# LEGISLATIVE STAFF AND REPRESENTATION IN CONGRESS. SUPPLEMENTARY MATERIALS APPENDIX

## A. STAFFER RECRUITMENT MATERIALS

The title of the initial recruitment email message we distributed to staffers was "Inquiry from a Columbia University Professor", and the body of email described the survey, emphasized its confidential and academic nature, and provided the contact information for all three of the principal investigators. The initial recruitment email text appears below.

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Dear [Staffer First Name],

My name is Alexander Hertel-Fernandez and I am an Assistant Professor at Columbia University. I am writing to request 5 minutes of your time to participate in a confidential academic research study. The purpose of this project is to better understand the experiences of senior congressional staffers, such as yourself. As part of this study, we want to ask you a series of simple questions about the work you do through a short survey.

The study is part of an academic research project run by myself, along with two other professors at the University of Califprmmoa. All of your responses will be kept confidential, which means we will not associate any of your answers with your name, or the name of your Congressperson.

You can take our confidential academic survey [HERE].

You can also access the survey by copying and pasting the URL link below into your browser [URL Here].

If you have any questions about this research project, please email me at [EMAIL of AUTHOR 1], or call me at [PHONE OF AUTHOR 1].

Thank you for your time and consideration of this request.

We look forward to your participation and learning about your experiences in Congress.

Sincerely,

Alexander Hertel-Fernandez, Matto Mildenberger and Leah Stokes

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Below, we reproduce the messages from the Legislative Branch Working Group and the Dear Colleague letter to encourage participation in the survey.

August 29, 2016

Congressional Staff: Help Scholars Understand Your Needs

How do legislative staffers gather and review information about policy proposals? What resources could help congressional staff create and evaluate legislative proposals to deal with pressing social and economic issues?

We are a team of three academic political scientists based at Columbia University and the University of California Santa Barbara are trying to answer these questions through a short, confidential survey of congressional staffers. The survey is being supported with a Congressional Research Grant awarded by the Dirksen Congressional Center, a non-profit, non-partisan research organization.

Our survey, which we anticipate will take around five to seven minutes to complete, asks Congressional staff about different considerations that they have weighed when evaluating public policy. Importantly, the survey is completely confidential. No information will be publicly identified back to staff members who participate. The Institutional Review Boards at Columbia University and the University of California Santa Barbara have both approved the survey on the condition of this confidentiality.

We understand that many congressional offices have standing policies against taking surveys, but we hope that staffers might make an exception for this project given its academic and confidential nature. Participation in the survey will give academic researchers valuable insights into the legislative process on Capitol Hill, and may yield new conclusions about how to provide better resources to congressional offices.

Senior legislative staff –including Chiefs of Staff and Legislative Directors– should have already received a link in their email to the survey from me ([AUTHOR 1 email]) on Wednesday, August 24th.

Interested respondents can also contact us for more information or questions, including requests to participate. Thank you in advance for considering our request. We know that staffers are exceptionally busy and so we appreciate your time. We look forward to learning more about your work in Congress!

Alexander Hertel-Fernandez is Assistant Professor at the School of International and Public Affiars, Columbia University. Matto Mildenberger and Leah Stokes are Assistant Professors of Political Science at the University of California Santa Barbara.

Participate in Congressional Staff Research Study
From: [MEMBER OF CONGRESS]
Sent By: [LEGISLATIVE DIRECTOR]
Date: 8/30/2016

Dear Colleague:

I am writing to invite your senior legislative staff to participate in a confidential academic research study that is being conducted by professors at Columbia University and the University of California Santa Barbara. Senior staff in your office should have received an email to the survey earlier this month. The survey is being supported with a Congressional Research Grant awarded by The Dirksen Congressional Center, a non-profit, non-partisan organization named for the late Senator Everett McKinley Dirksen.

The researchers are hoping to better understand the experiences of U.S. Congressional staff, in particular, how staff members gather information about legislation and policy. The survey is completely confidential; no information will be publicly identified back to staff members who participate. Participation in the survey will give academic researchers valuable insights into the legislative process on Capitol Hill, and may yield new conclusions about how to provide better resources to Congressional offices to help Members of Congress and their staffs.

Senior legislative staff – including Chiefs of Staff and Legislative Directors – should have received an email to the survey earlier this month. Interested respondents can also contact the research team for more information or questions. The team consists of Alexander Hertel-Fernandez, Columbia University ([EMAIL]), Matto Mildenberger, University of California Santa Barbara ([EMAIL]) and Leah Stokes, University of California Santa Barbara ([EMAIL]).

Thank you for your consideration of this request.

Sincerely,

[MEMBER OF CONGRESS NAME]
Member of Congress

## B. COMPLETE TEXT OF SURVEY QUESTIONS

Here, we present full question wording for all questions on the 2016 Congressional Legislative Staffer survey that are referenced in the manuscript text or in these supplementary materials. We also include the intro/consent section for context.

### Intro and Consent

ACADEMIC STUDY ON EXPERIENCES OF CONGRESSIONAL LEGISLATIVE STAFFERS
My name is Alexander Hertel-Fernandez and I am a professor of public and international affairs at

Columbia University. I am inviting you to participate in a confidential academic research study. The purpose of this project is to better understand the experiences of senior congressional staffers, such as yourself. The study is part of an academic research project run by myself, along with two other

political science professors at [university]. As part of this study, we want to ask you a series of simple questions about the work you do. We anticipate that completing this survey will take no more than 5 to 7 minutes of your time. All of your responses will be kept confidential. We will not associate any of your answers with your name, or the name of your Congressperson. In addition, your overall participation is voluntary. You can skip any question in our survey, and you can discontinue participation in the survey at any time. If you have any questions about this research project please email [name] at [email] or call [name] at [phone]. You may also contact [university] Institutional Review Board by email [email], by phone at [phone], or by mail at [mailing address]. Thank you for your time and your consideration of our request. We look forward to your reply, and learning about your experiences in Congress.

Do you consent to participate in this study?

- Yes
- No

## Years on Hill

How many years have you worked on the Hill? Please round to the nearest full number. [Input Box]

## Years in Current Office

How many years have you worked for your current Member of Congress? Please round to the nearest full number. [Input Box]

## Office Policy Importance

Do other Congressional offices rely on your Member or your staff for information and expertise about any of the following policy areas? Select all that apply

- Healthcare policy
- Infrastructure policy
- Labor policy
- Environment and natural resource policy
- Economic policy
- Energy policy
- Gun policy
- None of the above

## Member Re-Election

Is your Member of Congress running for re-election?

- Yes
- No
- Not Sure

## Re-Election Prospects

[If YES or NOT SURE above] Do you think your Member is likely to be re-elected?

- Yes

• No

## Re-Election Margin

[If YES to re-election] By how many percentage points do you think your Member will win re-election? [Text input] [If NO to re-election] By how many percentage points do you think your member will lose

re-election? [Text Input]

## Sources of Influence

Think about the policy proposals you have worked on during your time on the Hill.What shaped your thinking on whether your member should support or oppose these policies?Indicate how important each of the following considerations was in shaping your advice to your Member on various policy proposals: [5 point gridded response scale from EXTREMELY IMPORTANT to NOT AT ALL IMPORTANT]

- Information from the Congressional Budget Office (CBO)
- Information from the Government Accountability Office (GAO)
- Information from the Congressional Research Service (CRS)
- Public opinion of your Member's constituents
- Public opinion of the country as a whole
- Party leaders' opinions
- Information from businesses
- Information from unions
- Information from think tanks
- Concerns about primary opponents
- Concerns about re-election
- Communication from your Members' constituents

## US Opinion Estimates

Now, consider the entire population of the United States. To the best of your knowledge, what percentage of the US population would agree with the following policy statements? The slider below goes from 0% (no one) to 100% (everyone). Just give your best guess. [Respondents move a slider bar to answer]

- Congress should repeal the Affordable Care Act.
- Congress should authorize $305 Billion to repair and expand highways, bridges, and transit over the next 5 years.
- Congress should raise the federal minimum wage to $12 an hour by 2020.
- Congress should regulate carbon dioxide (the primary greenhouse gas) as a pollutant.
- Congress should enact background checks for all gun sales, including at gun shows and over the Internet.

