SPECIAL ISSUE

Does Political Sophistication Moderate How Citizens Use Information to Infer Left-Right Distances between Parties?*

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ABSTRACT. Research identifies numerous factors associated with citizens' perceptions of party ideologies, including the Left-Right orientations of parties' election manifestos, governing coalition arrangements, and media reports of party elites' interactions. We analyze whether citizens' reliance on these factors varies with their levels of education and political knowledge. In analyses of 51 election surveys from 18 countries between 2001 and 2015, we find that more politically sophisticated citizens attach (modestly) more weight to parties' election manifestos and media reports of political elites' interactions, but no evidence that sophistication moderates citizens' reactions to governing coalition arrangements. There thus appears to be far more homogeneity than heterogeneity in the structure of party placement perceptions.

A wide-ranging literature analyzes the factors related to citizens' perceptions of parties' ideological positions, including parties' election manifestos and the composition of governing coalitions (Fortunato and Stevenson 2013; Fortunato and Adams 2017; Adams, Ezrow, and Wlezien 2019), media reports of parties' public interactions (Adams, Weschle, and Wlezien 2021), and party leadership changes (Fernandez-Vazquez and Somer-Topcu 2019). To date, however, much of this research analyzes the macro level associations between average party perceptions across all citizens, with certain exceptions, including the Fortunato-Stevenson and Fortunato-Adams papers referenced above. Hence, there is little research assessing whether the impact of these factors depends on citizens' levels of political sophistication. This is the key question we address here.

We analyze survey respondents' perceived Left-Right distances between pairs of parties to evaluate whether the perceptual effects of three of the factors listed above – the Left-Right dispositions of parties' election manifestos, governing coalition arrangements, and party elites' interactions as reported in the media – are moderated by citizens' political sophistication levels. Our analyses rely on 51 election surveys in 18 countries from the Comparative Study of Electoral Systems (CSES), between 2001 and 2015. We measure political sophistication, first, based on their performance on a political knowledge quiz, and, second, based on the respondent's education level. Although some research (Fortunato and Stevenson 2013) relies on self-reported political interest to assess heterogeneity in party placements, we see knowledge and, to a lesser

extent, education as better measures of political sophistication.[1] This follows some previous research in the area (Fortunato and Adams 2017); perhaps most importantly, education and knowledge are available in most of the CSES surveys, whereas political interest is not. We regard political knowledge as the measure that best captures the underlying concept, since it taps directly into citizens' levels of political sophistication. We report the following conclusions.

First, we confirm prior research that citizens' perceived Left-Right party distances are related to differences in the Left-Right orientations of the parties' manifestoes and to governing coalition arrangements. We find more mixed evidence that perceived party distances decrease with more cooperative elite-level party interactions.[2] To the extent these observational relationships are causal, they imply that party manifestos and governing coalition arrangements exert substantively large effects on citizens' party perceptions, while media reports of party interactions exert weaker independent effects.

Second, we detect evidence that some – but not all – of the relationships described above are moderated by citizens' levels of political sophistication. More sophisticated citizens

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[1] This may be especially true in the modern era of both hyper-partisan and "alternative" news sources, and the availability of misinformation in online hyper-partisan echo chambers (Diaz Ruiz and Nilsson 2022; Rhodes 2022).

[2] When using only the CSES data the relationship we estimate is in the expected direction and not highly reliable, but supplementary analyses reported in the appendix (see Table A4) incorporating additional data used in Adams et al (2021) support the conclusion from prior research, that elite-level cooperation and conflict influence perceived party distances.

tend to react somewhat more strongly to the differences in party manifestos, and also to media reports of party interactions. By contrast, we detect only weak and inconsistent evidence that sophistication conditions citizens' reliance on governing coalition arrangements to estimate parties' Left-Right distances. The differences we do detect, however, appear quite modest, so that there appears to be considerable homogeneity in how citizens with differing political sophistication levels use information to estimate parties' Left-Right differences.

The findings are important, we think, for two reasons. First, they indicate that the various information cues available to citizens when evaluating the distance between parties are used in fairly similar ways by the more and less politically sophisticated. This comports with broader research demonstrating similarities in responses to circumstances and events that help produce "parallel publics" (Page and Shapiro 1992; Soroka and Wlezien 2010; Coppock 2023). That is, there is more homogeneity than heterogeneity in the structure of public perceptions of parties' Left-Right proximity.

Second, the findings have implications for parties' electoral strategies as they seek to shape their Left-Right images. It is well-known that ideologically moderate voters tend to be less politically engaged and knowledgeable than voters holding strong left- or right-wing ideologies (see, e.g., Converse and Pierce 1986; Adams et al. 2017), so that party elites might doubt whether they can successfully convey their ideologies to moderates. In this case, vote-seeking parties might discount moderate voters' policy preferences, which could weaken the "pull of the center" and prompt greater party ideological polarization (see, e.g., Adams et al. 2017). Moreover, co-governing parties might expect to confront daunting challenges in publicly distinguishing their ideologies from each other, since citizens might interpret co-governance as prima facia

evidence that cabinet partners' ideologies are aligned (see, e.g., Sagarzazu and Kluver 2017). In this case, governing parties might strategically campaign on their "valence" images for competence and integrity, reasoning that the public will not react to their policy-based and ideological appeals (see, e.g., Jensen et al. 2021). Yet, we detect only modest tendencies for the less politically sophisticated to discount party manifestoes, their coalition arrangements, and parties' public interactions when estimating inter-party distances, compared to the more sophisticated.

