

Ideology and Extremism of Interest Groups: Evidence from Lobbyist Declarations in Three States

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Abstract

What are the ideological positions of private interests? Valid measurements of interest group and legislator preferences on the same scale enable a closer examination of the role of private interests in the legislative process. In this paper, I exploit lobbying disclosure requirements in Iowa, Nebraska, and Wisconsin to provide a new measure of interest group ideology. These states' legislatures either permit or require lobbyists to declare their principals' positions on lobbied bills. I combine these data with roll call votes and candidate survey responses to estimate, via an item-response model, the ideal points of legislators and interest groups in the same space. Although the interest groups' position-based ideal points correlate strongly with contribution-based measures, there is more extremism in the former, which is primarily driven by conservative-leaning groups. In addition to providing a new measure of interest group ideology, the analysis suggests that private interests, including corporations and trade groups, cannot be ruled out as a source of partisan polarization.

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1 Introduction

What are the ideological positions of interest groups and how do they compare to these of legislators?¹ Valid measurements of interest group and legislator preferences on the same scale enable a closer examination of the role of private interests in the legislative process: For example, to what extent do interest groups contribute to legislative polarization? What motivates interest group' contributions to political candidates? And do private interests seek access to lobby ideological allies, or do they also attempt to lobby non-aligned legislators?

In this paper, I leverage lobbying disclosure requirements in the Iowa, Nebraska, and Wisconsin to collect the positions of interest groups' positions on lobbied bills as declared by their lobbyists at different times of the legislative process. By treating lobbyists' positions on behalf of their principals as votes on the passage of a bill and combining them with roll call votes, I can estimate, using an item-response model, the revealed preferences of interest groups and state legislators in the same basic space. Moreover, the fact that some groups take positions in multiple state legislatures allows me to estimate the positions of interest groups and legislators from all three states on the same scale. I do so by treating interest groups that take positions in multiple states as *bridging observations* that link otherwise disconnected parts of the roll call matrix. Further, I increase the number of bridging observations by supplementing the data with responses to candidate surveys.

The ideal point estimates of private interests show a substantial amount of extremism. Critically, these results are not an artifact of groups only taking positions on controversial bills, and suggest that private interests should not be ruled out as a source of legislative polarization. Next, I compare the position-based ideal points to ideological estimates of the groups' political action committees based on campaign contributions (Bonica 2012, 2013a, 2014, 2016). I find a strong correlation between the ideal points and common-space CFscores of PACs (Bonica 2014a, 2016) linked to labor unions and ideological PACs, but only a very weak correlation between the ideal points and CFscores linked to corporate and trade PACs. A further comparison of the ideal points to CFscores which aim to control for strategic determinants of giving (Bonica 2012, 2013a) finds no correlation, suggesting that these

¹In the following, I use the terms interest groups and private interests interchangeably, unless talking specifically about corporations, which are private interests, but not interest groups.

contribution-based measures are not reflective of differences in policy preferences of corporate and trade PACs.

2 Existing Measures of Interest Group Ideology

Whereas the ideology of legislators has long been estimated on the basis of roll call votes (for an overview, see Poole 2005, Ch. 1), the estimation of interest group ideology on the same scale as legislators has been constrained by a relative scarcity of position-based data. Interest group positions from legislator ratings, have provided the basis for a number of studies to estimate the ideology of interest groups (Poole and Romer 1985; Poole and Rosenthal 1998; Gerber and Lewis 2004; Poole and Rosenthal 2007; McKay 2008).² However, such positions are only available for a limited number of groups, and only for a potentially unrepresentative subset of all the groups' positions (Snyder 1992a; Poole and Rosenthal 2007, 227).

A different set of approaches to estimating interest group ideology has relied on campaign contributions (Poole and Romer 1985; McCarty and Poole 1998; McCarty, Poole, and Rosenthal 2006; Bonica 2013a, 2014a).³ Producing state-of-the-art estimates, Bonica (2013a, 2014a) uses campaign contributions to estimate a large number of candidates and contributors in a common ideological space. Bonica (2014a) assumes position-induced contributions and uses an augmented correspondence analysis to scale the positions of candidates, individual contributors, and political action committees (PACs) from 1980 through 2012.⁴ In order to account for possible investment motivations of PACs (see, e.g. Denzau and Munger 1986;

²Poole and Romer (1985) and Poole and Rosenthal (1998) use interest group ratings of legislators in a least squares unfolding algorithm that treats ratings as inverse distances (Poole 1984, 1990). Gerber and Lewis (2004) and Poole and Rosenthal (2007, Ch. 8) combine interest group ratings of legislators to construct *voting records* for these groups, enabling them to jointly estimate (W-)NOMINATE scores of the interest groups and legislators. McKay (2008) calculates the mean DW-NOMINATE estimate of legislators with perfect ratings to obtain an estimate of interest group ideology.

³Poole and Romer (1985) also estimate the political preferences of political action committees (PACs) as a weighted-mean location of each PAC's contribution. McCarty and Poole (1998) present a spatial model of campaign contributions (PAC-NOMINATE) to estimate the locations of candidates and contributors. In the model, contributors are faced with a series of choices to contribute to either a challenger or an incumbent. McCarty, Poole, and Rosenthal (2006) estimate the ideological preferences of PACs as the money-weighted average of the NOMINATE scores of legislators to whom they contribute.

⁴These estimates are made available in the *Database on Ideology, Money in Politics, and Elections* (DIME) (Bonica 2013b). Whereas the federal-level data goes back to 1980, the state-level data used goes back to different years, ranging from 1990 to 2001. An updated version (Bonica 2016) extends the data to 2014.

Hall and Wayman 1990; Snyder 1992b; Romer and Snyder 1994; Gordon and Hafer 2005), Bonica (2013a) employs an IRT-count model that estimates the location of candidates and PACs on the basis of spatial proximity, as well as non-spatial covariates.

Recent research has compared the contribution-based CFscores to position-based estimates of citizens (Huber and Hill 2017) and legislators (Tausanovitch and Warsaw 2017). However, a similar comparison is still lacking for the estimates of interest group PACs. A potential weakness in using contribution-based measures to estimate PAC ideology is that in addition to ideology, access or investment motivations are likely to be important determinants of the contribution decisions of PACs (Poole, Romer, and Rosenthal 1987; Bonica 2013a, 2014a; Barber 2016a, 2016b).⁵ Further, to the extent that the contribution decision is tied to ideology, PACs may only use a coarse measure based on a subset of votes for their contribution decision (McCarty and Poole 1998).⁶

3 A New Measure of Interest Group Ideology

Lobbyist Declarations in the Iowa, Nebraska, and Wisconsin state legislatures provide a novel source of data for estimating interest groups' and legislators' positions in a common space, which can be leveraged to provide new insights to questions of substantive relevance in U.S. politics. By treating declarations as votes on the passage of a bill, I can estimate the revealed preferences of the lobbyists' principals and state legislators in the same basic space, using an item-response model.⁷ Lobbying principals in the three states include private interests such as companies, non-profit NGOs, trade associations, and unions, but also public interests, such as municipalities, counties, and state agencies and boards.⁸

A main advantage of lobbyist declarations over legislator ratings is that interest group positions are available for many more groups, and provide a much larger set of a group's

⁵While Bonica (2013a) addresses this concern by including candidate and PAC covariates, Bonica (2014a) leaves corporate and trade PACs out of the estimation, since these are deemed to have greater strategic motivations to contribute, and projects them onto the recovered space as supplementary observations.