## District Opinion Estimates

Now, consider only the people living in your Member of Congress's constituency.To the best of your knowledge, what percentage of thepeople living in your Member's constituency would agree with the following policy statements? The slider below goes from 0% (no one) to 100% (everyone). Just give your best guess. [Respondents move a slider bar to answer]

- Congress should repeal the Affordable Care Act.
- Congress should authorize $305 Billion to repair and expand highways, bridges, and transit over the next 5 years.
- Congress should raise the federal minimum wage to $12 an hour by 2020.
- Congress should regulate carbon dioxide (the primary greenhouse gas) as a pollutant.
- Congress should enact background checks for all gun sales, including at gun shows and over the Internet.

## Personal Belief

Regardless of your Member of Congress's position, please indicate whether you personally agree or disagree with the following policy positions. [YES/NO response scale]

- Congress should repeal the Affordable Care Act.
- Congress should authorize $305 Billion to repair and expand highways, bridges, and transit over the next 5 years.
- Congress should raise the federal minimum wage to $12 an hour by 2020.
- Congress should regulate carbon dioxide (the primary greenhouse gas) as a pollutant.
- Congress should enact background checks for all gun sales, including at gun shows and over the Internet.

## List Experiment

Below, you will find a list of 4 statements, as bullet points. Please tell us HOW MANY of these bullet points you agree with. We don't want to know which ones you agree with, just HOW MANY.

   Over the last year, I've developed a new perspective about a policy under consideration in Congress after speaking with:

- a representative from a business.
- a legislative staffer from the opposing party.
- a representative from a union.
- a legislative staffer from my own party.
- (TREATMENT CONDITION ONLY) a group that provided campaign contributions to my Member


- None (0)
- One (1)
- Two (2)
- Three (3)
- Four (4)
- (TREATMENT CONDITION ONLY) Five (5)

## Primary Challenger

How likely is it that your Member of Congress will face a well-funded challenger in the next primary election?

- Very likely

6

- Somewhat likely
- Not very likely
- Not at all likely
- Not applicable

## Member Primary Challenger Concern

[If VERY LIKELY, SOMEWHAT LIKELY, or NOT VERY LIKELY above] How often has your Member expressed concern about having a primary challenger supported by a well-funded outside interest group?

- Very frequently
- Somewhat frequently
- Not very frequently
- Never

## Sources of Persuasion

Think back to a time when another Congressional office tried to persuade your Member to vote a certain way on a bill. Did the other office mention any of the following considerations? Check all that apply.

- Information from the Congressional Budget Office (CBO)
- Party leaders' opinions
- Information from unions
- Information from businesses
- Information from think tanks
- Communications from the other Member's constituents
- Concerns about primary opponents
- Concerns about re-election
- Public opinion of the country as a whole

## Interest Group Importance

We are interested in knowing which groups are most important to you when considering legislation. For each group, please indicate how important the group's positions,resources, and information have been to you when deliberating over legislation. [6 point gridded response scale of EXTREMELY IMPORTANT, VERY IMPORTANT, MODERATELY IMPORTANT, SLIGHTLY IMPORTANT, NOT AT ALL IMPORTANT, HAVEN'T HEARD OF THE GROUP]

- US Chamber of Commerce
- AFL-CIO
- Americans for Prosperity
- Center for American Progress
- National Rifle Association
- The Heritage Foundation
- The Club for Growth
- Americans for Tax Reform
- Economic Policy Institute
- Sierra Club

- Everytown for Gun Safety
- Edison Electric Institute
- American Petroleum Institute
- National Association of Manufacturers
- League of Conservation Voters
- Americans for Responsible Solutions

## Degree Importance

[If ANY groups checked above] You selected at least one group as being important to you when considering legislation. Please indicate the importance of each of the below factors in determining that the group(s) were important to your consideration of legislation. [5 point gridded response scale from EXTREMELY IMPORTANT to NOT AT ALL IMPORTANT]

- They are known for providing reliable information about the policy preferences of your Member's constituents
- They are known for communicating effectively with your Member's constituents about policies and candidates they support or oppose
- They are known for turning out your Member's constituents to vote

## Other Office Information Source

Think back to all the times when other Congressional offices tried to persuade your Member to vote a certain way on a bill. Did the other offices mention any of the following organizations in their conversations with you? Check all that apply.

- US Chamber of Commerce
- AFL-CIO
- Americans for Prosperity
- Center for American Progress
- National Rifle Association
- The Heritage Foundation
- The Club for Growth
- Americans for Tax Reform
- Economic Policy Institute
- Sierra Club
- Everytown for Gun Safety
- Edison Electric Institute
- American Petroleum Institute
- National Association of Manufacturers
- League of Conservation Voters
- Americans for Responsible Solutions

## Communication Experiment

Imagine your office is considering a bill that is under debate in Congress. Your office receives [2, 20, 200] letters from constituents [supporting, opposing] this bill. The letters have very [similar, different] wording to one another. The letter writers identify themselves as [employees of a large company based

in your constituency, constituents, members of a non-profit citizens group]. [4 point gridded response scale of VERY, SOMEWHAT, NOT VERY, and NOT AT ALL]

- How LIKELY are you to mention these letters to your Member?
- How SIGNIFICANT would these letters be in your advice to your Member about their position on the bill?
- How REPRESENTATIVE do you think these letters are of your constituents' opinions?

## Gender

What is your gender?

- Male
- Female
- Other

## Race/Ethnicity

What is your race/ethnicity? Please select the option that best matches your race/ethnicity.

- White/Caucasian
- African-American
- Hispanic or Latino
- Asian or Pacific Islander
- Native American
- Other
- Prefer not to answer

## Age

In what year were you born? [Input box]

## C. FULL SURVEY BALANCE STATISTICS

**TABLE 1. Staffer Survey Balance Statistics**

| | Survey results | Whole sample | DIM p-value Clustered by office, two-tailed |
|---|---|---|---|
| *Job Title* | | | |
| Chief of Staff | 43% | 51% | 0.08 |
| Legislative Director/Other | 57% | 50% | - |
| *Chamber* | | | |
| House | 72% | 80% | 0.09 |
| Senate | 28% | 20% | - |
| *Party* | | | |
| Democrat | 53% | 42% | 0.03 |
| Republican | 46% | 58% | - |
| *Region* | | | |
| Midwest | 21% | 23% | 0.62 |
| Northeast | 20% | 17% | 0.48 |
| South | 35% | 36% | 0.77 |
| West | 25% | 24% | 0.88 |
| *Congressional Leadership* | | | |
| Leadership | 1% | 4% | 0.025 |
| *Congressional seniority* | | | |
| Average Years in Congress | 9 | 10 | 0.30 |
| Median Years in Congress | 7 | 7 | - |
| *Census division* | | | |
| East North Central | 15% | 14% | 0.82 |
| East South Central | 3% | 7% | 0.05 |
| Mountain | 6% | 10% | 0.13 |
| Mid-Atlantic | 8% | 11% | 0.25 |
| Northeast | 12% | 5% | 0.03 |
| Pacific | 19% | 14% | 0.34 |
| South-Atlantic | 23% | 18% | 0.32 |
| West North Central | 6% | 9% | 0.2 |
| West South Central | 9% | 11% | 0.47 |
| *N* | 101 | 1,057 | |
| **Ideological Measures** | | | |
| *Democrats* | | | |
| DW-NOMINATE 1st Mean | -0.40 | -0.38 | 0.24 |
| DW-NOMINATE 1st Median | -0.42 | -0.39 | - |
| DW-NOMINATE 1st 25th percentile | -0.46 | -0.45 | - |
| DW-NOMINATE 1st 75th percentile | -0.32 | -0.31 | - |
| *Republicans* | | | |
| DW-NOMINATE 1st Mean | 0.69 | 0.69 | 0.88 |
| DW-NOMINATE 1st Median | 0.73 | 0.71 | - |
| DW-NOMINATE 1st 25th percentile | 0.61 | 0.54 | - |
| DW-NOMINATE 1st 75th percentile | 0.83 | 0.83 | - |
| *N* | 84 | 1,057 | |