Background and Theory

While the relationships between citizens' Left-Right party placements and the ideological orientations of party manifestos has been extensively documented,[3] Fortunato and Stevenson (2013) were the first to identify the impact of governing coalition arrangements on citizens' perceived party differences, presenting theoretical and observational evidence that citizens apply a *coalition heuristic* to infer that parties that are currently co-governing share more similar Left-Right positions than is implied by the Left-Right tones of their manifestos.[4] Moreover, past histories of co-governance also predispose voters to place parties' Left-Right positions closer together. Adams, Weschle, and Wlezien (2021) find that citizens also employ a *party interactions heuristic* to infer that pairs of parties that interact more cooperatively in public (as reported in legacy news

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[3] Note that studies find strong relationship between the codings of parties' election manifestos and citizens' party placements in cross-sectional comparisons between different parties, but a far weaker relationship between over-time shifts in parties' RILE codings and changes in citizens' Left-Right party placements (see Adams et al. 2019).

[4] See Adams, Ezrow, and Wlezien (2016) for an application to European unification.

media coverage) share more similar Left-Right positions, independently of coalition arrangements and of the ideological tones of their manifestos.[5]

How might we expect citizens' political sophistication to condition the impact that party manifestos, coalition arrangements, and party elites' reported interactions exert on citizens' perceived Left-Right party differences? Theoretical considerations point to conflicting answers to these questions. Intuitively, we might expect politically sophisticated citizens to weigh these factors more heavily. On the other hand, alternative considerations suggest that political sophistication may not moderate these effects, or even that the less sophisticated may rely more heavily on some of these factors. For instance, Fortunato and Stevenson argue that less knowledgeable citizens rely <u>more</u> heavily on parties' co-governance to estimate their ideological similarity because coalition arrangements are an "easy" heuristic to apply – since nearly everyone is aware of which parties are governing – so that less-knowledgeable citizens fall back on this simple cue, while the more knowledgeable consider the wider range of information they have.[6] And, while the party interactions heuristic depends on monitoring political news coverage,

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[5] The authors report evidence that citizens apply the party cooperation heuristic around the times of national election campaigns, but not at other points in the election cycle when citizens are presumably less attentive to political news.

[6] The literature on party balancing is instructive here (Alesina and Rosenthal 1995; Bafumi, et al 2010).

something that politically sophisticated citizens presumably do more of,[7] such citizens are also more likely to consume media commentary that sometimes dismisses parties' public interactions as "performative" public relations exercises that do not reflect party elites' sincere beliefs. That is, politically-sophisticated citizens who consume more news reports about party interactions also tend to consume media commentary pushing them to discount these interactions.

Related, while politically-sophisticated citizens are more likely to be aware of a focal party's policy statements (including those contained in its manifesto), such citizens are also more likely to be aware of rival parties' assertions that the focal party's promises are insincere "cheap talk" designed to win votes (see, e.g., Somer-Topcu, Tavits, and Baumann 2020; Fernandez-Vazquez 2019).[8]

In summary, theory and previous research offer only limited information about how political sophistication moderates citizens' reliance on various informational cues to estimate

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[7] Consider that Santoso, Stevenson, and Weschle (2023) find that citizens who report lower levels of media attention display far less accurate estimates of how cooperatively different political parties interact based on media news reports.

[8] Adams, Bernardi, and Wlezien (2020) substantiate this argument with respect to governing parties, finding that citizens generally adjust their perceptions of these parties' ideologies in response to the government's actual social welfare policy outputs, but not in response to the policy promises contained in their election manifestos. We do not examine the effects of actual policy here because it is not clear how to theorize and evaluate the connection to distance between party dyads, which is the focus of our empirical analysis.

parties' ideological differences. We attempt to redress this imbalance in observational data analyses that empirically test the possibilities.

Data and Estimation Approach

To evaluate the relationships discussed above, we perform individual-level analyses using data from Waves 2-4 of the Comparative Study of Electoral Systems (CSES), which gives us a sample of 51 surveys in 18 Western countries. We do not include CSES surveys from Wave 1 because our media-based measure of inter-party cooperation and conflict, described below, is only available from 2001 onwards. Moreover, we do not analyze CSES surveys from Wave 5 because it does not include the political knowledge quizzes that were administered in Waves 1-4, which is one of our measures of political sophistication. Table 1 presents the set of countries and election years included in our analyses.

---Table 1 about here---

We estimate models in which the dependent variable is survey respondent i's perception of the Left-Right distance between parties j and k in the country-election-year survey, defined as the absolute value of the difference between i's placements of j and k along the 0-10 Left-Right scale used in the CSES. The models include the following independent variables.

First, to account for differences between party manifestos, we include the Left-Right (RILE) distance between parties j and k based on Lowe et al.'s (2011) logit transformation of the codings of the Left-Right orientations of parties' election manifestos in the Comparative Manifesto Project (Volkens et al. 2013).

Second, we include two variables to account for the current and past co-governance histories of the party pair. To capture current co-governance, we include a dummy variable for whether parties j and k had governed together at any point during the year of the current election.[9] To capture the parties' previous co-governance histories, we included a variable that equals the number of years in which the party pair had co-governed over the past decade (not including the current election year). We control for parties' previous co-governing histories due to Fortunato and Stevenson's (2013) finding that citizens weigh past coalition arrangements when estimating parties' current Left-Right distances.[10]

Third, following Adams et al. (2021), we include the degree of cooperation versus conflict that party elites displayed in their public interactions in the 365 days prior to the election, using the media-based cooperation (QPR) scores developed by Weschle (2018). These scores are based on a large number of news reports from legacy media that were collated in the Integrated Crisis Early Warning System (ICEWS) event data, and are available starting in 2001. The

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[9] Consistent with previous studies (see, e.g., Horne et al. 2023) we do not code j, k as co-governing in the current year if they had entered government after the current election, as post-election surveys were often in the field during coalition negotiations. Analyses that code such parties as co-governing support the same substantive conclusions we report below.

