERCEIVED wave 2	Rep. PERCEIVED wave 3	CCES	Dem. CCES	Rep. CCES	RECIPIENT CFScore	CONTRIBUTOR CFScore	NOMINATE DIM 1	NOMINATE DIM 2
PERCEIVED	1.00	0.98	0.98	0.99	1.00	0.96	0.96	0.97	0.93	0.91	0.90	0.96	0.89	0.88	0.89	0.85	0.82	0.90	0.31
PERCEIVED wave 1	0.98	1.00	0.96	0.96	0.95	1.00	0.93	0.92	0.85	0.98	0.85	0.90	0.89	0.89	0.89	0.85	0.83	0.90	0.27
PERCEIVED wave 2	0.98	0.96	1.00	0.97	0.95	0.93	0.99	0.95	0.84	0.88	0.98	0.90	0.90	0.90	0.90	0.87	0.85	0.91	0.31
PERCEIVED wave 3	0.99	0.96	0.97	1.00	0.97	0.93	0.95	0.99	0.83	0.86	0.87	0.97	0.88	0.88	0.88	0.84	0.81	0.89	0.26
Dem. PERCEIVED	1.00	0.95	0.95	0.97	1.00	0.95	0.95	0.96	-0.09	0.60	0.59	0.76	0.73	0.77	0.72	0.65	0.63	0.79	0.23
Dem. PERCEIVED wave 1	0.96	1.00	0.93	0.93	0.95	1.00	0.93	0.92	0.24	0.83	0.82	0.89	0.80	0.83	0.80	0.73	0.71	0.84	0.17
Dem. PERCEIVED wave 2	0.96	0.93	0.99	0.95	0.95	0.93	1.00	0.95	0.32	0.83	0.83	0.85	0.77	0.81	0.76	0.72	0.71	0.83	0.24
Dem. PERCEIVED wave 3	0.97	0.92	0.95	0.99	0.96	0.92	0.95	1.00	0.16	0.70	0.70	0.79	0.77	0.80	0.77	0.70	0.70	0.81	0.19
Rep. PERCEIVED	0.93	0.85	0.84	0.83	-0.09	0.24	0.32	0.16	1.00	0.87	0.87	0.90	0.60	0.51	0.63	0.52	0.41	0.66	0.06
Rep. PERCEIVED wave 1	0.91	0.98	0.88	0.86	0.60	0.83	0.83	0.70	0.87	1.00	0.86	0.89	0.68	0.64	0.70	0.62	0.54	0.73	0.01
Rep. PERCEIVED wave 2	0.90	0.85	0.98	0.87	0.59	0.82	0.83	0.70	0.87	0.86	1.00	0.88	0.74	0.66	0.76	0.69	0.62	0.75	0.09
Rep. PERCEIVED wave 3	0.96	0.90	0.90	0.97	0.76	0.89	0.85	0.79	0.90	0.89	0.88	1.00	0.73	0.66	0.76	0.65	0.54	0.75	-0.01
CCES	0.89	0.89	0.90	0.88	0.73	0.80	0.77	0.77	0.60	0.68	0.74	0.73	1.00	0.99	1.00	0.97	0.95	0.95	0.20
Dem. CCES	0.88	0.89	0.90	0.88	0.77	0.83	0.81	0.80	0.51	0.64	0.66	0.66	0.99	1.00	0.97	0.96	0.94	0.95	0.22
Rep. CCES	0.89	0.89	0.90	0.88	0.72	0.80	0.76	0.77	0.63	0.70	0.76	0.76	1.00	0.97	1.00	0.97	0.95	0.95	0.21
RECIPIENT CFScore	0.85	0.85	0.87	0.84	0.65	0.73	0.72	0.70	0.52	0.62	0.69	0.65	0.97	0.96	0.97	1.00	0.96	0.95	0.16
CONTRIBUTOR CFScore	0.82	0.83	0.85	0.81	0.63	0.71	0.71	0.70	0.41	0.54	0.62	0.54	0.95	0.94	0.95	0.96	1.00	0.92	0.22
NOMINATE DIM 1	0.90	0.90	0.91	0.89	0.79	0.84	0.83	0.81	0.66	0.73	0.75	0.75	0.95	0.95	0.95	0.95	0.92	1.00	0.16
NOMINATE DIM 2	0.31	0.27	0.31	0.26	0.23	0.17	0.24	0.19	0.06	0.01	0.09	-0.01	0.20	0.22	0.21	0.16	0.22	0.16	1.00

Table 4: Correlations across ideology-related measures

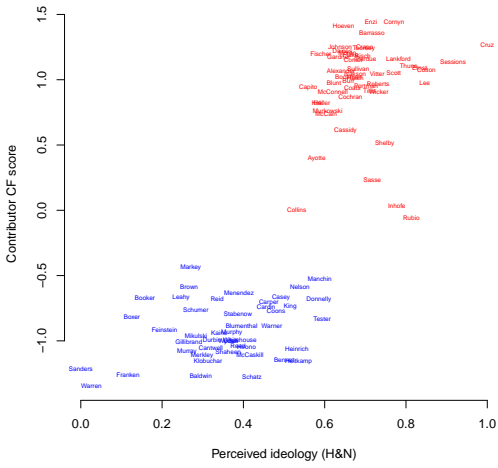


Figure 7: Contributor-based Campaign Finance Scores vs. Estimated Pairwise Ideology in the 114th Senate.