## D. INFORMATION SOURCES USED BY OTHER OFFICES IN PERSUASION

An alternative approach to identifying important considerations for staffers involves asking about how other staffers have attempted to persuade them during past policy debates. For this reason, we asked staffers the following: "Think back to a time when another Congressional office tried to persuade your Member to vote a certain way on a bill. Did the other office mention any of the following considerations?" Staffers then had the option of listing most of the same considerations as on the first item.

This question taps into revealed behavior, rather than simply staffers' own judgments. If another office was trying hard to persuade a staffer and her Member about an issue, they would likely pick considerations they knew would be taken more seriously by the target office. We plot the results of this item in Figure 1.

**FIGURE 1. Information Sources Staffers Reported that Other Offices Used to Persuade Own Office, by Party.**
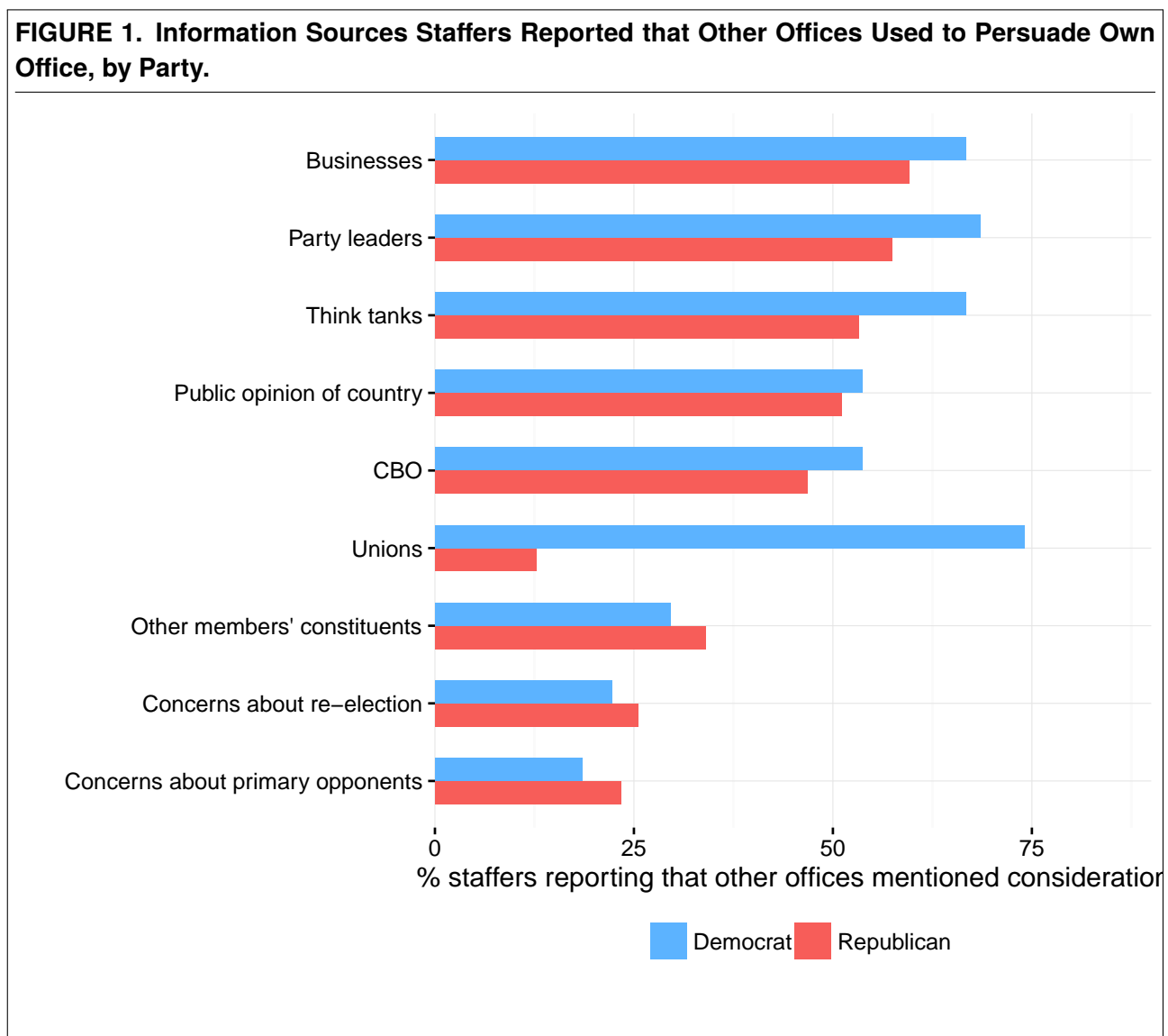
# E. DOWNSCALED OPINION DATA DETAILS

Table 2 provides the precise question wording from the survey data source used to generate downscaled estimates of public opinion, and the source of this survey data. The table also provides the exact question wording used in the 2016 legislative staffer survey.

Table 2: Details for Downscaled Opinion Data

| Source Wording | Source | Staffer Survey Wording |
|---|---|---|
| Regulate carbon dioxide (the primary greenhouse gas) as a pollutant | Howe et al. (2015) | Congress should regulate carbon dioxide (the primary greenhouse gas) as a pollutant |
| Congress considers many issues. If you were in Congress would you vote FOR or AGAINST each of the following? Repeal the Affordable Care Act | 2016 CCES | Congress should repeal the Affordable Care Act of 2010 |
| Background checks for all sales, including at gun shows and over the Internet | 2016 CCES | Congress should enact background checks for all gun sales, including at gun shows and over the Internet |
| Congress considers many issues. If you were in Congress would you vote FOR or AGAINST each of the following? Raises the federal minimum wage to $12 an hour by 2020. | 2016 CCES | Congress should raise the federal minimum wage to $12 an hour by 2020 |
| Congress considers many issues. If you were in Congress would you vote FOR or AGAINST each of the following? Authorizes $305 Billion to repair and expand highways, bridges, and transit over the next 5 years | 2016 CCES | Congress should authorize $305 Billion to repair and expand highways, bridges, and transit over the next 5 years |

# F. DETAILS ON MULTILEVEL REGRESSION WITH POST-STRATIFICATION OF CCES SURVEY QUESTIONS

We use a mutilevel regression and poststratification (MRP) approach to estimate congressional-district and state-level public opinion about the CCES policy items (ACA repeal, background checks on gun sales, infrastructure spending, and raising the minimum wage). MRP methods are a well-validated technique to estimate the local level distribution of public opinion from national survey data (for more detailed treatments, see Park et al. 2006; Lax and Phillips 2009; Warshaw and Rodden 2012; Buttice and Highton 2013).