[10] Relatedly, Horne, Adams, and Gidron (2023) present evidence that parties' previous co-governance histories influence partisan voters' current affective evaluations of opponents when controlling for current coalition arrangements and for policy differences in the parties' election manifestos.

scores come from a latent factor network model, which estimates parties as being more cooperative when their direct interactions with each other are more cooperative – i.e., when there are more media reports of inter-party cooperation and fewer reports of conflict between them – *and* when the parties have similar interactions with third-party actors, as when both parties interact cooperatively (or conflictually) with third parties such as other parties or societal actors like unions or business associations.[11]

Fourth, we account for the respondent's political sophistication level, measured in two ways. The first is the proportion of questions the respondent answered correctly on the political knowledge quiz included in the CSES waves 1-4.[12] Although these quizzes have been widely used as measures of political knowledge in previous research (see Santoso 2023), as far as we know they have not been employed in studies of whether political sophistication moderates the perceptual effects of party manifestos, coalition arrangements, and elite interactions. Yet, respondents' political knowledge is arguably most relevant to these factors. The second measure is the survey respondent's highest level of education attained, which Fortunato and Stevenson (2013) use as a measure of political sophistication in their analyses of the perceptual effects of governing coalitions.[13] This ranges from no education/illiterate (0) to primary education/lower secondary education (1) to higher secondary education (2) to post-secondary education (3), the

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[11] Weschle (2018) provides a detailed discussion and validation of these media-based, inter-party cooperation scores.

[12] Proportions are useful because some of the quizzes included in the CSES surveys ask three questions and others ask four.

[13] See also Fortunato and Adams (2015).

latter of which includes both university and non-university education.[14] As we are interested in how sophistication conditions citizens' reliance on the different information sources described above, we estimate both additive and interactive effects. Specifically, we interact the political sophistication measures with RILE distance, current and past co-governance, and the media-based cooperation (QPR) scores, to estimate how sophistication moderates the impact of these variables.

Table 2 reports descriptive statistics for our variables. The computations are across all party pairs in our data set. We see that CSES respondents place the average party pair slightly over three units apart on the 0-10 Left-Right scale, that the average party pair is separated by just under one unit on the logged RILE scale, and that roughly 17% of party pairs had co-governed prior to the election in the year of the current election survey. The media-based cooperation scores between party pairs, for which higher numbers denote a more cooperative relationship based on news reports of their interactions, by construction average zero.

Regarding our political sophistication measure, Table 2 indicates that CSES respondents correctly answered a little over half of the political knowledge questions, on average, and the distribution is *fairly* uniform (also see footnote 10). Higher secondary education is the median

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[14] An alternative political sophistication measure is the respondent's reported level of political interest. However this variable is not included in all the CSES surveys so that use of the political interest variable would significantly reduce our sample size. See Fortunato and Stevenson (2013, p. 470) for a further discussion of this issue.

level of education attained among CSES respondents, while the average level of education attained falls somewhere between higher secondary education and post-secondary education.

---Table 2 about here---

To account for the hierarchical nature of our data, we estimate linear mixed-effects models. We include a full set of country-year fixed effects, which capture temporal and cross-national differences in how CSES survey respondents interpret the Left-Right scale as well as any differences associated with QPR scores that are estimated separately for each country-year. Following Fortunato and Stevenson (2013) and Fortunato and Adams (2015), we also include survey-dyad random effects that are designed to capture the impact of unmeasured characteristics of the party dyad that change from survey to survey that are relevant to respondents' perceived Left-Right distance between the parties.

Results

Tables S1-S2 in the supplementary online appendix report parameter estimates for our model using the respondent's performance on the political knowledge quiz as our political sophistication measure (Table S1), then using the respondent's reported education level (Table S2). Figures 1-2 graph the estimates and standard errors on the RILE, co-governance, and QPR variables, for respondents with different political sophistication levels using these two measures.

Figure 1 displays the estimated marginal effects of our independent variables RILE distance, coalition status and history, and media-based cooperation scores, for citizens with different proportions of correct answers on the political knowledge quizzes. In the figure, estimates range from respondents who did not correctly answer any of the political knowledge questions

13

(proportion equals zero) to those who correctly answered all questions (proportion equals 1.0)

on the horizontal axis. In Figure 1A, which plots the estimates for the RILE distance variable, we

see that respondents at all knowledge levels are predicted to place the parties farther apart as

the parties' RILE scores diverge more, and that this effect is modestly stronger for the most

knowledgeable respondents. The marginal estimate for those at the lowest knowledge level,

+0.629 (p<.01), denotes that a one standard deviation (0.72) change in the RILE distance be-

tween parties predicts a roughly 0.45-unit increase in the perceived distance between the par-

ties on the 0-10 Left-Right scale, all else equal. The estimate for those at the highest knowledge

level, 1.012 (p<.01), means that the same 1SD change in RILE distance predicts a roughly 0.73-

unit increase in the perceived Left-Right party distance. The difference in the weight that the

most knowledgeable attach to RILE distance is detectibly larger than the weight the least knowl-

edgeable attach to it (p<.01), though this difference is substantively modest.[15]

Figure 1B plots the estimates on the current co-governance variable, showing that citizens

at all knowledge levels are predicted to place the parties closer together when the parties are

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[15] On the three-question political knowledge quizzes, the proportions of respondents answering