⁶On the other hand, contributors are also free to consider political actions besides roll call votes in their contribution decision, which could lead to a more complete reflection of ideology (Bonica 2014a).

⁷This approach has previously been applied with positions from legislator ratings (e.g., Gerber and Lewis 2004; Poole and Rosenthal 2007).

⁸While I estimate the ideology of some public interest lobbying principals, the primary focus of the analysis are the preferences of private interests.

declared positions.⁹ Similarly, a main advantage over contribution-based measures is that declarations exist from many non-profit or non-partisan groups that do not contribute, such as state chapters of the League of Women Voters. Organizations that take positions in multiple states as well as responses from candidate surveys enable a joint estimation across states.

3.1 Data

Although all 50 states have reporting requirements for state-level lobbyists, disclosure requirements vary substantially by state.¹⁰ Current lobbying rules in Iowa, Nebraska, and Wisconsin are unusual in that they require lobbyists to report the bills on which they lobby legislators, as well as the principal on whose behalf they lobby on each bill.¹¹ Moreover, in all three states, these declarations are made available online.

Nevertheless, there are several key differences in the reporting requirements. First, lobbyists in Iowa and Nebraska are required to report their principals' positions, while lobbyists in Wisconsin may leave the position undisclosed.¹² Second, the states differ in how quickly lobbyists have to report lobbying activity on bills, and each state has different options for reporting positions. Finally, the states differ in how far back in time data is made available online.¹³ Below, I describe the reporting requirements in greater detail.

The format in which positions are reported is different for each state. In Iowa, lobbyists must choose between *For*, *Against*, and *Undecided* within one day of lobbying a legislator.¹⁴ Similarly, they must report any change in the communicated position on behalf of a principal within one working day.¹⁵ Lobbyists report their principals' positions through an online

⁹Of the above-mentioned studies that rely on legislator ratings, the highest number of estimated interest groups was 72 (McKay 2008). By contrast, I can estimate the ideal points of 613 lobbying principals.

¹⁰For an overview from the National Conference of State Legislatures, see <http://www.ncsl.org/research/ethics/50-state-chart-lobbyist-registration-requirements.aspx>.

¹¹The rules concerning lobbyists are specified in Iowa Code §68B.36, (and lobbyist rules passed by the legislature) §49-1488 of Nebraska Revised Statutes, and Chapter 13 of the Wisconsin Statutes.

¹²Between 2003 and 2016, only 16.7% of positions were not disclosed.

¹³Whereas records in Iowa before 2005 do not indicate the name of the lobbyist's client, records in Nebraska are available going back to 2001. In Wisconsin, the current website provides records going back to 2003.

¹⁴The *Undecided* declaration is also used to indicate that the lobbyist is monitoring a bill which may be of interest to a his or her principal.

¹⁵Since 2015, lobbyists may also choose *Withdraw* as a position to indicate that the principal is no longer interested in the legislation. However, previous declarations will remain visible.

system, and the positions, once reported, are immediately made publicly accessible as *lobbyist declarations* on the website of the Iowa State Legislature.¹⁶ A declaration includes the name of the bill or resolution, the name of the lobbyist, the name of the principal, and the date when the declaration was made.¹⁷ Each bill in the online *BillBook* has a link to the relevant lobbyist declarations.¹⁸ Differently from Nebraska and Wisconsin, Iowa requires the representatives of state offices and agencies to register their position online.

Wisconsin has a similar reporting system to Iowa. Lobbyists must register their principals' interest within 15 days of first communicating with a legislator. Furthermore, lobbyists who choose to report their principals' position can choose between *For*, *Against*, *Other*, and *Undisclosed*. In addition, lobbyists can upload documents and links to documents in support of their position, as well as a comment with a maximum of 250 characters.¹⁹ These statements are immediately made publicly accessible through the website *Eye on Wisconsin*, currently maintained by the Wisconsin Ethics Commission.²⁰ As in Iowa, lobbyists in Wisconsin may amend their principals' reported position at any point in the legislative process, with previously reported positions remaining publicly accessible. The online database shows the date a position was first reported or amended. Differently from Iowa and Nebraska, it does not show specify which lobbyist reported the position on behalf of a principal.

In Nebraska, lobbyists must register the positions they communicated on behalf of their principals on a *Statement of Activity* (Nebraska Accountability and Disclosure Commission Form D) within 45 days of the end of a legislative session.²¹ Lobbyists are required to report communicated positions on bills. Whereas in Iowa and Wisconsin the reported positions refer to the version of the bill that is current at the time, the reported positions in Nebraska generally refer to the last version of the bill. However, some lobbyists also report their

¹⁶A screenshot of the reporting application is shown in Figure A.2 in Appendix A.1.

¹⁷Information on the exact time that a declaration was made is available starting 2009.

¹⁸<https://www.legis.iowa.gov/legislation/BillBook>

¹⁹See Figure A.1 in Appendix A.1 for a screenshot of the reporting system from a training presentation by Wisconsin's Government Accountability Board.

²⁰The website is available at <https://lobbying.wi.gov/Home/Welcome>. The positions are often viewed by legislators ahead of committee proceedings and votes (see Figure A.1 in Appendix A.1). The Wisconsin Government Accountability Board (GAB) was replaced by the Wisconsin Elections Commission and the Wisconsin Ethics Commission on June 29, 2016, pursuant to Wisconsin Act 118.

²¹See §49-1488. An example of a completed Statement of Activity is provided in Figure A.3 in Appendix A.1.

principals' positions at different stages of the legislative process (e.g., *Support as Introduced, Oppose as Amended*).²² Electronic versions of filed forms are available on the website of the Nebraska state legislature.²³

I collected and assembled dataset of all lobbyist declarations from Iowa between 2005 and 2016, all statements of activity from Nebraska between 2003 and 2016, and all principal lobbying efforts in Wisconsin between 2003 and 2016. I excluded lobbyist declarations from Iowa from 2003 through 2004, as these do not include information on the lobbyists' principals and the date when the declaration was made. I also did not include statements of activity from Nebraska or Wisconsin before the 2003 session to maintain a relative balance in the time periods across states.²⁴ Given the potential for many changes in political control, I excluded declarations from lobbyists representing local governments (e.g., municipalities or school districts) in the estimation. Further, I collected the state legislative roll calls and bill histories from 2003 through 2016 for all three states.

I also collected all available *Political Courage Test* (PCT) surveys on behalf of state legislative and congressional candidates in Iowa, Nebraska, and Wisconsin between 2002 and 2016 from *Vote Smart's* Archive (see also Shor, Berry, and McCarty 2010; Shor and McCarty 2011, 2015).²⁵ In order to compare the position-based estimates of interest groups to existing contribution-based estimates of PACs, I downloaded datasets containing the common-space CFscore contributor estimates (Bonica 2014a, 2016) and the covariate-adjusted CFscores (Bonica 2012, 2013a).

²²Since 2015, lobbyists in Nebraska must submit statements of lobbying activity electronically, which limits their options to *Support*, *Oppose*, and *Neutral* (LB 782, 2012). Prior to 2013, many statements were submitted manually, allowing for more variation in how positions were described.

