

Party Government and the Shape of American Political Information

David Fortunato
University of California, Merced
dfortunato@ucmerced.edu

Randolph T. Stevenson
Rice University
randystevenson@rice.edu

Abstract:

We argue that political information should be utilitarian and therefore the aggregate shape of political information may vary over time or across contexts in response to the political processes voters need to understand in order to participate in politics. We discuss how Congressional organization and voting have evolved over the last several decades to increase the salience of parties and derive empirical expectations for how these changes should condition the types of political information possessed by Americans. Using nearly 50 years of ANES data we provide strong evidence that voters have replaced individually-oriented information with partisan information. More specifically, as Congressional parties have grown more homogenous, voters have become less able to identify their individual Congressional candidates, but more able to properly rank-order Republicans and Democrats ideologically.

Over the past several decades, the organization and behavior of the U.S. Congress has evolved, increasing the partisanship of the legislative agenda, parliamentary

procedure, and, most importantly, the voting of individual members. This increase in the salience of party has motivated three separate, but related, literatures in political science. The first investigates the origins of these changes, typically focusing either on organizational features of Congress, or how members are selected into the body. The second investigates the implications of increased partisanship on policy-making and policy outcomes. The final literature focuses on how the increased salience of party in Congress has affected the electorate, investigating, for example, the erosion of mass institutional support for Congress (Ramirez 2009), the increase in mass ideological polarization (Hetherington 2001), or how Congressional polarization may increase the stability of vote choices (Levendusky 2010).

In this paper we hope to contribute to this third literature by asking how the increased partisanship of Congress has reshaped the extent and nature of the average American's information about Congress. We argue that political information, in a certain sense discussed below, is *utilitarian* – that is, interested citizens will obtain and retain specific kinds of political information when this information helps them complete typical political tasks in a satisfying way (and not otherwise). These tasks certainly include specific actions like voting; but, we can also think of more general tasks such as discussing politics with others or simply making sense of political news.

Given its utilitarian nature, we further argue that when the kind of information necessary to make sense of political news (about Congress or members of Congress), discuss politics, or vote in a satisfying way changes then the average citizen's available information set should also change. Specifically, we hypothesize that the increased salience of parties to Congressional organization and the behavior of members has reduced the value of individual-specific information in understanding Congress and its members while, at the same time, increasing the value of partisan information (e.g., ideological brands and partisan majority status). Consequently, we expect that over time (and as a result of polarization in Congress) the typical citizen's information set will include less individual-specific information (about representatives) and more partisan information. For example, we predict that, over the last few decades, the typical voter should become *less likely* know the names and (non-partisan) characteristics of individual legislators (e.g., the leadership roles of specific members), but *more likely* to possess party-centered information (like the party of incumbent representatives and which party controls a majority in congress).

In order to make our theoretical argument plain, in this paper we set aside (for now) the general question of what information a citizen needs to understand and discuss politics (in a satisfying way) and instead focus on the more narrow theoretical question of what information a voter needs to cast either a prospective or retrospective vote. Specifically, in the next section we discuss the types of information that prospective and retrospective voters would need to cast satisfying votes in two idealized legislative environments: one that is perfectly non-partisan

and the other which is perfect partisan (i.e., in the latter case a majority party dominates the legislative agenda and organization of the legislature and there is perfect party discipline in legislative voting; in the former case there is neither of these things). This discussion leads directly to theoretical hypotheses about the kinds of information that should be most useful to voters in understanding and predicting legislative outcomes and behavior in the two cases.

With this theoretical roadmap, we next describe real the real changes in the partisan organization and structuring of US Congress over the last several decades and argue (in line with almost all Congressional scholars) that the institution has been moving toward a greater role for partisanship. More specifically, we break the general idea of increased partisanship in Congress into two distinct sub-components, which we call *partisan homogeneity* and *partisan distinctiveness*, and illustrate the extent to which Congress has evolved on each. Further, we show that while we should expect (according to our theory) the information set of voters to respond strongly to changes in *partisan homogeneity*, we should expect a more muted response to changes in *partisan distinctiveness*.