0, 1/3, 2/3, and all of the questions correctly was 0.18, 0.28, 0.34, 0.20, respectively; on the

four-question knowledge quizzes, the proportions of respondents answering 0, 1/4, 1/2, 3/4,

and all (1.0) of the questions correctly was 0.20, 0.13, 0.23, 0.28, 0.17, respectively.

currently co-governing, and to almost the exact same degree.[16] These results indicate that re-

spondents place co-governing parties nearly one unit closer together on the 0-10 Left-Right

scale, when controlling for parties' RILE distances and the tones of their public interactions as

reported in legacy media. Much the same is true for the previous co-governance variable, as dis-

played in Figure 1C which shows that people at all knowledge levels tend to place parties closer

together when they have histories of previous co-governance over the past decade.[17] The differ-

ences across different knowledge levels are substantively small, although they are statistically

significant (p<.01), with more knowledgeable respondents relying slightly more on this coalition

history heuristic.[18] That said, the estimates substantiate that parties' current and past coalition

participation both significantly influence citizens' perceived party distances, and the magnitudes

of these effects are not strongly related to citizens' political knowledge levels.

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[16] For the least knowledgeable respondents, the predicted marginal effect of current co-govern-

ance is to shift parties' predicted perceived positions 0.89 units closer together on the 0-10

scale. For the most knowledgeable the predicted effect is 0.92 units.

[17] The coefficient estimates cluster near 0.2 for all education levels, denoting that, among party

pairs that are not currently co-governing, the perceived distance between the parties shrinks by

about 0.2 units on the 0-10 Left-Right scale for each additional year that the pair co-governed

over the past decade.

[18] For the least knowledgeable respondents, the predicted marginal effect of each additional

year of previous co-governance is to shift parties' predicted perceived positions 0.19 units closer

together on the 0-10 scale. For the most knowledgeable this predicted effect is 0.23 units.

Figure 1D plots estimated marginal effects for the cooperative/conflictual tone of media coverage of party interactions (the QPR score), again stratified by knowledge. The estimates are all near zero and statically insignificant, which contrasts with the findings reported in Adams et al (2021) who estimate a macro-level effect that presumes some basis at the individual level. We explore this discrepancy in the appendix, finding evidence that it is due to differences in the countries and elections included in the two studies. Adams et al (2021) analyze a different set of cases, drawing on the CSES but also the European Election Survey which is taken after European Parliament elections, and includes some post-national election surveys that are not included in the CSES. We show that when combining the data from both studies, the original Adams et al. (2021) finding is supported, i.e., citizens' mean perceived party distances are significantly associated with the cooperative/conflictual tones of parties' public relationships (see Table A2 in the appendix). While important, here we are interested in what is happening at the individual-level, with whether citizens' reactions to party interactions are related to their political sophistication, and we estimate that the marginal effects do become slightly more negative for citizens with greater knowledge. This implies that more knowledgeable citizens tend to place parties slightly closer together as their interactions (as portrayed in the media) become more cooperative.[19]

---Figure 1 about here---

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[19] For the least knowledgeable respondents the predicted marginal effect of the media-based cooperation variable is -0.06 and for the most knowledgeable it is -0.14, with neither marginal effect being statistically significant.

Figure 2 displays estimated marginal effects using education as the political sophistication measure, and are generated using the model coefficients presented in Table A2 in the appendix. The patterns are extremely similar to what we found with political knowledge, in that there are detectible effects of manifestos and of current and past coalition arrangements on citizens' perceived party distances, and that – with the exception of manifestos, for which effects are substantially stronger for the more highly-educated – the magnitudes of these effects are not strongly related to the respondents' education levels. For the interaction between education level and the media coverage tone of party interactions in Figure 2D, there is some suggestion that more highly educated respondents place more weight on this when estimating party Left-Right differences. That said, the effects of media-based cooperation are statistically insignificant at every education level.

In summary, our analyses using political knowledge and education to proxy political sophistication suggest that, while sophistication exerts a modest direct effect on citizens' perceptions of Left-Right party differences, it does not fundamentally affect citizens' reliance on party manifestos, governing coalition histories, and parties' reported interactions. Of special interest may be results relating to coalition governance, as Fortunato and Stevenson (2013) found that people with high political interest relied less heavily on those cues when placing parties. Although we cannot be certain what accounts for the differences between their results and ours, it may have to do with the differences in the samples of election, and/or differences in measures of sophistication, for which we rely on knowledge and education.[20]

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[20] Also note that the empirical models differ.

---Figure 2 about here---

Conclusion

Parties' stated policy positions, their governing histories, and media reports of their public interactions all have been found to affect citizens' estimates of parties' ideological differences.[21] However, it is unclear whether these effects operate differently for different types of citizens, since theoretical considerations point in conflicting directions. Here we considered one possible mediator, namely citizens' levels of political sophistication. Analyzing 51 Comparative Study of Electoral Systems election surveys from 18 Western publics between 2001 and 2015, we find that sophistication measured using political knowledge and education levels only selectively and modestly conditions people's reliance on these different pieces of information. The more sophisticated rely more heavily on information contained in party manifestos, though even the least sophisticated do so, and not to fundamentally different degrees. There are some hints that more sophisticated individuals rely more on co-governing histories and publicly reported party interactions, but the differences are substantively small.

The results imply that when estimating the Left-Right distances between parties, people with different levels of political knowledge and education tend to use the same set of cues and to roughly the same degree. Other variation may matter, of course,[22] and this variation may also

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[21] As we have noted, the public may react to policy outputs themselves (Adams, et al. 2020).