²³See <http://nebraskalegislature.gov/lobbyist/view.php?v=principal>. Figure A.3 in Appendix A.1 shows a screenshot of the 2009 Session Statement of Activity by Lobbyist David S. McBride on behalf of the Nebraska Association of Health Underwriters (NAHU).

²⁴The Nebraska state legislature makes all statements of activity since 2001 available on its website. The current *Eye on Wisconsin* website only shows lobbying efforts from 2003-2016. However, an older website (<http://ethics.state.wi.us/LobbyingRegistrationReports/LobbyingOverview.htm>) also has position records from 2001-2012. In addition, prior lobbying efforts are available in paper format from the State of Wisconsin Historical Society (see <http://www.gab.wi.gov/lobbying>).

²⁵Prior to 2010, the PCT was called the *National Political Awareness Test* (NPAT). Access to the archive is available upon request to Vote Smart members who are academics or journalists via votesmart.org. Since the archived 2012 Wisconsin State Legislative PCT survey has all entries missing, I collected all available responses from that survey from Vote Smart's API. Several legislators completed PCTs in different years and elections.

3.2 Combining Position-Based Data from Multiple Sources

I used the lobbyist declaration data to construct a vote matrix that combines principals' positions with roll call votes in the Iowa, Nebraska, and Wisconsin state legislatures. These data were supplemented with candidate responses to the PCT. In this section, I first describe how I combined lobbying declarations with roll call votes. I then discuss how I merged the position-record of principals across states and legislative sessions. Lastly, I provide an overview of the coding of Political Courage Test responses.

Since bills are often amended in the legislative process, matching declarations with final passage votes requires assumptions about which version of a bill a declared position by a principal refers to. In each state, I used the bill histories to determine the dates of successful amendments to identify which version of a bill was current at a particular date.²⁶ I assume that any successful amendment constitutes a change in the version of a bill.²⁷ In Iowa, I also merged bill histories and the declaration record for study bills and subsequently introduced identical House Files or Senate bills. Moreover, I merged bill histories and the declaration record for identical companion bills within the same chamber of the Iowa General Assembly.

Further, I assume that any declaration applied to the then-current bill version. Therefore, I do not assume that declarations referred to previous versions of a bill. In Iowa and Wisconsin, where position statements can be made throughout the legislative process and are reported by date, I assume that any declaration made at a time when a previous bill version was current carries over to subsequent version unless a new declaration is made.²⁸ Any bill versions that were only current for a day or less were disregarded, under the assumption that potential changes in the principal's position could not be picked up in such

²⁶The bill histories identify the date of any legislative action on a bill. I downloaded all bill histories from Iowa from <https://www.legis.iowa.gov/legislation/billTracking/billHistory>. In Nebraska, archived bill chronologies are available by session, e.g., at http://www.nebraskalegislature.gov/session/view_archives.php?leg=98 for the 98th Legislature (2003-2004). On the website of the Wisconsin state legislature, each bill history is listed on the website of the bill, e.g., <http://docs.legis.wisconsin.gov/2015/proposals/reg/asm/bill/ab1> for Assembly Bill 1 in the 2015-2016 Wisconsin legislature.

²⁷I only considered a bill as amended when the amendment was approved by a floor vote. An alternative way to proceed would be to distinguish between contentious and non-contentious amendments.

²⁸In Iowa, since I aggregated declarations by different lobbyists for the same principal, and since lobbyists tend to make an initial *Undecided* declaration before declaring a position in support or opposition, I excluded all *Undecided* declarations by lobbyist 1, for principal A on bill X, unless lobbyist 1 had previously declared support or opposition to bill X for principal A.

a short interval. However, declarations from the day on which an amendment takes place were not disregarded and were matched to subsequent bill versions if these last longer than one day.²⁹

In Nebraska, position statements on behalf of principals are generally made after the end of a session. Therefore, I assume that any general position statement such as *Support* or *Oppose* without reference to amendments or different versions of the bill applied only to the then-current version of the bill. As a result, there were relatively fewer positions on the initial versions of bills that were reported out of committee. I used the bill histories to determine the bill version current at the end of the session. However, whenever a more detailed position was provided, such as *Oppose as Introduced*, *Support as Passed*, I manually coded these accordingly, i.e., with a *nay* vote on the first bill version and a *yea* vote on the last bill version. I also manually coded positions on amendments or procedural motions, whenever they could be matched to a roll call vote. Any discrepant positions on behalf of one principal that could not be reconciled were coded as *missing*.³⁰

In the ideal point estimation, I only used lobbyist statements that indicate a position for or against the passage of a bill, resolution, amendment, or procedural matter. Where any other position categories were matched to a bill version, I recoded the position to missing. This was done in order to simplify the analysis, as many of the other response categories are harder to interpret. For example, in Iowa, the position *Undecided* may indicate that a lobbyist is monitoring a bill and not a genuinely undecided position. In Wisconsin, the position *Other* may indicate a support of portions of the bill and an opposition to others, a neutral position, or a general concern or interest relating to the legislation. Similarly, the *Neutral* position in Nebraska, which has experienced a pronounced increase in usage since 2012 may indicate monitoring of bills, supporting some parts while opposing others, as well

²⁹These assumptions imply active lobbyists that follow the progress of bills and change their declaration if the position of their principals changes. I assume that lobbyists in Iowa and Wisconsin use the online reporting system to communicate any changes in their principals' position to legislators as quickly as possible. In Iowa, this assumption is also motivated by Rule 2.2 of the Joint Rules Governing Lobbyists (HJR 7 2015-2016), that requires lobbyists to declare any change in their principal's position within a business day. Results from robustness tests in which I made different assumptions about how to merge declarations with bill versions, e.g., that declarations were only merged with the first bill version or only the bill version that was current at the time, are available upon request.

³⁰This affects less than 50 positions.

as a reflecting a position between support and opposition.³¹ Without additional information on which responses indicated a genuine undecidedness, naive coding of *Undecided* declarations in Iowa, *Neutral* positions in Nebraska, or, *Other* positions in Wisconsin as a middle category between *Oppose* and *Support* is likely to result in biased estimates (see e.g., Lo 2013).³²

In the final step, I constructed the legislator-principal-vote matrix from the matched position statements by combining the declarations on bill versions with legislator roll calls whenever a bill version is associated with a final passage roll call vote. Whenever a bill version was not associated with a roll call vote, for example, because the bill died in committee, I added the bill version and its associated declarations to the matrix as a separate column. Therefore, declarations on bills that died in committee were coded as “votes” on the initial version of the bill.

Merging the position-record of lobbying principals across states and legislative sessions requires assumptions about the identity of a principal.³³ I used the principals’ registered names, addresses, and websites in order to identify matches across states.³⁴ For non-profit organizations with the same name (e.g., unions), I assume that an organization is a separate actor within a state, unless the registration record clearly indicates a federal or regional representation by the organization. I did not merge subsidiary and parent (or holding) companies, unless the registration indicates a representation by the parent company. In cases where one company with a registered lobbyist acquires another company with a registered lobbyist, and where the registration record of principals does not reflect this change, I changed the name to reflect either its new subsidiary name or, in case the acquired company was likely represented by a new parent company, to the name of the new parent company.

³¹The use of the *Neutral* position in Nebraska increased from about 900 in 2012 to about 12,500 in 2016, while the combined number of supporting and opposing positions stayed roughly the same across the years.