We test our theoretical expectations in two different ways. First, we use data from the American National Election Studies to examine 50 years of change in the nature of the voters' information about Congress. This exercise reveals that voters have grown less likely to know the names of the candidates competing to be their Congressional representatives, but have grown more able to rank-order the Democrats and Republicans in terms of their general left-right policy positions. Further, when including measures of both partisan homogeneity and distinctiveness in the model, changes in voter information are much more responsive to the former than the later. Second, we use cross-sectional data from the 2011 CCES to examine variation in voters' knowledge of state assembly majorities. As we expect, we find that voters are more likely to know the partisan identity of the chamber majority in states in which partisan homogeneity in legislative voting is greater.

What must voters know to vote prospectively and retrospectively in different partisan contexts?

Consider a legislature institutionally equivalent to the U.S. Congress, save the existence of parties. Such a perfectly non-partisan legislature would very likely be organized in a manner familiar to most Congressional scholars: this system would either be organized informationally (Gilligan and Krehbiel 1990), where the legislature as a whole acts to curtail uncertainty in policy execution, or distributively (Weingast and Marshall 1988), where logrolling coalitions are organized by individuals seeking passage of their most desired policies. In either case, voting records and policy outcomes would be determined by the aggregation of individual policy preferences, free of the organizing influences or pressures of party organizations (e.g. Jenkins 1999; Wright and Schaffner 2002).

Because individual legislators are truly individual actors in such a non-partisan world, understanding the institution in any meaningful way would require citizens to have *individually-oriented* information. That is, the most salient aspects of the law-making process in this kind of legislature are likely to be the voting behaviors of particular representatives (*your* representatives) and the distribution of agenda control amongst individual legislators.¹ More specifically, we can think about the minimum information set that voters would need in order to cast an informed prospective or retrospective vote in this context.

A prospective voter, assuming her own policy preferences are given, would need information on the policy preferences of the candidates competing to be her representative.² More specifically, she would need to know the names of the candidates and then attach reasonably accurate policy preferences to those names so she could then compare the candidate preferences to her own and choose the best match.

A retrospective voter, assuming his perceptions of previous outcomes are given, would need information on the vote choices of his incumbent legislator. More specifically, he would need to know his incumbent representative's name and voting record. He could then compare this voting record to the policy outputs of the legislature and determine whether or not his representative was on the "right side" of a sufficient number of votes to earn his support in the coming election; if not, the he would support the challenger. These informational requirements (for the non-partisan legislative environment) are summarized in the Table below.

Voter type	Primary information	Secondary information
Prospective voter	Candidate names	Candidate preferences
Retrospective voter	Incumbent name	Incumbent voting record

Next, consider a case in which partisan organization in the legislative chamber is perfect. In this world, the majority party dominates the legislative agenda and voting is perfectly disciplined *within* parties. Because the majority seeks policies that increase its brand value at the expense of the minority, the overwhelming majority of roll calls should result in the majority and minority voting against each other en bloc. Further, because party leadership dominates the agenda, and party

¹ For example, a voter may well need to know the House Speaker, chair of the Committee on Appropriations, or chair of the Committee on Rules (or at least whether her representative was one of these people).

² We are not concerned here with "correct voting," so we do not ask if voters know enough to know what is best for them (and vote accordingly) only do they know enough to cast a prospective vote that reflects their preferences (whatever these are, even if misguided).

brands are protected at all costs, the role of individuals is necessarily marginalized. That is, individual legislators have little or no means to distinguish themselves from their co-partisans inside the chamber.³

From a voter’s perspective selecting representatives to party-dominated legislature is quite different from selecting representatives to a non-partisan chamber. Rather than collecting information on individuals, voters require party-centered information. Assuming a nationalized two-party system and, again, assuming voters’ policy preferences as given, a prospective voter would need to know the labels of the two parties competing for office and the policy positions of the parties on salient policies.⁴ Likewise, given some perceptions of policy outcomes (i.e., did the voter like or not like these outcomes), a retrospective voter would only need to know the identity of the majority party in the legislature.⁵

Voter type	Primary information	Secondary information
Prospective voter	Party names	Party preferences
Retrospective voter	Majority party name	

Clearly, the informational requirements of voting in contexts of strong party government are less burdensome than the requirements in an individually organized legislature. Indeed, Levendusky (2010) highlights this implication in his demonstration that the increased clarity of choice under polarized party government can significantly increase the stability of vote choices.