[22] In this regard Adams et al. (2014) argue and empirically substantiate that partisan citizens perceive their party's policy shifts more accurately than they perceive rival parties' shifts, suggesting that it is promising to analyze partisan subconstituencies' perceptions.

18

condition the influence of knowledge, but those possibilities remain to be seen. Moreover, since we analyze survey respondents who provided party placements on the Left-Right scale, future research might analyze whether sophistication conditions citizens' willingness to place parties on this scale (see, e.g., Fortunato, Silva, and Williams 2018). Future research might also explore whether political sophistication affects the weights citizens attach to the party positions they do perceive, as citizens make their vote choices on Election Day (e.g., Clark and Leiter 2015).

For now, it appears that there is much more homogeneity than heterogeneity in citizens' party placements. This has implications for electoral behavior and political representation, as there is less basis for political inequality than we might suppose. That, of course, depends on the connections between citizens' party placements and their political judgments, which we have not examined here. The starting point nevertheless is a lot more equal than we – and presumably other scholars – might have supposed.

APPENDIX. Macro-Level Analyses Incorporating
Additional Data Analyzed in Adams et al. (2021)

Our individual-level analyses of the perceptual effects of the cooperative/conflictual tone of media coverage of party interactions (based on QPR scores) generate statistically insignificant results for all levels of political knowledge (although the interaction of the QPR scores with political knowledge is statistically significant). As discussed in the main text, this null finding contrasts with those presented in Adams et al (2021), who report macro-level analyses showing that the mean perceived Left-Right distance between parties *i, j* decreases significantly as the QPR score for this party pair become more positive. To explore this discrepancy, we re-estimated the macro-level model presented in Adams et al. (2021) merging the country-election year surveys analyzed in that paper (see Table A.3 in the appendix to Adams et al. 2021 for the list of election surveys) with the surveys we analyze here. Table A1 below reports the set of election-year surveys included in these analyses.[23] In this model, the dependent variable [*Mean perceived distance between parties i, j* (*t*)], denotes the difference between party *i*'s and party *j*'s mean perceived positions in the country-election survey in year *t*, averaged across all respondents who provided valid Left-Right placements of *i* and *j*. Column 1 in Table A2 reports these estimates on

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[23] We note that the Adams et al. (2021) paper included party QPR scores estimated for the six months prior to the national election, while here we are analyzing QPR scores for the twelve months prior to the election. For this reason, we could not include a small number of observations analyzed by Adams et al. for which 12-month QPR scores were unavailable due to data limitations.

the set of surveys originally analyzed by Adams et al., while column 2 reports these estimates

when merging these data with the survey data we analyze in this paper. We see that the coeffi-

cient estimates on are quite similar when estimated on both sets of surveys, and support the

same substantive conclusion; that is, citizens' mean perceived Left-Right distances between

pairs of parties decrease significantly as the tones of parties' public interactions (as reported in

legacy media) become more positive. Thus, the Adams et al. (2021) findings continue to be sup-

ported when analyzing the full set of country-election years analyzed in their original study and

in this paper, even as estimated effects using only the latter are smaller and much less reliable.

Table A1: Countries and Election-Year Surveys in Analyses
Incorporating Additional Data from Adams et al. (2021)

Country	Election surveys included
Australia	2004, 2007, 2013
Austria	2008, 2013
Belgium	2003, 2014
Canada	2004, 2008, 2011, 2015
Denmark	2005, 2007
Finland	2003, 2007, 2011, 2015
France	2002, 2007, 2012
Germany	2002, 2005, 2009, 2013
Great Britain	2005, 2015
Greece	2004, 2009, 2012, 2015
Ireland	2002, 2007, 2011
Israel	2003, 2006
Italy	2006
Netherlands	2002, 2003, 2006, 2010, 2012
New Zealand	2002, 2008, 2011, 2014
Portugal	2002, 2005, 2009
Spain	2004, 2008, 2011
Sweden	2002, 2006, 2014
Switzerland	2003, 2007, 2011

Notes. The table lists the election-year surveys for our analyses merging the survey data from
Adams et al. (2021) with the data from our current study.

Table A2: Analyses of Mean Perceived Left-Right Distances between Pairs of Parties: Assessing the Robustness of the Adams et al. (2021) Findings

	Analyses of data from Adams et al. 2021	Analyses of Adams et al. data merged with our data
RILE distance between parties j,k (t)	0.97** (0.19)	0.98** (0.14)
Media-based cooperation score j,k (t)	-0.49** (0.17)	-0.49** (0.18)
j,k are currently co-governing (t)	-0.64** (0.19)	-0.92** (0.19)
Number of observations	222	386
Adjusted *R*-squared	0.31	0.33

∗∗*p* < .01, two-tailed tests

Notes: The dependent variable for the analyses is [*Mean perceived distance between parties i, j (t)*], defined as the absolute difference between the survey respondents' mean left–right placements of the focal parties *i* and *j* on the 0–10 Left–Right scale in the election-year survey administered in year *t*. The independent variables are defined in the text. The top number in each cell is the unstandardized coefficient estimate, and the number in parentheses below is the standard error on this estimate. The model also includes country-period fixed effects (not shown).