MRPs comprise two steps. In an initial multilevel regression step, individual survey responses are modelled as a function of both individual-level demographics and geography-level covariates. In a subsequent post-stratification step, a weighted sum of the beliefs of demographic-geographic types are generated for each geographic subunit.

In the multilevel regression step, we use a hierarchical model to estimate the relationship of individual and geography-level covariates with specific opinions, h, for a given individual i, represented by $y_{h[i]}$. For clarity, we present the model for a single opinion only, thus dropping the indexing over h. At the individual-level, we thus have:

$$Pr(y_i = 1) = logit^{-1}(\gamma_0 + \alpha_{j[i]}^{race} + \alpha_{k[i]}^{education} + \alpha_{l[i]}^{gender} + \alpha_{d[i]}^{district})$$

where

$$\alpha_j^{race} \sim N(0, \sigma_{race}^2), \ for \ j = 1, ..., 4$$

$$\alpha_k^{education} \sim N(0, \sigma_{education}^2), \ for \ j = 1, ..., 4$$

$$\alpha_l^{gender} \sim N(0, \sigma_{gender}^2), \ for \ l = 1, 2$$

Each variable is indexed over individual i and over response categories j,k, and l for race, education, gender, and geography variables respectively. The geography variable indexes over 114th Congress' congressional districts, d.

In turn, we model the district term following covariates used in a validated model described by Warshaw and Rodden (2012) as:

$$\alpha_d^{district} \sim N(\alpha_{s[d]}^{state} + \gamma^{vet} \cdot vet_d + \gamma^{samesex} \cdot samesex_d + \gamma^{income}$$
$$\cdot income_d + \gamma^{home} \cdot home_d, \sigma_{district}^2), \ for \ s = 1, ..., 435$$

where *vet* describes the percentage veterans in a given congressional district, *samesex* describes the percentage of samesex households in a given district, *income* gives median income level in a district, and *home* gives the median home price in each district

We model the state term as:

$$\alpha_s^{state} \sim N(\alpha_{r[s]}^{region} + \gamma^{mormon} \cdot vet_s + \gamma^{union} \cdot union_s), \ for \ s = 1, ..., 50$$

where *mormon* gives the fraction of each state belonging to the mormon faith, *union* gives the percentage of each state's workforce belonging to a union, and the region term is modeled as a function of the census region in which a respondent resides as

$$\alpha_z^{region} \sim N(0, \sigma_{region}^2), \ for \ j = 1, ..., 9$$

For all models, we use the GLMER function in the lme4 package to estimate the model (Bates et al. 2014).

During the second, post-stratification stage, we use our multilevel regression model results to estimate the average opinion of each demographic-geographic individual type. We use American Community Survey data to provide the count of each population type in each congressional district across 114th congressional geographies. Final MRP estimates weight the model estimated belief of

each population type by the true population count of that type in a given geographic subunit. Let $\vartheta_w$ describe the estimated opinion of each unique demographic-geography type, indexed over cell w, and $N_w$ give the population count for that cell, then our MRP estimate of beliefs in any given district is the weighted sum of these estimates and population counts, over district variable d:

$$y_{district}^{mrp} = \frac{\Sigma_{c \epsilon d} N_c \vartheta_c}{\Sigma_{c \epsilon d} N_c}$$

## REFERENCES

Bates, D., M. Maechler, B. Bolker, and S. Walker (2014). *lme4: Linear mixed-effects models using S4 classes*.

Blair, G. and K. Imai (2012). Statistical analysis of list experiments. *Political Analysis 20*(1), 40–77.

Buttice, M. and B. Highton (2013). How does multilevel regression and poststratification perform with conventional national surveys? *Political Analysis 21*(4), 449–467.

Glynn, A. (2013). What can we learn with statistical truth serum? design and analysis of the list experiment. *Public Opinion Quarterly 77*(S1), 159–72.

Hacker, J. and P. Pierson (2010). *Winner-Take-All Politics*. New York, NY: Simon and Schuster.

Lax, J. and J. Phillips (2009). How should we estimate public opinion in the states? *American Journal of Political Science 53*(1), 107–121.

Park, D., A. Gelman, and J. Bafumi (2006). State level opinions from national surveys: Poststratification using multilevel logistic regression. In J. E. Cohen (Ed.), *Public opinion in state politics*, pp. 209–228. Stanford University Press.

Schlozman, K. L., S. Verba, and H. Brady (2012). *The Unheavenly Chorus*. Princeton: Princeton University Press.

Warshaw, C. and J. Rodden (2012). How should we measure district-level public opinion on individual issues? *The Journal of Politics 74*(01), 203–219.

## G. STAFFER MISPERCEPTIONS OF NATIONAL PUBLIC OPINION

In Figure 2, we chart staffers' estimates of national public opinion by staffers' personal beliefs. We continue to see pronounced evidence of egocentric bias, with staffer perceptions of national opinions being shaped by their individual policy preferences—just as in the constituency-level results presented in the main text. The horizontal line gives an estimate of the true national preference for the policy item.

In Figure 3, we compare misperceptions of national-level opinion with misperceptions of district-level opinions. Looking across all five issue domains, we see generally positive correlations: the more accurate that staffers were in estimating district opinion, the more accurate staffers were in also estimating national public opinion, too.

**FIGURE 2. Staffer Estimates of National Public Opinion against Personal Support, by Policy Item. Horizontal dashed lines give the nationally representative estimate of the US public's opinion preferences.**



15

**FIGURE 3. Correlation between Staffer Misperceptions of National-Level Public Opinion and District- or State-Level Public Opinion.**

## H. FURTHER ELECTORAL COMPETITIVENESS RESULTS

In this section, we show bivariate correlations between staffers' estimates of their Member's reelection margin in 2016 and preference mismatches. Table 2 summarizes bivariate OLS regressions between the reelection margin estimates and the staffer-constituent preference mismatch by issue area. Each cell shows an OLS coefficient and standard errors, clustered by office (sample size: 42 Democrats, 31 Republicans). Staffer experience is not consistently related to the accuracy with which staffers perceived constituent preferences.

We also present additional results testing whether staffers who faced tighter races in the past were more likely to correctly estimate their district's or state's preferences. As the plots in Figure 4 indicate, there is virtually no relationship between past race competitiveness (in a Member's last election) and staffer misperceptions across the policy issues, further bolstering our conclusions that electoral competitiveness does not mediate staffer perceptions of public opinion.

We lastly used the Cook Partisan Voting Index as an alternative measure of state or district competitiveness and similarly did not find consistent results (results shown in Appendix N).

**TABLE 2. Bivariate Correlations between Staffer Estimates of Member Reelection Margin and Absolute Staffer Mismatch by Issue and Party. Top value is correlation coefficient, bottom value in parentheses is standard error for the correlation coefficient. Standard errors clustered by office.**

|  | Democrats | Republicans |
|---|---|---|
| Background checks | 0.03 | 0.24 |
|  | (0.08) | (0.07) |
| Repeal ACA | 0.09 | 0.01 |
|  | (0.06) | (0.04) |
| Limits on CO2 | 0.02 | -0.04 |
|  | (0.05) | (0.06) |
| Infrastructure spending | -0.08 | 0.002 |
|  | (0.04) | (0.10) |
| Minimum wage | -0.06 | 0.09 |
|  | (0.06) | (0.10) |

18

**FIGURE 4. Staffer Misperceptions of Constituent Preferences and Member's Vote Share in Last Election, by Issue Area.**

# I. STAFFER EXPERIENCE AND STAFFER-CONSTITUENT MISMATCH

In this section, we present the findings referenced in the paper that there is no consistent relationship between staffer experience and accuracy in perceiving constituent preferences. Table 3 summarizes bivariate OLS regressions between staffer years in an office and staffer years in Congress and the staffer-constituent preference mismatch by issue area. Each cell shows an OLS coefficient and standard errors, clustered by office (sample size: 50 Democrats, 41 Republicans). In no case is staffer experience consistently related to the accuracy with which staffers perceived constituent preferences.