³²In a robustness check in which the response category *Undecided* was naively coded as a middle category between *For* and *Against*, and Iowa legislator were scaled together with interest groups that took positions in Iowa, the results lacked face-validity in that the estimation placed all interest groups in a very narrow band between all Democrats and all Republicans. Similarly, scaling legislators and interest groups in Nebraska, and treating the neutral position as a middle category lacked face-validity in that it resulted in almost all interest groups, including unions, being more conservative than the most conservative Nebraskan legislator.

³³This issue does not usually arise in item-response analysis, because the subjects tend to be individuals, such as legislators, voters, or students.

³⁴In Nebraska, I also employed an official directory of name changes to identify principals which changed their name.

Since using the PCT to bridge across chambers, states, and years requires bridging questions to be *measure invariant* across the groups being merged (e.g., Oberski 2014), I applied several criteria for bridging questions. First, I did not merge answers to a question across states if the question references state-specific status quo policies and/or proposals. I merged answers to these questions across years within a state only when the status quo is unlikely to have changed. In cases of national policies and a national status quo, I merged across states, but not across years. Finally, general questions that do not refer to a potentially changing status quo permitted merging across states and years.

I dichotomized questions on the Political Courage Test in two ways. For question items where candidates were asked to pick the policies they support (e.g., on abortion), I dichotomized each response category as a *Yes/No* or *Support/Oppose* item. For question items where candidates chose between different levels of spending or taxation, I dichotomized the question by turning it into *Support for Increase/Support for Decrease*. If the respondent chose *Maintain Status*, the answer was coded as *missing*. When a candidate filled out a PCT in multiple years and the same question was answered differently, I also coded the answer as *missing*.

3.3 Descriptive Statistics of Principals and Matched Declarations

The number of registered principals within each state is quite stable across time. In Iowa, the number of registered principals in a given two-year term between 2005 and 2016 ranges from a minimum of 589 (2005-2006) to a maximum of 702 (2013-2014) with a mean of 652. In Nebraska, the minimum, maximum, and mean number of registered principals are 419 (in 2003-2004), 493 (in 2007-2008 and 2015-2016), and 470, respectively. The number of registered principals in Wisconsin ranges from 547 (2003-2004) to 638 (2009-2010), with a mean of 584.

The number of declarations matched to bill versions varies across time in Iowa and Wisconsin, but is relatively stable in Nebraska. The number of matched declarations in Iowa is lowest in 2015-2016 (9,980) and highest in 2007-2008 (21,737). In Nebraska, the 2003-2004 legislature has the lowest number of matched declarations (6,724) while the 2005-2006 legislature has the highest (7,682). In Wisconsin, the number of matched declarations

from 10,294 (2013-2014) to 14,225 (2009-2010). On average, Iowa has the most number of matched declarations (15,995), followed by Wisconsin (12,498) and Nebraska (7,215).

3.4 Sincere Voting and Other Assumptions

As is common in the roll call literature, I assume sincere voting and ignorable nonresponses by legislators (e.g., Poole 2005, Poole and Rosenthal 2007; Bafumi and Herron 2010; Shor and McCarty 2011; Jessee 2016).³⁵ I follow previous estimations of interest groups using position-based data in assuming that the reported positions of interest groups are also sincere, and that nonresponses are ignorable (e.g., Poole and Romer 1985; Poole and Rosenthal 1998; Gerber and Lewis 2004; Poole and Rosenthal 2007; McKay 2008).³⁶ In a robustness check (see Section 4.1), I address the concern that interest groups taking positions on votes that discriminate strongly between the parties leads to artificial extremism (Snyder 1992a).

Further, as is standard in the roll call literature, I assume conditional independence of the votes across legislators (and interest groups) and votes.³⁷ While party whipping of legislators can similarly violate conditional independence (Clinton 2012), joint scaling of legislators and interest groups does not exacerbate this problem.³⁸ Relatedly, while censoring of the agenda has the potential to bias ideal point estimates of legislators (Hirsch 2011; Clinton 2012), as long as interest groups' preferences estimates are valid, this problem should be mitigated by the fact that interest groups are taking positions on bills that do not receive a roll call votes.

There are several justifications for the assumption that lobbyist positions on behalf of principals can be treated as sincere votes on bill versions, similar to a roll call vote by a

³⁵See e.g., Snyder and Groseclose (2000), McCarty, Poole, and Rosenthal (2001), Clinton, Jackman, and Rivers (2004), Poole and Rosenthal (2007, Ch. 7), Rosas, Shomer, and Haptonstahl (2015) for tests of sophisticated voting. For exceptions concerning ignorable nonresponses, see e.g., Lo (2013) and Rosas, Shomer, and Haptonstahl (2015).

³⁶Due to the discretionary nature of interest group activity, modeling of interest group nonresponse and other responses beyond support and opposition remains an important objective for future research.

³⁷The assumption of conditional independence is valid if, conditional on a legislator's ideal point and the item parameters for a vote, the vote choice is independent of all other vote choices by all legislators. These assumptions are consistent with a view of interest groups that help draft legislation or lobby for amendments, thereby moving the vote cutpoint (Poole and Rosenthal 1991) and rule out vote-buying interest groups (e.g., Snyder 1991), interest groups who base their decision to lobby on those of other groups (e.g., Holyoke 2009), and similar violations of the conditional independence assumption.

³⁸If an interest group's pressure influences a vote, it will do so regardless of whether the group's position is included.

legislator. As described in Section 3.1, the Iowa, Nebraska, and Wisconsin state legislatures have laws and legislative rules governing how lobbying on bills should be reported. In the case of Iowa and Nebraska, these rules include the positions taken on each bill.³⁹ In addition, misreporting a position is likely to harm the reputation of lobbyists and thereby jeopardize their success in lobbying (Ainsworth 2002, 132). Moreover, to the extent that interest groups wish to inform legislators of their positions, lobbyists’ declared positions that differ from personally communicated positions would arguably increase a legislator’s uncertainty. Intentional misreporting by the lobbyist may also complicate communication between the lobbyists and their principals. Lastly, while there may be strategic reasons for interest groups to take or not take positions towards legislation, such incentives also exist (perhaps even more strongly) in the decision to contribute to candidates (Clinton 2012, 86).

In comparing position-based estimates from three states with contribution-based estimates from nationally active interest groups, I assume, in line with Bonica (2014a), that these groups have the same ideal points in different states, as well as in Congress. If the assumption of constant group preferences across time is valid (see also Bonica 2012, 2013a, 2014a, 2016), the lack of perfect overlap between the time periods on which the estimates are based should not be problematic.⁴⁰

3.5 Joint Estimation of Legislators and Interest Groups

In order to scale legislators and interest groups, I employed Clinton, Jackman, and River’s (2004) 2-parameter item-response model (*IDEAL*) which is implemented in the *R* package *pscl* (Jackman 2015).⁴¹ I jointly estimated legislators and interest groups by using a combi-

³⁹To be sure, the publicly available information does not show that any formal sanctions were ever levied as a result of a violation of misreporting a communicated position, or as a result of failing to communicate a position.

⁴⁰The position-based ideal points are based on roll call from 2003 through 2016, candidate survey data from 2002 through 2016, and lobbyist declaration data from 2003 through 2016 (2005 through 2016 in Iowa). The contribution-based measures are estimated using contribution data from 1980 through 2014 (Bonica 2016) and 1980 through 2010 (Bonica 2012).