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Table 1: Countries and Election-Year Surveys Included in the Analyses

Country	Election surveys included
Australia	2004, 2007, 2013
Austria	2008, 2013
Belgium	2003
Canada	2004, 2008, 2011, 2015
Denmark	2007
Finland	2003, 2007, 2011, 2015
France	2002, 2007, 2012
Germany	2002, 2005, 2009, 2013
Great Britain	2005, 2015
Greece	2009, 2012, 2015
Ireland	2002, 2007, 2011
Israel	2003, 2006
Netherlands	2002, 2006, 2010
New Zealand	2002, 2008, 2011, 2014
Portugal	2002, 2005, 2009
Spain	2004, 2008
Sweden	2002, 2006, 2014
Switzerland	2003, 2007, 2011

Notes. The table lists the election-year surveys from the Comparative Study of Electoral Systems (CSES) that we analyze in our study. As discussed in the text, we do not include CSES surveys from Wave 1 because our media-based measure of inter-party cooperation and conflict is only available from 2001 onwards, and we exclude surveys from Wave 5 because this wave does not include the political knowledge quizzes that were administered in the earlier waves, which we use to construct our measure of survey respondents' political knowledge levels.

**Table 2. Descriptive Statistics for the Dependent and Independent Variables**

	Mean	SD	Min	Max
i's perceived L/R distance between parties *j,k*	3.28	2.57	0	10
RILE distance between parties *j,k* (t)	0.94	0.80	0.00	5.62
j,k are currently co-governing (t)	0.17	0.37	0	1
# of years j,k have co-governed in last decade (t)	1.44	1.3	0	7
Media-based cooperation score *j,k* (t)	0.02	0.39	-3.63	2.20
Respondent *i*'s political knowledge	0.52	0.34	0	1
Respondent *i*'s education level	2.12	0.87	0	3

Notes. The table reports descriptive statistics for the variables we included in our analyses of Comparative Study of Electoral Systems (CSES) survey respondents' perceptions of the Left-Right distances between pairs of the political parties. The variables are described in the text. The computations are over respondents from the CSES election surveys listed in Table 1 above.