Figures 5 and 6 show these relationships graphically and similarly indicate that there are no consistent correlations by issue or party between opinion mismatches and the tenure of staffers in their current office or on Capitol Hill in general.

**FIGURE 5. Staffer Misperceptions of Constituent Preferences and Years Employed in Current Office, by Issue Area.**
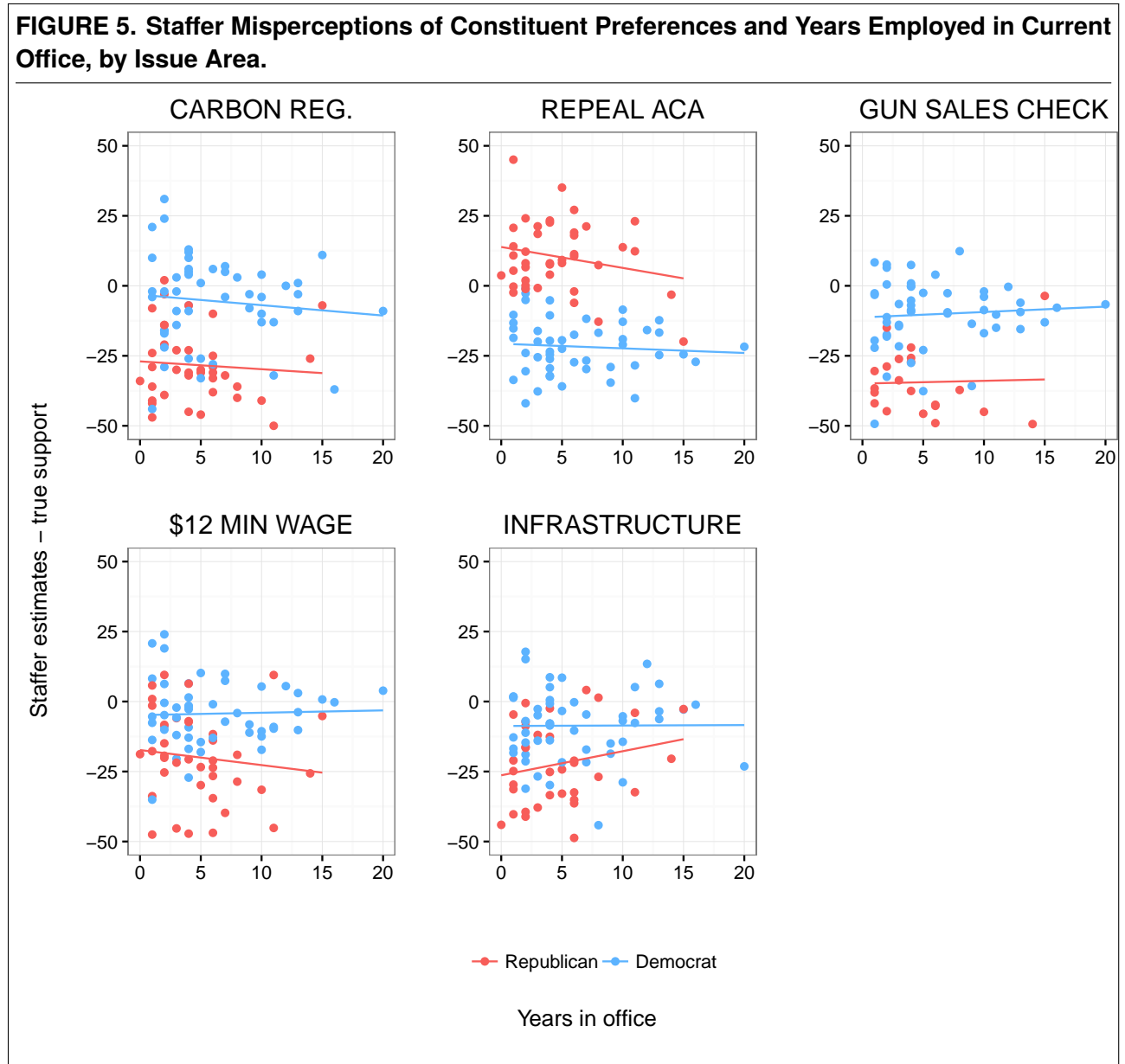
**TABLE 3. Bivariate Correlations between Staffer Tenure and Absolute Staffer Mismatch by Issue and Party. Top value is correlation coefficient, bottom value in parentheses is standard error for the correlation coefficient. Standard errors clustered by office.**

|  | *Democrats* Yrs. in Office | *Democrats* Yrs. in Congress | *Republicans* Yrs. in Office | *Republicans* Yrs. in Congress |
|---|---|---|---|---|
| Background checks | -0.37 | -0.03 | -0.12 | -0.20 |
|  | (0.27) | (0.27) | (1.15) | (0.55) |
| Repeal ACA | -0.22 | -0.17 | 0.31 | 0.28 |
|  | (0.34) | (0.26) | (0.41) | (0.34) |
| Limits on CO2 | -0.35 | -0.13 | 0.50 | 0.45 |
|  | (0.39) | (0.22) | (0.83) | (0.46) |
| Infrastructure spending | -0.10 | 0.15 | -0.62 | -0.25 |
|  | (0.33) | (0.25) | (0.76) | (0.51) |
| Minimum wage | -0.78 | -0.66 | 0.14 | 0.02 |
|  | (0.31) | (0.31) | (0.70) | (0.51) |

**FIGURE 6. Staffer Misperceptions of Constituent Preferences and Years Worked on Hill, by Issue Area.**

## J. THE RELATIONSHIP BETWEEN STAFFER MISPERCEPTIONS AND LABOR UNIONS

In the main text we show the relationship between staffer misperceptions and the net contact staffers reported between mass and corporate interest groups, as well as corporate campaign contributions. An alternative measure of the relevance of mass-based groups for Congressional offices involves labor union density since the labor movement is an especially important mass-based interest group representing the political preferences of working-class Americans (Hacker and Pierson 2010; Schlozman et al. 2012).

While state-based estimates of labor union density are readily available from the Bureau of Labor Statistics, no official measure of union density exists for U.S. House districts. We therefore rely on data generously provided by Michael Becher, Konstantin Kappner, and Daniel Stegmueller, who use annual reports filed with the Department of Labor (LM-2 forms) to estimate union density in House districts for the 114th Congress. Given LM-2 filing requirements, this measure generally captures private-sector unions.

The methods for this estimation are detailed in: Michael Becher, Konstantin Kappner and Daniel Stegmueller, "Local Union Organization and Lawmaking in the U.S. Congress," *Journal of Politics*, 2017, as well as Daniel Stegmueller, Michael Becher, and Konstantin Kappner. "Labor Unions and Unequal Representation," presented at the 113th APSA Annual Meeting in San Francisco, CA, September 1, 2017.

## K. ALTERNATIVE MEASURES OF CONTRIBUTIONS AND STAFFER MISPERCEPTIONS

In the paper we report on the correlation between the share of corporate contributions a staffer's office received and the mismatch in perceptions between the staffer and their constituents. As an alternative, we report the correlation between staffer-constituent mismatches and net contributions a staffer's office received from labor unions and private-sector businesses. We see that staffers were more likely to misperceive constituent preferences when their office received relatively more campaign contributions from businesses over labor unions.