⁴¹Starting values were obtained via scaled eigenvectors of the agreement score matrix, calculated by selecting the option *eigen* in the *ideal* function. I discarded the first 50,000 iterations and thinned the subsequent 200,000 iterations by sampling from every 100th iteration, resulting in 2001 samples from the posterior distribution. I examined convergence through a combination of commonly used tests (Heidelberger and Welch 1983; Gelman and Rubin 1992) on the posterior distribution of three chains and a visual analysis of the trace plots (see Appendix A.2).

nation of bridging observations to provide sufficient “glue” (Poole 2005) to combine otherwise disjoint parts of the vote matrix. Interest groups whose lobbyists took positions in multiple states, chambers, or years permit merging across states, chambers, and sessions. Further, candidate responses on the PCT serve as bridging votes across states and chambers, while politicians who served in both chambers of a legislature or in multiple sessions help to bridge across chambers and sessions.⁴²

Votes with few legislators and legislators with few votes may contain little information and therefore lead to estimates with a lot of uncertainty associated with them. In order to balance the trade-off of estimating the ideal points of legislators and interest groups with sufficient precision and estimating a substantial number of interest groups, I reduce the vote matrix so that all included *votes* have a minimum number of 9 *legislators*, all included *legislators* have at least 20 *votes*, and at least 4 *legislators* voting in the minority.⁴³ Since many groups only take positions on few bills, or on bills that not many other groups lobby on, this reduces the number of lobbying principals in the vote matrix from 3,401 to 613. Similarly, the number of matched bill versions is reduced from 50,640 to 11,904.⁴⁴

4 Results

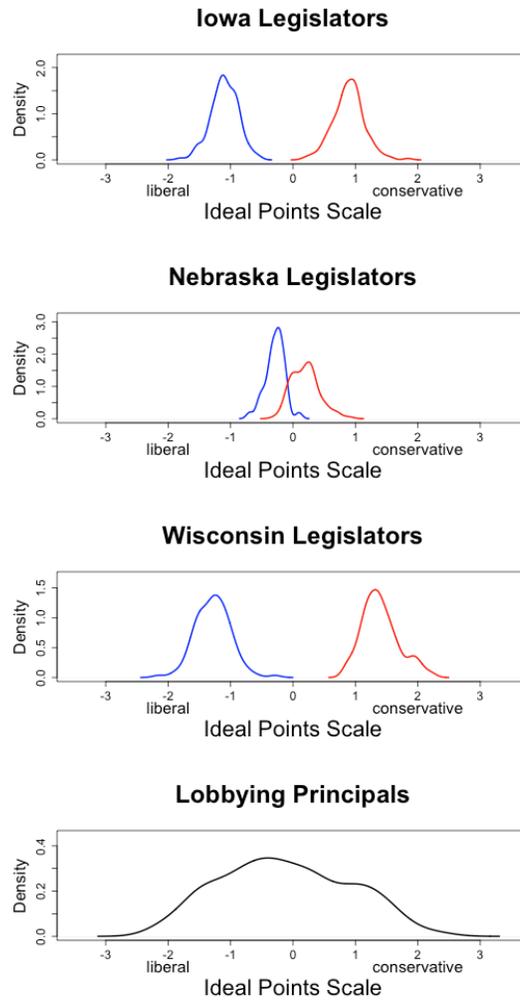
Overall, the model estimates predict 92.4% of votes correctly. Looking only at lobbying principals, the percentage of correctly classified votes is 86.7%. In order to control for different vote margins, I employ the measure of aggregate proportional reduction in error, or *APRE* (see, e.g. Poole and Rosenthal 2007, 36-37), where the baseline for classification

⁴²I also leverage the additional bridging observations for a test of whether the common ideal point (CIP) assumption required for joint scaling is met for a joint estimation across states, and do not use actors as bridging observations when the assumption is not met (see Appendix A.4).

⁴³Here, I use *legislator* to refer to either legislators or interest groups and *vote* to refer to roll call votes or question items on which *legislators* took positions. For votes with more than 120 actors, the minimum lopsidedness requirement was changed to 2.5%, in which case at least 4 actors have to be voting in the minority. In a comparison with estimates where the requirements used were 20 votes per item, with at least 4 being in the minority, and 20 votes per actor, the rank-order correlations between the ideal points and item parameters that are estimated in both are extremely high ($r_s = 99.3$ for common ideal points, $r_s = 99.3$, for common item discrimination parameters, and $r_s = 99.3$ for the item difficulty parameters).

⁴⁴Correspondingly, the number of positions from lobbying principals on bill versions decreases by 79% from 194,008 to 40,526.

Figure 1: Ideal Point Distributions of Jointly Estimated State Legislators and Lobbying Principals



Note: This figure shows the ideal point distributions of legislators and lobbying principals based on a joint estimation across the three states. The first three panels show the ideal point distributions of Iowa (Panel 1), Nebraska (Panel 2), and Wisconsin state legislators (Panel 3) by party (blue for Democrats, red for Republicans). There are 136 Democratic and 182 Republican legislators from Iowa, 40 Democratic and 93 Republican legislators from Nebraska, and 121 Democratic and 167 Republican legislators from Wisconsin. Panel 4 shows the ideal point distribution of 613 principals that lobbied in one or more of the three states between 2003 and 2016. Respondents to the PCT and principals that took positions in multiple states are only used as bridging observations if they do not violate the common ideal point assumption. Not shown are the ideal points of independent legislators in Nebraska ($n=4$) and Wisconsin ($n=3$), as well as candidates that were only estimated based on the PCT.

errors is the minority vote.⁴⁵ The APRE for all actors is 0.72, whereas for lobbying principals it is 0.53.⁴⁶

The panels in Figure 1 present the distribution of ideal points from the joint scaling.⁴⁷ The center of the ideal point distributions of Democratic and Republican legislators can be ordered from least extreme in Nebraska (Panel 2), to most extreme in Wisconsin (Panel 3). The ideological distribution of estimated lobbying principals (Panel 4) has a left-of-center mode and covers the entire range from the most liberal to the most conservative legislator. In particular, legislator ideal points range from -2.15 to 2.23, while those of lobbying principals range from -2.35 to 2.53.

4.1 Controversial Votes and the Potential for Artificial Extremism

If interest groups only take positions on controversial votes that discriminate strongly between the parties it can lead to artificial extremism in the ideal point estimates of interest groups (Snyder 1992).⁴⁸ To address this concern, I compared the level of interest group extremism in two sets of groups, those that are presumed to be susceptible to artificial extremism and those that are not.

To identify these two sets, I tested whether the distribution of cutpoints from a group's *votes* was significantly different from the overall distribution of cutpoints.⁴⁹ In addition, I tested for each group if the variance of *its* cutpoint distribution was significantly lower than that of the overall distribution of cutpoints. I classified 213 groups as susceptible to artificial

⁴⁵The minority vote is determined from all actors' positions on an item.