Figure 1. Computed marginal effects of independent

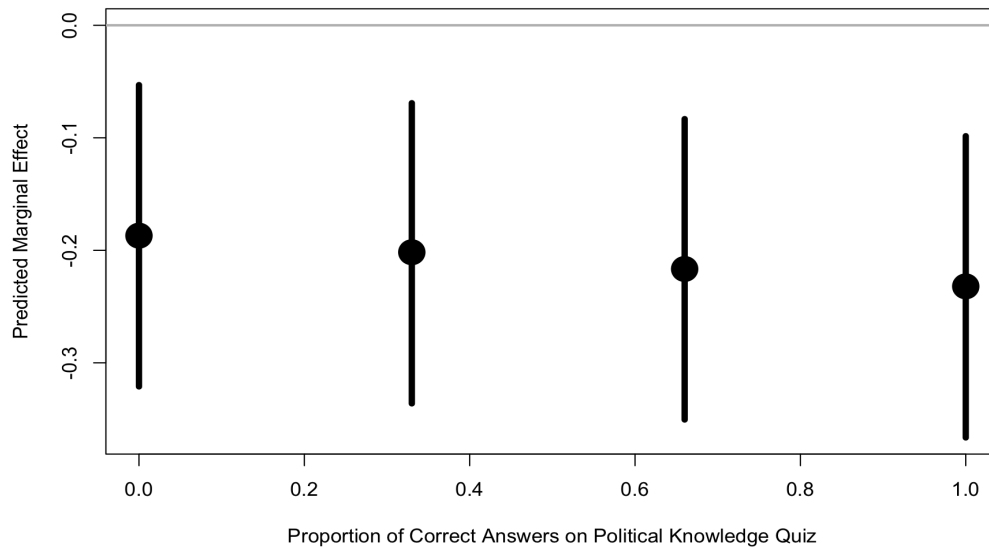**variables, by respondent's performance on political knowledge quiz**
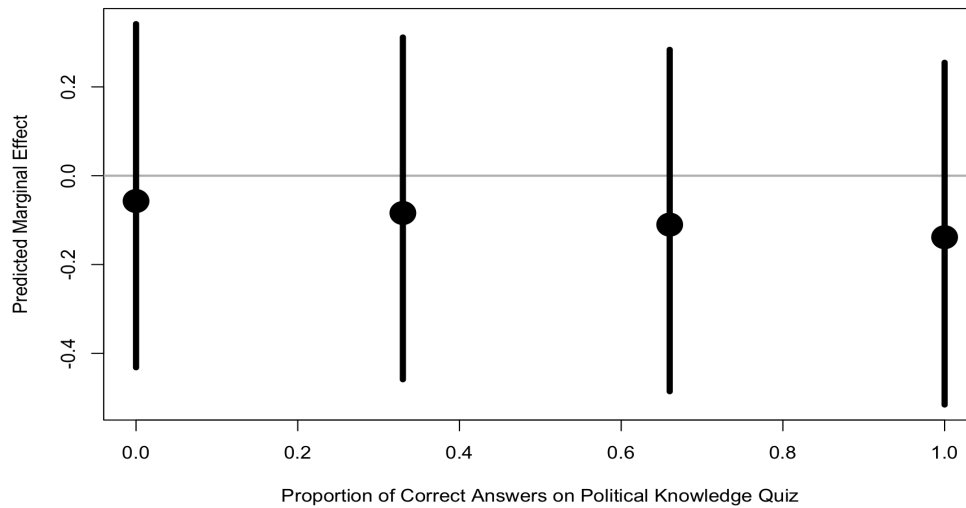
1A. RILE distance
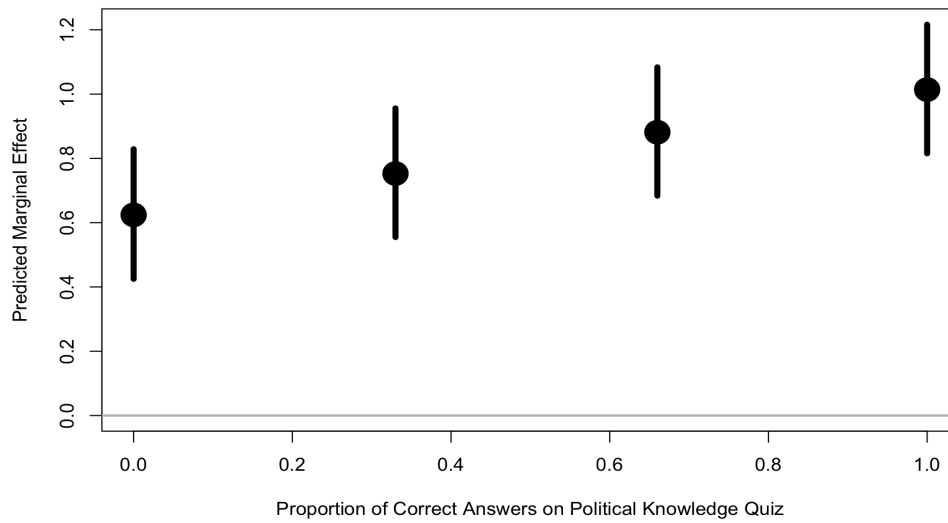
1B. Current co-governance
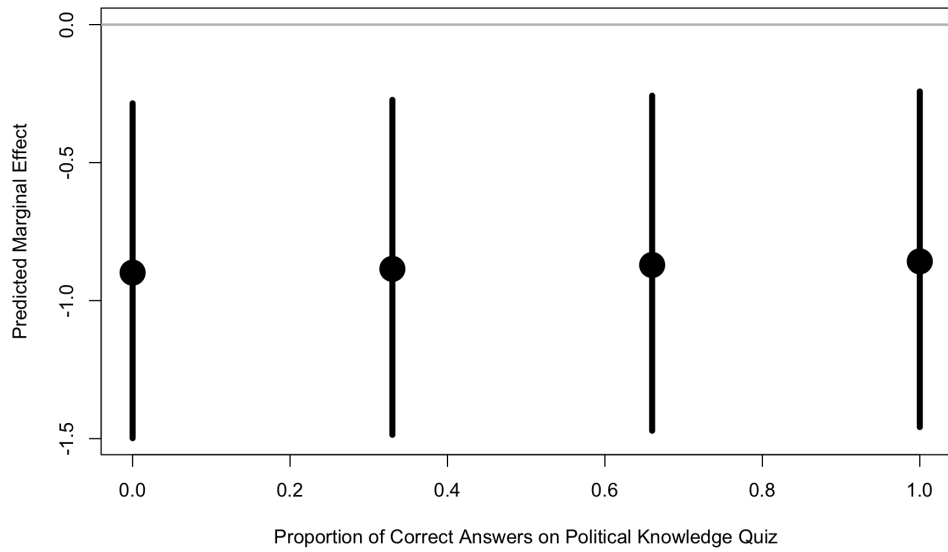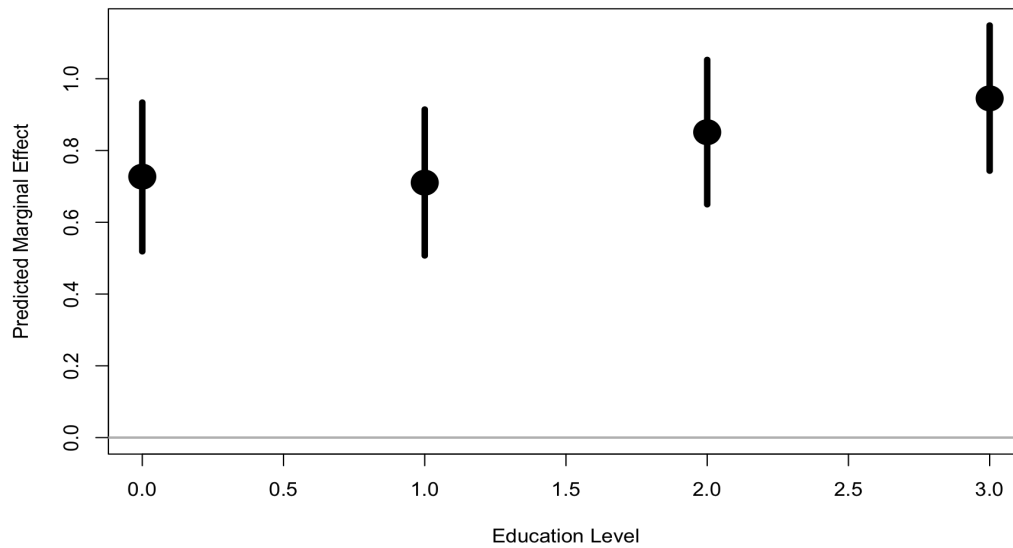
1C. Past co-governance