³ Following Schattschneider (1942), this is often called “party government,” an organization of legislative proposals, procedures, and voting behaviors that consolidate control of policy-making power and, in so doing, maximize the primacy of parties as cohesive organized units to the law-making process, typically at the expense of the individual. Several Congressional scholars have written extensively on how these cartels are constructed and maintained – Aldrich (1994); Aldrich and Rohde (2001); Cox and McCubbins (1993, 2005); and Rodhe (1991) are among the most widely cited, but perhaps an even better illustration of this concept would be Cox’s (1987) account of the transition of the House of Commons from an individual-oriented institution to party-structured one that delegates nearly all policy authority to party leadership, i.e., the cabinet.

⁴ If ballots included partisan information (which would be likely in such an institutional setting), prospective voters would not even really need to know the partisan labels of the candidates in the district, but only which partisan options existed on the ballot.

⁵ Again, there is no real need to know the partisan identity of the candidates in a district (or of the incumbent) since one just votes for or against the majority party conditional on outcomes.

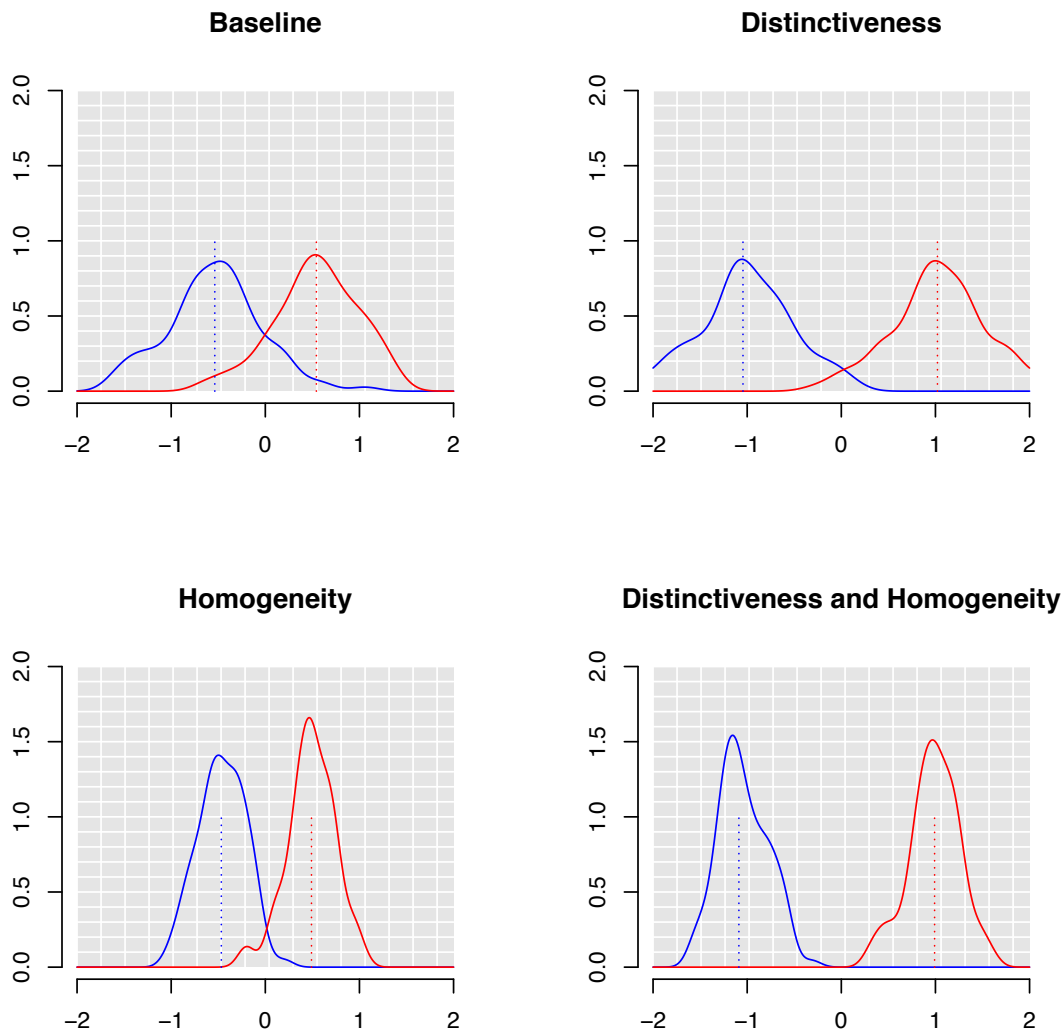
Party Government and Political Information