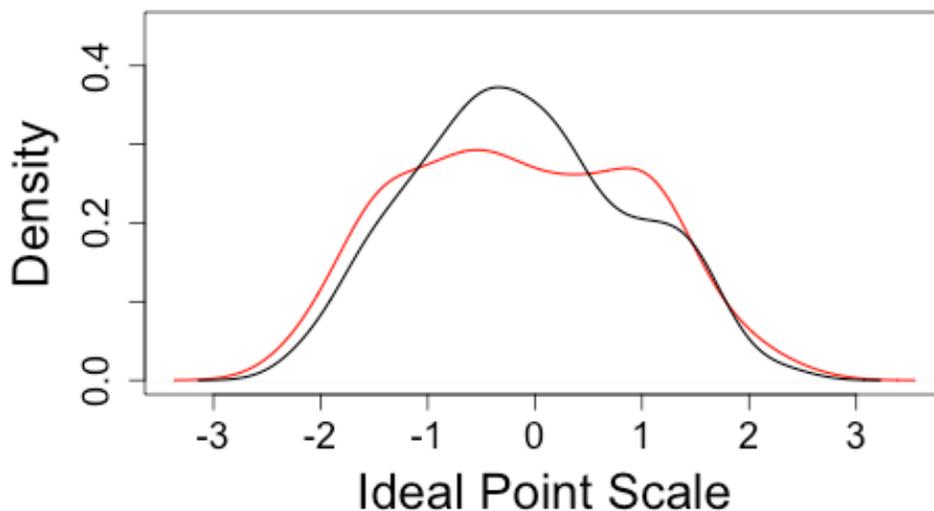
⁴⁶While in Congress, such a moderate APRE for a model estimating a single dimension would be indicative of a "second dimension" (Poole and Rosenthal 2007, Ch. 3), the same does not necessarily follow for interest groups, where the additional variation in positions may not be easily captured by *one* additional dimension. In order to test for a second dimension, I conducted a separate analysis using W-NOMINATE (Poole *et al.* 2011), using a vote matrix with minimum legislator and vote requirements of 20 and a minimum number of 4 minority votes. The two-dimensional ARPE was 0.821 compared to the one-dimensional APRE of 0.803. The marginal proportional reduction in error (MPRE) of 0.089 (less than 10%) does not offer strong evidence for a second dimension.

⁴⁷In Appendix A.3.1, I present estimates from within-states estimations. Further, in Appendix A.3.3, I compare the common-space ideal points of legislators to the commonly used NPAT common space scores (Shor and McCarty 2011, 2015).

⁴⁸While this problem is severe in legislator ratings by interest groups (Snyder 1992), it can also occur in item-response models if the voting error is sufficiently small. The logic is similar to the bias that arises from a censoring of the agenda (Hirsch 2011; Clinton 2012).

⁴⁹I employed a two-sided Kolmogorov-Smirnov test, limiting the analysis to those votes that discriminated significantly on the main dimension and excluding items from the candidate surveys.

Figure 2: Robustness Check to Address Potential Artificial Extremism



Note: This figure presents the distributions of estimated ideal points of 213 groups that were identified as being susceptible to artificial extremism (red) and 400 groups that were not identified as being susceptible to artificial extremism (black).

extremism, as they had a significantly different cutpoint distribution for their votes and the variance of *their* cutpoints was significantly lower than the overall variance of cutpoints. On the other hand, 400 groups did not meet these criteria and were classified as not being susceptible to artificial extremism. If artificial extremism is driving the results, we should expect the ideal points of the susceptible subset to exhibit a higher variance than the ideal points of the non-susceptible subset.

In Figure 2, I compare the ideal point distributions of the two sets of groups. The ideal point distribution of the susceptible set is shown in red, that of the non-susceptible set is shown in black. While the two distributions do not overlap perfectly, a Kolgomorov-Smirnov test reveals no statistical difference between the two distributions ($p=0.5$). Moreover, although the ideal point variance is somewhat higher for groups identified as susceptible to artificial extremism (1.21 vs. 1.01), an F-test of the equality of the variances is not statistically significant ($p=0.12$). This suggests that artificial extremism is not primarily driving the level of interest group extremism.

4.2 Comparison with Contribution-Based Estimates of Ideology

Of the 613 lobbying principals for which I estimated an ideal point, I was able to link 322 to a PAC and a corresponding common-space CFscore (Bonica 2016). These include PACs that were not part of the original CFscore estimation, but later projected onto the recovered space as supplementary observation.⁵⁰ Figure 3 compares the common-space CFscores of these 322 PACs to the ideal points of the associated interest groups. The CFscores are from linked PAC with the largest dollar amount in contributions between 2002 and 2014.⁵¹ Although there is a strong overall rank-order correlation between the two estimates ($r_s = 0.71$), there is a higher level of interest group extremism in the ideal points. This is driven by groups with moderate CFscores, but ideal points close to the most extreme Republican legislators.⁵²

What can account for these discrepancies? Bonica (2014a) addresses the concern of non-ideological motivations by excluding corporate and trade PACs from the estimation, since the private interests that control them are more likely to have investment motivations. The CFscores from these PACs were then subsequently projected onto the recovered space. The same procedure was applied to PACs with contributions to only one recipient. With a subgroup analysis, I examine whether the discrepancies are driven by projected observations. In particular, the first panel of Figure 4 compares PACs for which CFscores were estimated, as opposed to projected (n=171).⁵³ The second panel compares corporate and trade PACs for which CFscores were projected, and where the PAC contributed to more than one recipient