1D. Media-based cooperation/conflict score

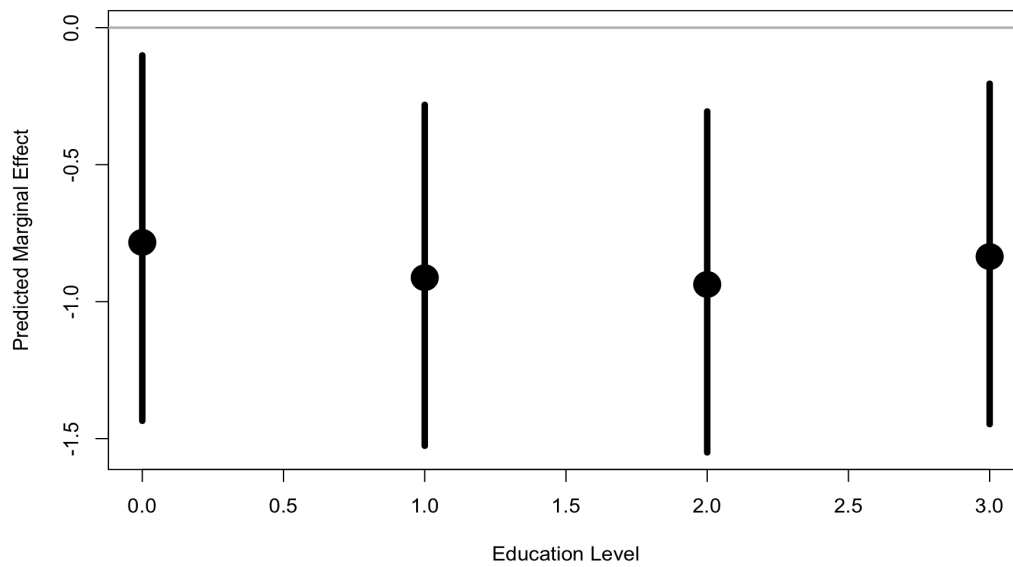
Notes. The marginal effects displayed in the figures are effects on the respondent's predicted perception of the Left-Right distance between parties *j,k*. The marginal effects were derived from the coefficients reported in Table A1 in the appendix. These effects were estimated over the set of CCSE election surveys listed in Table 1.

Figure 2. Computed marginal effects of independent variables, by respondent's education level
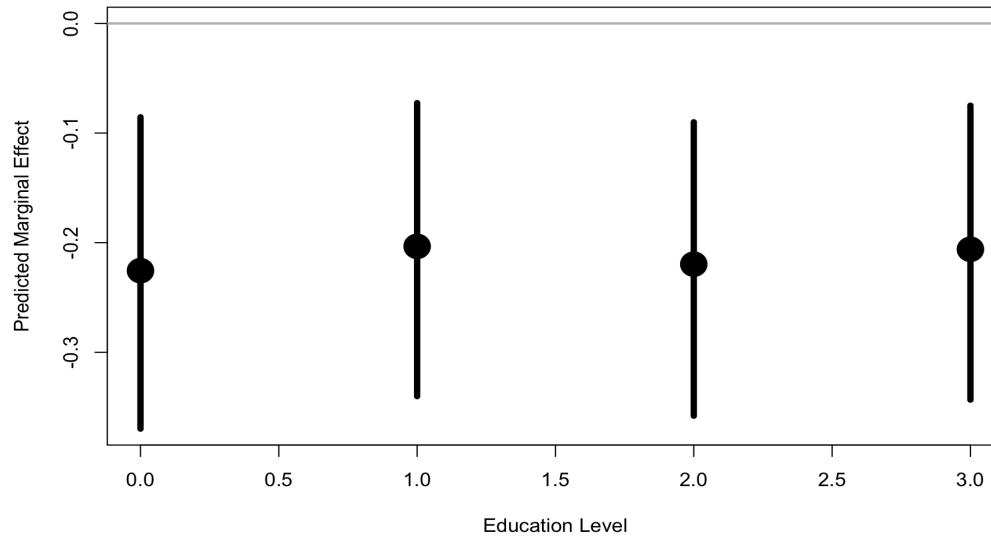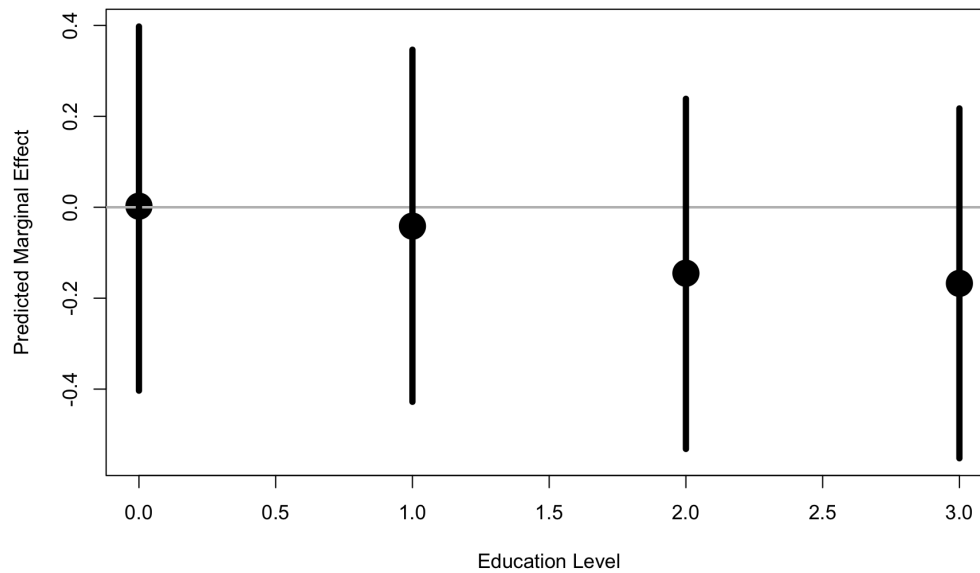
2A. RILE distance

2B. Current co-governance

2C. Past co-governance

2D. Media-based cooperation/conflict score

Notes. The marginal effects displayed in the figures are effects on the respondent's predicted perception of the Left-Right distance between parties j,k. The marginal effects were derived from the coefficients reported in Table A2 in the appendix. These effects were estimated over the set of CCSE election surveys listed in Table 1.