**FIGURE 7. Staffer Misperceptions of Constituent Preferences and Net Business and Labor Campaign Contributions.**
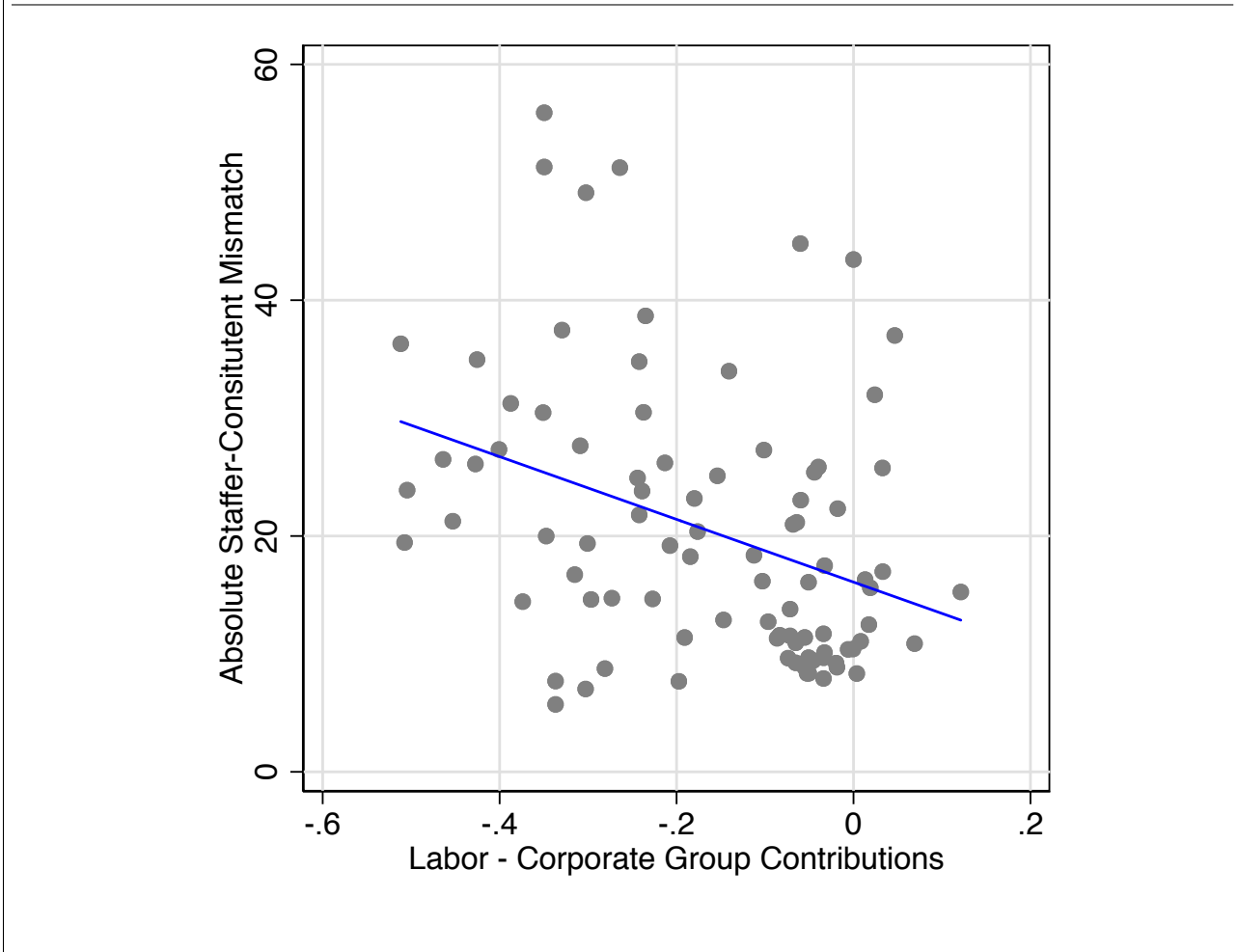
We also report on another measure that is more similar to our "mass minus corporate group contact" measure constructed from the survey self-reports for the environmental policy domain (support for $CO_2$ limits). Here, we calculate the net contributions a staffer's office received from environmental and extractive industry interests. We see that staffers were more likely to misperceive constituent preferences for $CO_2$ limits when their office received relatively more campaign contributions from the extractive industry over environmental groups.

**FIGURE 8. Staffer Misperceptions of Constituent Preferences on CO2 Limits and Net Environmental and Extractive Industry Campaign Contributions.**
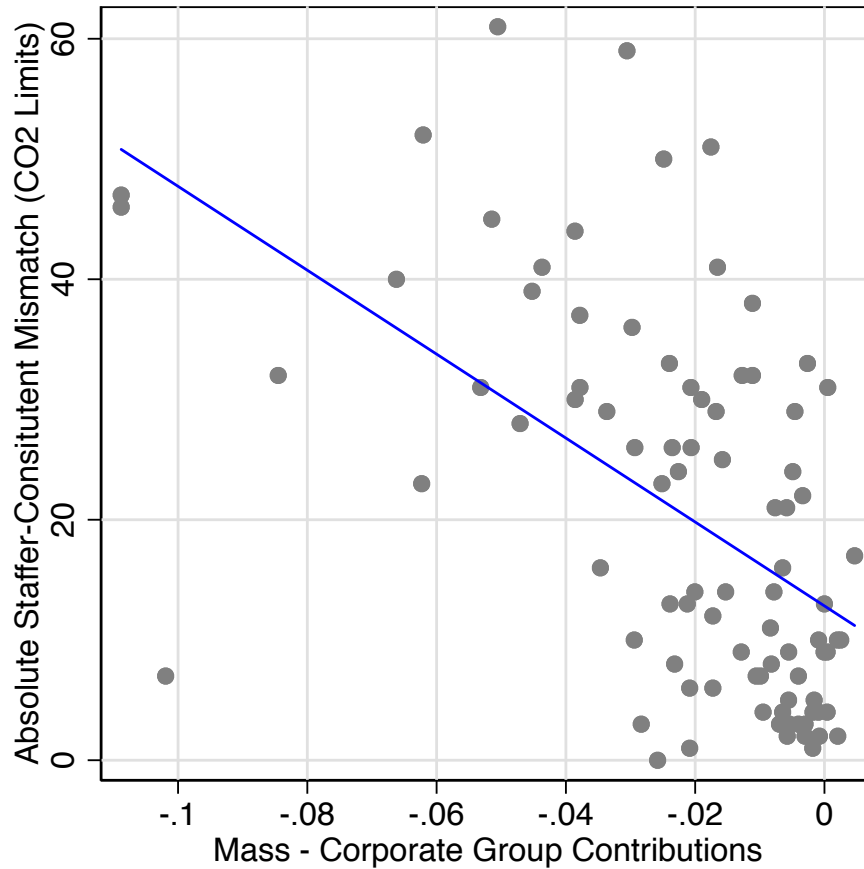


## L. MULTIVARIATE REGRESSION RESULTS FOR STAFFER MISPERCEPTIONS

In the main text we examine each of our potential explanations for the staffer-constituent mismatches individually rather than in a regression framework. This reflects the fact that we cannot make strong causal claims using the available observational evidence. In Table 4 we conduct a multivariate regression combining all of these explanations together as an alternative means of summarizing our conclusions. To simplify presentation of our results, we average the absolute value of staffer mismatches across all policy issues. Put differently, each observation represents an individual staffer's average absolute mismatches across the five policy items. Note that we exclude staffers' own opinions from this analysis because we are pooling observations across issues. We show separate models with the three different measures of mass versus corporate interest group interactions: the index of staffer self-reported reliance on mass versus corporate groups, an office's share of corporate campaign contributions in the past electoral cycle, and state or district labor union density.