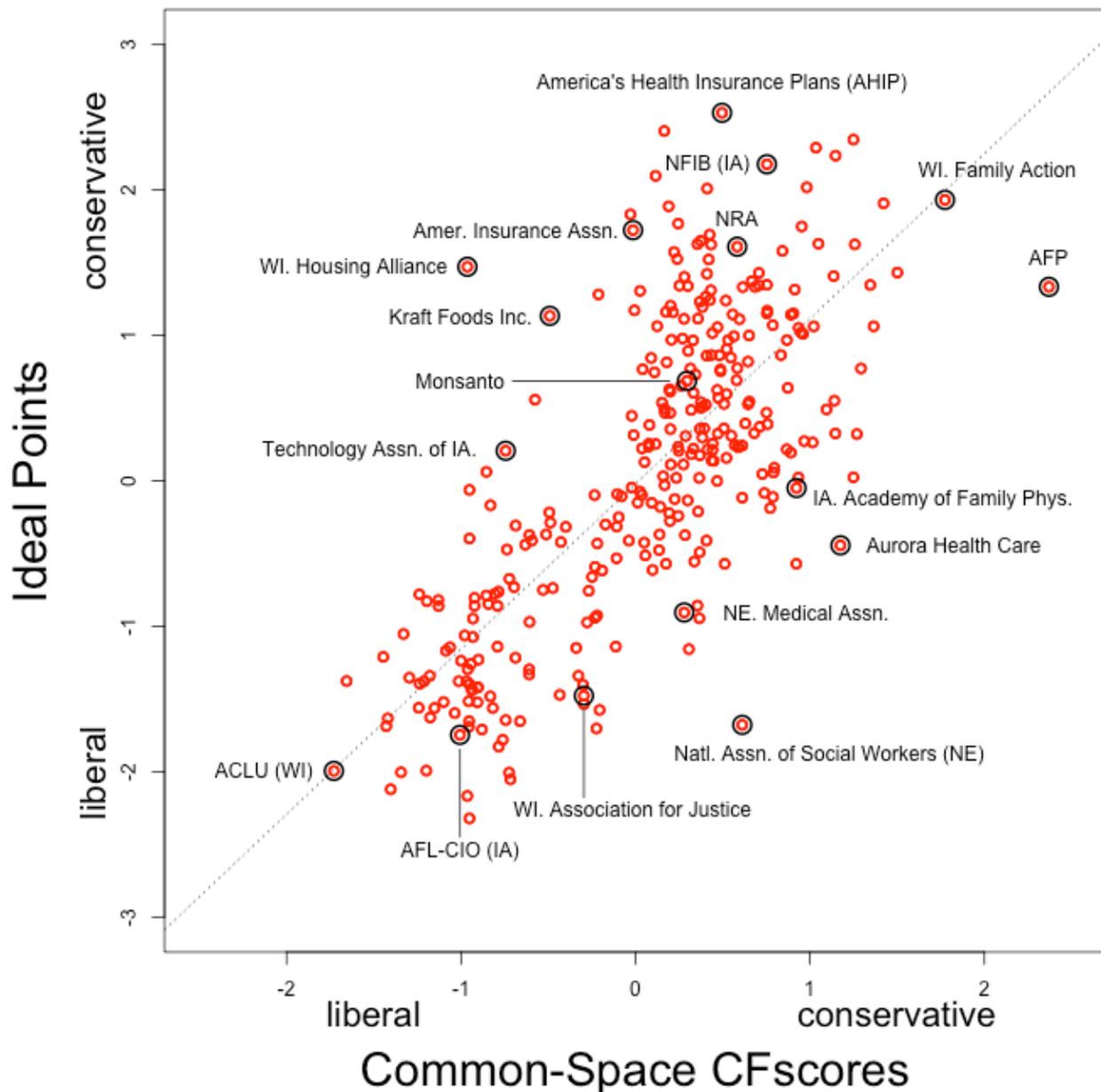
⁵⁰I describe the process of linking interest groups positions with estimates of their PACs' common-space CFscores in Appendix A.5. The 291 lobbying principals that I was not able to link include many interest groups that do not contribute to political campaigns. Non-contributing groups include many "charitable" organization (e.g., many religious organizations) and non-partisan groups (e.g., state chapters of the League of Women Voters or associations of municipalities). In some cases, unions could not be linked, because lobbyists were hired by state chapters, but contributions were made by local chapters. State agencies and boards (especially in Iowa) constitute another set of lobbying principals without contributions. Lastly, name changes or inconsistencies in names may be responsible for additional failures to link interest groups to PACs.

⁵¹Substantially similar results using the common-space CFscore from the PAC with the highest number of distinct contributions are presented in Appendix A.7. The comparison includes PACs that were projected onto the recovered space, either due to being classified as a trade or corporate PAC, or, because it only contributed to one committee. Interest groups were linked to the PACs that represented them, as described in Appendix A.5.

⁵²In Appendix A.7, I compare the level of interest group extremism between the two sets of estimates based on the proportion of groups whose estimates are below the first or above the third legislator quartile. In Appendix A.8, I show that artificial extremism is unlikely to be driving differences in interest group extremism between position-based and contribution based estimates.

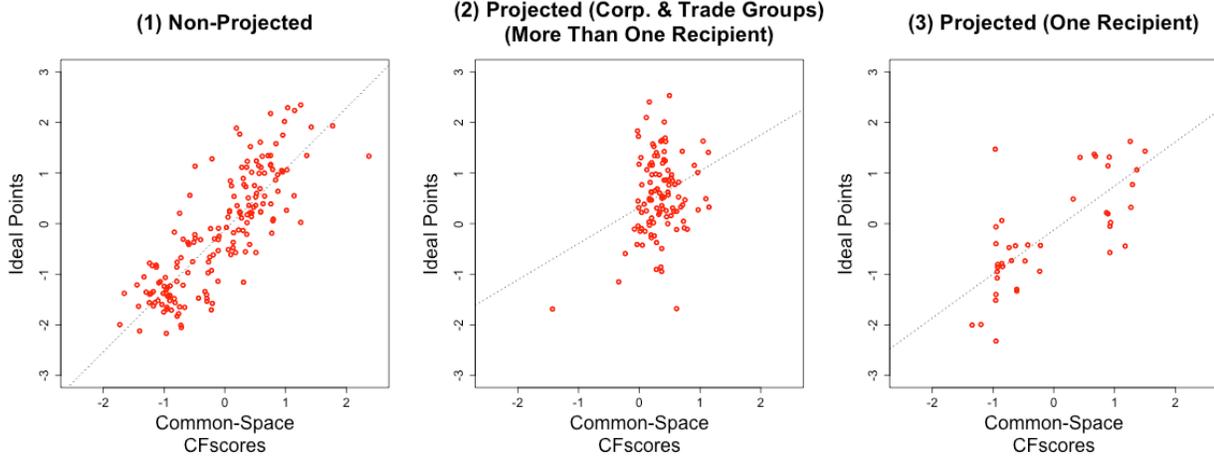
⁵³While the estimated scores are predominantly from labor unions, membership organizations, they also include some corporate and trade PACs that were not projected.

Figure 3: Common-Space CFscores Plotted Against Ideal Points for Linked Interest Groups



Note: This figure plots the Contributor CFscores of 322 linked PACs from the *DIME* (Bonica 2016) against the interest groups' ideal point estimates from a joint scaling in Iowa, Nebraska, and Wisconsin. Groups were linked to the PAC with the largest dollar amount in contributions between 2002 and 2014. The comparison includes PACs that were projected onto the recovered space, either due to being classified as a trade or corporate PAC, or, because it only contributed to one committee. Interest groups were linked to the PACs that represented them, as described in Appendix A.5. The dotted line represents the estimates from a least absolute deviations regression.

Figure 4: Common-Space CFscores Plotted Against Ideal Points (Subgroup Analysis)



Note: The panels in this figure plot the CFscores of 322 PACs from the *DIME* (Bonica 2016) against the ideal point estimates of linked groups. The first panel compares PACs for which CFscores were estimated, as opposed to projected ($n=171$). In addition to ideological groups, labor unions, and professional groups, they include some corporations and trade groups. The second panel compares corporate and trade PACs (as well as seventeen other PACs) for which CFscores were projected, and where the PAC contributed to more than one recipient ($n=109$). The third panel compares PACs (including non-corporate and non-trade PACs) for which CFscores were projected, and where the PAC contributed to only one recipient ($n=41$). The dotted lines show estimates from least absolute deviations regressions.