The scholarly consensus is that, over the past several decades, the US Congress has moved away from our idealized non-partisan, individualized body and toward our idealized party dominated chamber. Since the early 1970's party cohesion in legislative voting has increased nearly monotonically (Roberts and Smith 2003); and, the parties have also drifted apart in terms of their cardinal ideological positions (Theriault 2006). Our purpose here is not to weigh in on the causes of this change – Bonica (2014) offers a nice summary of, and contribution to, the scholarship on this – but to assess its effects on political knowledge in the electorate.

We argue that, in general, the typical voter should respond to this greater role for parties in Congress by transitioning away from individual-based information and toward party-based information. Specifically, we argue that this trend affects the import and prevalence (or relative cost) of partisan information in relation to individual information in two separate, but related ways. The first involves the increasing usefulness of party brands in predicting the behavior of individual legislators (which we call increasing *partisan homogeneity*) and the second involves their increasing *partisan distinctiveness*.

The concepts of *partisan homogeneity* and *distinctiveness* are theoretically related and measures of them have also evolved over time (to some degree) in tandem. Consequently, they are often conflated (often implicitly), discussed as a single concept, or are seen as “two sides of the same coin,” and most such accounts use the generic term “polarization” to capture both concepts, e.g., Levendusky (2010).

Conceptualizing polarization in this way, however, can obscure the fact that changes in partisan homogeneity and distinctiveness are not necessarily bound together. We have generated some graphics to illustrate this in and present them in Figure 1. In the top left pane, we have a hypothetical baseline picture of the kind of distribution of ideal points of Members of Congress (MCs) that political scientists often estimate from legislative votes – a picture that is not unlike the true distribution of ideal points from, say, the 92nd House. In the bottom left pane, we show how those ideal point distributions look if partisan homogeneity were to increase while partisan distinctiveness (measured here as the distance between party median ideal points) remains the same. Likewise, in the top right pane, we change from the baseline by increasing the distance between party medians without increasing partisan homogeneity. Finally, in the bottom right pane, we increase both homogeneity and distinctiveness, to create a picture resembling what one would find in modern Congresses.



This distinction between partisan homogeneity and distinctiveness is salient because we believe changes in these two dimensions of polarization should affect the electorate's political knowledge differently. This is because the relationship between partisan homogeneity and partisan distinctiveness and the relative value of individualized information versus party information is not necessarily collinear. As we explain in more detail below, while increasing partisan homogeneity reduces the relative value of candidate-specific information, increasing partisan distinctiveness may not. Likewise, while increasing partisan distinctiveness, by definition, sharpens the ideological divide between parties, increasing partisan homogeneity may not. We begin our discussion with partisan homogeneity.