Across all three models, interest group contact is strongly related to average staffer mismatches. Neither reelection pressure (as measured by staffers' estimates of their Member's reelection margin) nor staffer tenure in an office was related at statistically significant levels to staffer accuracy. In model 1, we see that staffers who reported more mass group contact over corporate group contact had more accurate perceptions of their constituents. In model 2, we see that staffers from offices that relied

on a greater share of corporate campaign contributions in the past electoral cycle had less accurate perceptions of their constituents. And in model 3, we see that staffers from states and districts with stronger unions were more likely to have accurate perceptions of their constituents. The consistent finding across all three regression models is that greater contact with mass groups is related to more accurate staffer perceptions of mass opinion and greater contact with corporate groups is related to less accurate staffer perceptions of policy attitudes.

**TABLE 4. Testing Explanations of Average Absolute Staffer Mismatches. OLS regression models. Statistical significance * $p <$0.10, ** $p <$0.05, *** $p <$0.01, two-tailed tests. Standard errors clustered by office. Unit of analysis is the staffer, averaging absolute mismatches across the five policy issues. The three models test the three different operationalizations of staffer interest group contact.**

|  | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| Net Mass-Corporate Group Contact | -4.11*** | | |
|  | (0.73) | | |
| Share Corporate Contributions | | 7.64*** | |
|  | | (2.45) | |
| Estimated Union Density | | | -0.52*** |
|  | | | (0.14) |
| Estimated Reelection Margin | 0.00 | -0.02 | 0.02 |
|  | (0.03) | (0.03) | (0.04) |
| Staffer Tenure in Office | -0.46** | -0.52** | -0.19 |
|  | (0.21) | (0.23) | (0.21) |
| R-Squared | 0.38 | 0.25 | 0.20 |
| N | 66 | 70 | 73 |

We further explore the multivariate regressions by issue in Table 5. Across all issues except for the ACA repeal item, we see a negative relationship between the net mass versus corporate group contact item and staffer-constituent mismatches.

**TABLE 5.  Testing Explanations of Absolute Staffer Mismatches, by Issue.  OLS regression models.  Statistical significance * $p <$0.10, ** $p <$0.05, *** $p <$0.01, two-tailed tests.  Standard errors clustered by office.  Unit of analysis is the staffer.**

|  | ACA Repeal | CO2 Limits | Gun Checks | Infra-structure | Minimum Wage |
|---|---|---|---|---|---|
| Net Mass-Corporate Group Contact | 3.68*** | -5.48*** | -8.96*** | -4.94*** | -1.98 |
|  | (0.76) | (0.76) | (0.77) | (0.75) | (1.40) |
| Estimated Reelection Margin | 0.10** | -0.04 | 0.06 | -0.06 | -0.03 |
|  | (0.04) | (0.05) | (0.06) | (0.04) | (0.05) |
| Staffer Tenure in Office | -0.33 | -0.32 | -1.15*** | -0.12 | -0.76** |
|  | (0.31) | (0.36) | (0.36) | (0.33) | (0.36) |
|  |  |  |  |  |  |
| R-Squared | 0.28 | 0.43 | 0.55 | 0.37 | 0.11 |
| N | 66 | 66 | 65 | 66 | 66 |

## M. MEMBER IDEOLOGY AND STAFFER-CONSTITUENT MISMATCH

Although we do not include these results in the main text, we show variation in staffer mismatches by Member's ideological orientation in Figure 9.

**FIGURE 9. Staffer Misperceptions of Constituent Preferences and Member DW-NOMINATE Scores (First Dimension).**
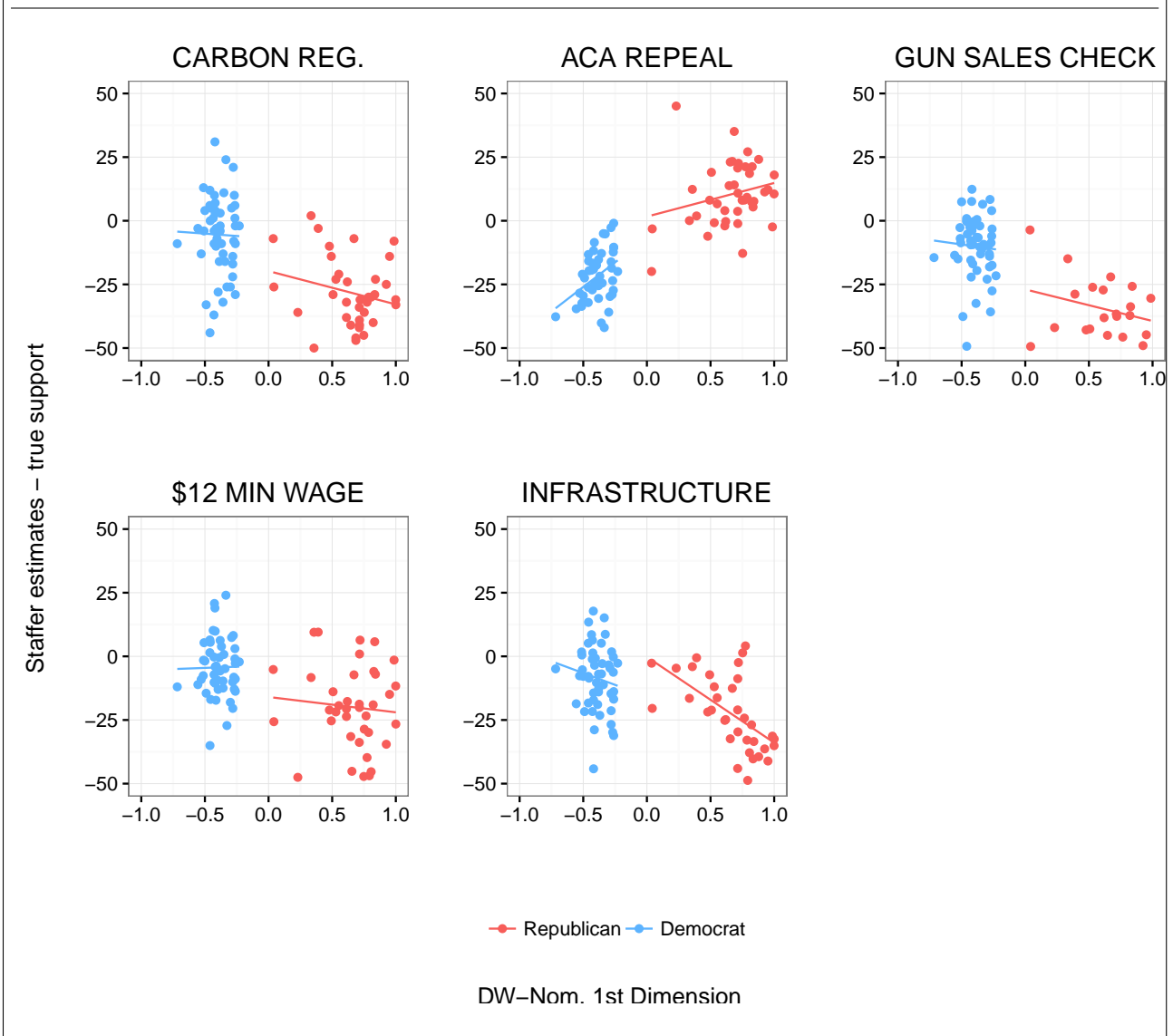
## N. COOK PARTISAN VOTE INDEX AND STAFFER-CONSTITUENT MISMATCH

Although we do not include these results in the main text, we show no apparent regular or systematic relationship between the absolute value of a district's Cook Partisan Voting Index and the magnitude of the staffer-constituent mismatch in Figure 10.