($n=109$).⁵⁴ The third panel compares PACs for which CFscores were projected, and where the PAC contributed to only one recipient ($n=41$).⁵⁵

It is interesting to note the very strong correspondence between the estimated (non-projected) CFscores and the ideal points ($r_s = 0.83$).⁵⁶ On the other hand, the rank-order correlation for corporations and trade groups with projected estimates and more than one distinct contribution is quite weak ($r_s = 0.15$), especially for observations with CFscores above 0 ($r_s = 0.08$).⁵⁷ These comparisons add external validity to the estimated common-space CFscores of PACs, and provide further justification for excluding corporate and trade PACs from the estimation. They also raise doubts about the validity of common-space CF-score estimates of corporate and trade PACs that were projected onto the recovered space

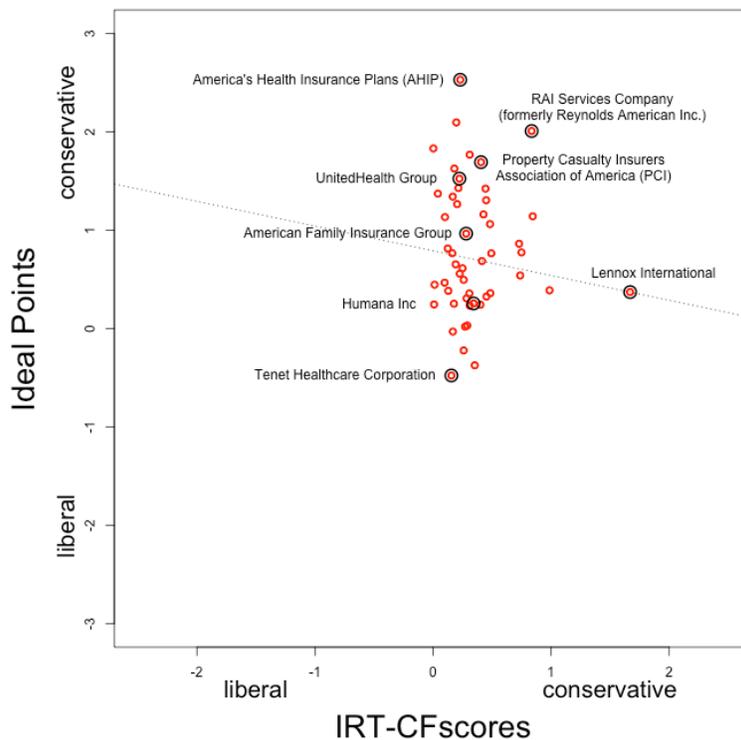
⁵⁴The American Heart Association's PAC (not shown), a non-corporate and non-trade PAC that contributed to multiple recipients, was also projected. Fifteen membership organizations in the sample were also projected.

⁵⁵This includes some PACs that are neither corporate nor trade PACs.

⁵⁶For observations with CFscores below/above zero, the correlations are 0.44 and 0.53 respectively.

⁵⁷The correlation for the observations in the third panel is $r_s = 0.65$.

Figure 5: Covariate-Adjusted CFscores Plotted Against Ideal Points for Linked Corporations and Trade Groups



Note: This figure plots the covariate-adjusted Contributor CFscores (estimated with an IRT count model) of 50 linked corporate and trade PACs (Bonica 2012) against the interest groups' ideal point estimates from a joint scaling in Iowa, Nebraska, and Wisconsin. Groups were linked to the PAC with the highest number of contributions (see Appendix A.6). The dotted lines represents the estimates from a least absolute deviations regression.

and included in the dataset (Bonica 2016) as supplementary observations.

Next, I examine if the inclusion of non-spatial covariates in a contribution-based measure of PAC ideology (Bonica 2012, 2013a) leads to a greater correspondence between the position-based and contribution-based estimates of corporations and trade groups. A comparison between 50 linked corporations and trade groups (Figure 1.5) suggests that this is not the case.⁵⁸ The rank-order correlation in this sample is not distinguishable from zero ($r_s = -0.03$).⁵⁹ Whereas the contribution-based CFscores are almost all in a moderately conservative range, the position-based ideal points vary from somewhat liberal to extremely

⁵⁸Interest groups were linked to the PACs as described in Appendix A.5.

⁵⁹Fifteen of the linked PACs have multiple contributor IDs. I show the comparison between these observations' CFscores and ideal points in Appendix A.7.

conservative.⁶⁰ These results suggest that the moderate contribution-based preference estimates of corporate and trade PACs (Bonica 2013a) are not very reflective of the policy preferences of these private interests, at least on the state level.⁶¹

5 Discussion

The results from the joint ideal point estimation of interest groups, legislators, and candidates reveal a substantial amount of interest group extremism. Critically, this result is not an artifact of groups only taking positions on controversial bills, and suggest that interest groups should not be ruled out as a source of legislative polarization. A comparison between the position-based ideal points and contribution-based common-space CFscores (Bonica 2014a, 2016) shows a strong correlation for directly estimated groups (mostly labor unions and ideological groups). However, there is only a weak, positive correlation between the ideal points and projected CFscores, most of which are linked to corporate and trade PACs. A further comparison of the ideal points to covariate-adjusted contribution measures (Bonica 2012, 2013a) finds no correlation, suggesting that these contribution-based measures are not reflective of differences in policy preferences of corporate and trade PACs.

Whether the preferences of private interests are moderate or extreme relative to those of legislators sheds light on the extent to which those groups may contribute to legislative polarization (e.g., McCarty, Poole and Rosenthal 2006, Bawn *et al.* 2012, Bonica 2013b, Egan 2013). In particular, if interest groups have moderate preferences, they are unlikely to be a driving force behind polarization (Bonica 2013a). The high variance and (in some cases) extreme policy preferences of corporate and trade PACs with moderate contribution records suggests that strong claims of “establishment” organizations acting as a damper on

⁶⁰This variation is not just due to positions on different sets of bills, but also due to different positions on the same set of bills. See, for example, Assembly Bill 29 in the 2013-2014 Wisconsin session, which aimed to reform the Wisconsin law governing collateral source payments in personal injury cases, and on which corporations like Humana Inc. and Anthem (“against”) lobbied on opposite sides of the bill from the American Family Insurance Group (AmFam) and the Property Casualty Insurers Association of America (“for”) (see <https://lobbying.wi.gov/What/BillInformation/2013REG/Information/9702?tab=Principals>).

⁶¹To the extent that the estimated ideal point scale corresponds to a national dimension of political ideology (see Appendix A.3.3), the results also suggest that the moderate contribution-based preferences of corporate and trade PACs are not very reflective of these groups’ policy preferences on legislation in Congress.

polarization may be overwrought.⁶² Relatedly, to the extent that legislators are extreme even compared to state partisans (e.g., Bafumi and Herron 2010, 538), the results suggests a different set of actors that may be represented by legislators with extreme policy preferences.⁶³ The analysis also reveals the difficulty of disentangling ideological and investment motivations of corporate and trade PACs, and highlights the need for further work to examine the determinants of their contributions.

This paper does not examine if the level of interest group extremism varies by policy area and to what extent additional dimensions can account for the positions of private interests. Although prior studies have shown that a single dimension can account for interest group ratings (Poole 1981; Poole and Romer 1985), the lobbying positions of private interests may be structured by additional dimensions. Moreover, tests of the common ideal point assumption for bridging observations (see Appendix A.4) suggest the need for similar tests for bridge actors across different chambers of the same legislature, or across different sessions of the same legislature. In a similar vein, the possibility of differential item functioning for the different sets of actors whose ideal points are jointly estimated should be examined more closely (see e.g., Jessee 2016). Due to the discretionary nature of lobbying, modeling of interest group nonresponse and responses other than support and opposition also remains an important objective for future research.

⁶²Recent events suggest the possibility that business interests may currently play both polarizing and moderating roles in U.S. politics, depending on the issue area. For example, business interests have been relatively united in holding moderate positions on immigration reform (O’Keefe 2018), but more extreme positions on regulations (Appelbaum and Tankersley 2018). At the same time, corporations and trade groups have been divided on issues such as tariffs (Kitroeff and Swanson 2018) and climate change and global warming (Crooks and Meyer 2017).

⁶³Of course, a more direct comparison would rely on jointly estimated ideal points of legislators, voters, and interest groups.

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