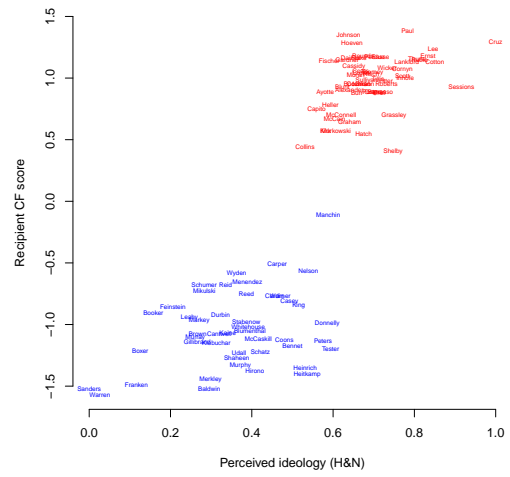


Figure 8: Recipient-based Campaign Finance Scores vs. Estimated Pairwise Ideology in the 114th Senate.

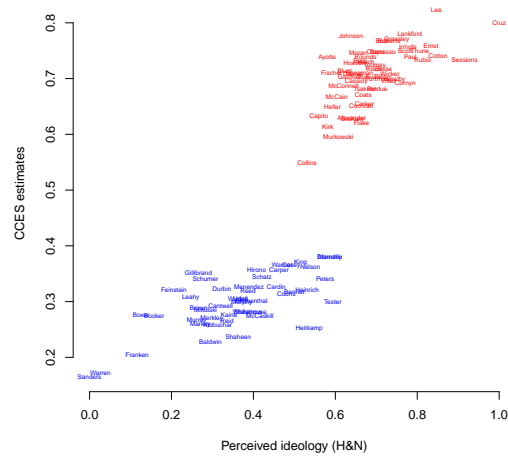


Figure 9: CCES perceived ideology vs. Estimated Pairwise Ideology in the 114th Senate. Democrats in Blue. Republicans in Red.

Who Doesn't Rank Pairs?

Activists only contribute to the pairwise estimates when they are able to evaluate a given pairing, so we also analyzed who among the activists was more or less likely to say that they weren't familiar with both politicians. In Table 5, we report regressions in which the dependent variable is the fraction of all pairings for which each respondent said she wasn't familiar with one or both. For the three 2016 surveys, women are more likely to report not being able to evaluate pairings, while those with Bachelor's degrees and Democrats are less likely to say that they are unfamiliar with at least one of the politicians. While there is no effect of being very conservative or liberal—labeled “extreme ideology”—strong partisans are between 0.06 and 0.11 less likely to say that they aren't able to assess a given pair. Such effects for strength of partisanship are notable, but substantively modest; the pairwise measure is not driven simply by strong partisans.

In 2021, the task changed, as we included high-profile figures outside the Senate (such as Kamala Harris and Mike Pence) while also allowing more cross-party comparisons. Possibly as a result, the baseline rate of respondents being unable to evaluate a given pair dropped from 40 percent to 25 percent. As Table 5 illustrates, the correlates of being unfamiliar changed somewhat as well. While men and strong partisans continued to report higher levels of familiarity, older respondents did, too.

	Winter 2016	Summer 2016	Fall 2016	Spring 2021
Intercept	0.474*	0.406*	0.415*	0.170*
	(0.057)	(0.058)	(0.058)	(0.043)
Black	0.077	0.063	0.126	-0.018
	(0.066)	(0.067)	(0.065)	(0.042)
White	0.046	0.045	0.046	-0.038
	(0.048)	(0.046)	(0.044)	(0.036)
Hispanic	-0.062	-0.099	0.022	-0.071
	(0.078)	(0.070)	(0.080)	(0.046)
Has BA	-0.073*	-0.077*	-0.088*	-0.020
	(0.021)	(0.022)	(0.021)	(0.016)
Female	0.130*	0.114*	0.104*	0.092*
	(0.021)	(0.022)	(0.021)	(0.016)
Age 30-44	-0.004	0.051	0.040	0.084*
	(0.049)	(0.039)	(0.054)	(0.027)
Age 45-64	-0.029	0.078*	0.046	0.200*
	(0.034)	(0.036)	(0.040)	(0.025)
Age 65+	-0.059	0.075*	0.035	0.176*
	(0.037)	(0.038)	(0.042)	(0.026)
Democrat	-0.095*	-0.082*	-0.096*	-0.003
	(0.022)	(0.022)	(0.022)	(0.016)
Strong Partisan	-0.093*	-0.108*	-0.056	-0.070*
	(0.029)	(0.031)	(0.029)	(0.023)
Extreme Ideology	0.000	-0.007	-0.015	0.001
	(0.022)	(0.024)	(0.022)	(0.017)
R ²	0.082	0.075	0.071	0.129
N	989	972	1024	1110

* $p < 0.05$

Table 5: This table displays regressions of the fraction of pairings for which each respondent indicated she was not familiar with one or both politicians.