**FIGURE 10. Staffer Misperceptions of Constituent Preferences and Member Cook Partisan Vote Index (PVI - Absolute Value).**



Absolute Value Cook Partisan Vote Index (PVI)
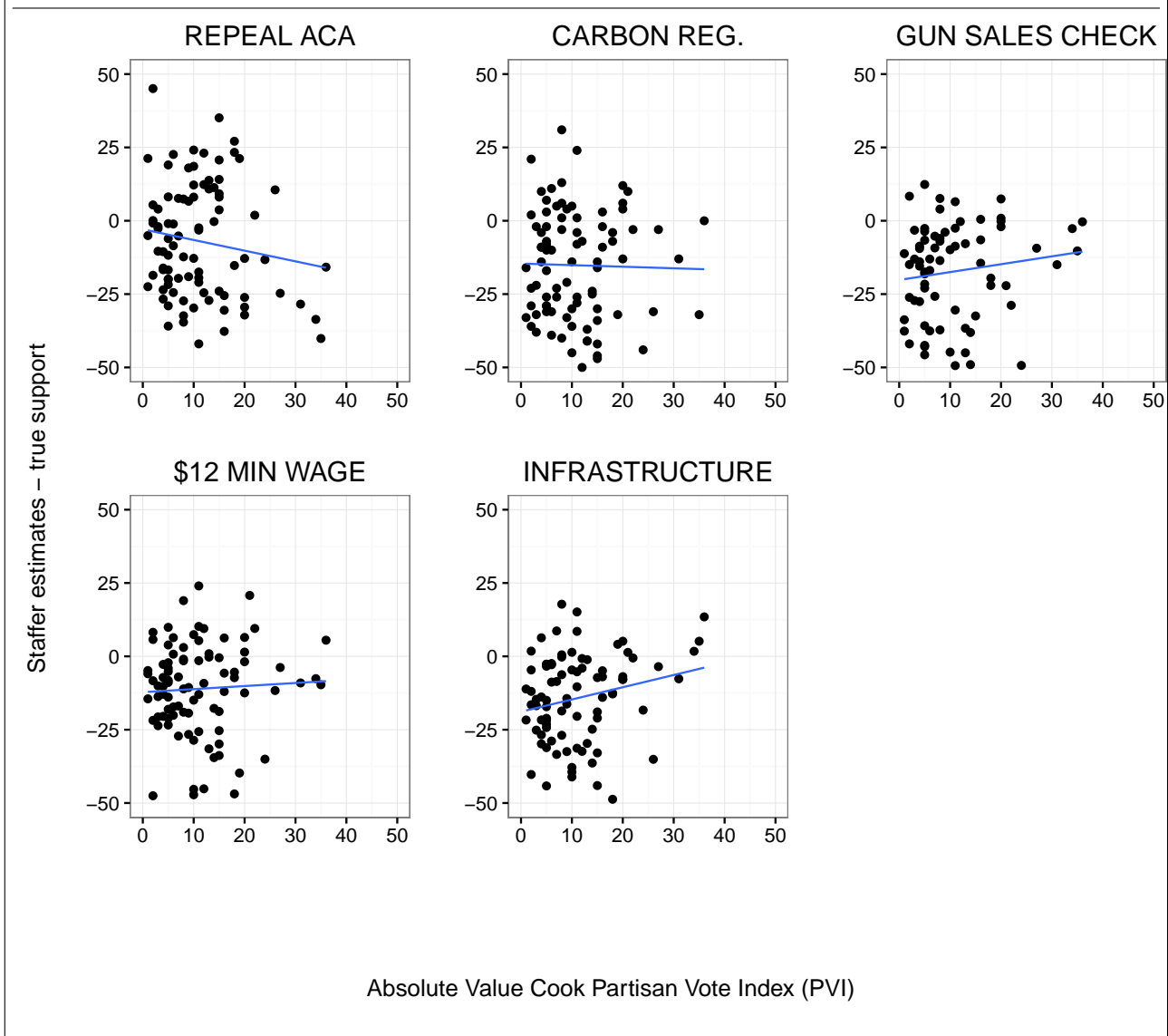
## O. FURTHER LIST EXPERIMENT DESIGN DETAILS

Following best practices in list experiment design (Glynn 2013), we chose two pairs of control items that were likely to be negatively correlated with one another in order to reduce the incidence of staffers having to indicate that they agreed with all five items (which would reveal that they had selected the sensitive item). We anticipated that staffers would not be likely to indicate that they developed a new perspective about policy from both labor unions and businesses, and from their own party and the opposing party. To minimize floor effects, we also included one item that all staffers would likely select. Finally, we made sure that the sensitive item did not appear out of place in the list of other items. Thus, all five items refer to plausible sources of policy information for senior staffers. Examining the results from the list experiment, we are relatively confident in our question design.

We find little evidence of floor effects, for instance: just 6% of respondents in the control condition selected zero items. We have somewhat stronger concerns about ceiling effects, however, as 34% of staffers in the control condition indicated agreement with four items—but this is ultimately not a large

proportion of control respondents. Lastly, we consider whether the introduction of our sensitive item altered staffers' responses to the non-sensitive items by testing for the presence of design effects. Using the method outlined by Blair and Imai (2012) in the *List* package for R, we find a *p* value of 0.95, indicating no evidence for the presence of design effects. We therefore proceed under the assumption that the inclusion of our sensitive item did not shape selection of the remaining non-sensitive items.

## P. UNEMPLOYMENT RATE AND EMPLOYEE LETTER INTERACTION IN CONSTITUENT CORRESPONDENCE EXPERIMENT

In Table 6, we summarize the interactive effects of the employee letter condition on staffers from districts of varying unemployment, using data on unemployment from the American Community Survey, 2011-15.

**TABLE 6. District or State Unemployment Rate and Staffer Responsiveness to Employee Letter Condition. OLS regression models. Statistical significance * $p <$0.10, ** $p <$0.05, *** $p <$0.01, two-tailed tests. Outcomes measured on 1-4 scale. Unemployment data from 2011-15.**

|  | *Mention to Member* | *Shape Advice to Member* | *Representative of Constituents* |
|---|---|---|---|
| Employee Letter Condition | -0.92 (1.03) | -0.68 (0.74) | -1.17 (0.80) |
| 2011-15 Unemployment Rate | -8.00 (6.66) | -10.98** (5.35) | -11.24** (5.34) |
| Employee Letter X Unemployment | 14.23 (11.40) | 13.08* (8.10) | 20.76** (9.08) |
| R-Squared | 0.03 | 0.08 | 0.17 |
| *N* | 82 | 82 | 81 |

## Q. EVALUATING THE ROBUSTNESS OF STAFFER MISPERCEPTIONS TO SURVEY ERROR

Some staffers in our survey estimated that public opinion in their districts was over 90% or under 10%. While staffers may believe there is a public consensus on these issues, it is also possible that these 'extreme' responses reflect some unobserved staffer attribute that reflects a lack of seriousness with which this question bank was answered.

Accordingly, we also check to ensure our results are robust to dropping these 'extreme survey values'. Fig 11 replicates Figure 3 in the main text, but drops for each panel respondents who estimated public opinion as being over 90% or under 10% in their districts. Our results are unchanged.

**FIGURE 11. Comparing Staffer Perceptions of Constituent Preferences to True District-Level Preferences, by Issue Area, Among Staffers who Estimated that Less than 90% and over 10% of Constituents Supported a Given Policy.**