As partisan homogeneity increases, the usefulness of partisan knowledge about the legislature increases in kind. One example of this comes from work on the usefulness of partisanship heuristics to infer the behavior of legislators (that would be costly to observe directly). A number of scholars have examined how a simple *partisanship heuristic* allows a voter with little or no knowledge of the actual voting behaviors of individual representatives to forecast how a particular member of Congress (MC) voted on a particular policy. By knowing which party a representative belongs to and the relative positions of the parties on the issue, voters can often apply the simple rule, “MCs tend to vote with their party” to accurately infer voting behavior. Research has shown this heuristic is applied widely, in both experimental (Lau and Redlawsk 2001) and observational studies (Ansolabehere and Jones 2010; Dancey and Sheagley 2012). Indeed, we recently examined its use by voters to infer their senator’s votes and found that, not only is the heuristic widely applied, but voters tend to apply it in proportion to its average accuracy across contexts. That is, senators vary in their party loyalty, and, as such, the accuracy of the heuristic will vary in kind. Our analysis showed that voters were attuned to this variation in accuracy, applying the heuristic less often for senators with a “maverick” reputation (Fortunato and Stevenson 2014).

As party loyalty in legislative voting (i.e. partisan homogeneity) has increased over the years, the average accuracy of the *partisanship heuristic* as also increased. This means that voters may accomplish more with less, so to speak – that the average voter can infer more Congressional behaviors, with greater accuracy, with the same small information set. As such, the usefulness of party brands as summary devices, or informational inputs to simple heuristics, like the *partisanship heuristic*, or other cognitive shortcuts has grown, increasing the net value of knowing, party-centered information (e.g., which party holds a majority or which party is more “liberal” or “left” and which party is more “conservative” or “right”).

Over this same period, as party-centered information has become more useful to understanding congress, individual-oriented information has decreased in its relative value. As MCs defect from their party less and less, individualized information about them explains less and less of their behavior. Consider a distribution of ideal point estimates for a given party. For simplicity, assume the distribution is normal, and, as such, can be described by its mean and standard deviation. As the party organization strengthens and/or the type of legislators selecting into the party become more similar, party voting unity (the proportion of votes in which a party member votes with the majority of her party) increases.⁶ When voting unity increases, the expressed preferences of the party members, or ideal points, necessarily converge on each other, shrinking the standard deviation of the distribution. As unity

⁶ Again, we are agnostic to the origins of the rise of party government or increased primacy of parties in Congress, whether it is caused by the strengthening of partisan control over legislative procedure (Cox and McCubbins 2005), member replacement (Poole and Rosenthal 1997), ideological migration (Theriatault 2006), or some combination of the three, the overall trend and end result is our concern.

approaches 1, the standard deviation of the distribution of policy preferences within the party approaches 0, and voters need only one piece of information to describe that party: the distribution mean. In this case, there is no benefit to individual-oriented information.⁷

Likewise, as partisan homogeneity increases, individual-oriented information is also likely to become more costly. Specifically, as such information is less important in understanding congressional politics and policy outcomes, it is likely to become less prevalent in media reports and day-to-day political discourse. As Benoit and Laver have written:

“. . . political discourse is rather like a giant feral factor analysis. The concepts that emerge — liberal versus conservative, left versus right — emerge because people over the years have found them simple and effective ways to communicate their perceptions of similarity and difference” (2012, 198).

In the transition from a perfectly non-partisan legislature to a perfectly partisan one, individual characteristics cease to communicate the important dimensions of similarity and difference as efficiently as party-centered variables do. Thus, these characteristics naturally recede from the greater political discourse, replaced by concepts pertaining to parties. Therefore, we expect that, over the last thirty years (as partisan homogeneity has heightened in Congress), terms like “Democrat” and “Republican,” or, “liberal” and “conservative,” and their attached ideological connotations, have become more widely understood among voters (i.e., have become a more important part of the voters’ information set).

As mentioned above, as Congressional partisanship has increased, party brands have increased in both their homogeneity and distinctiveness. Homogeneity has come from declining variation in intra-party behaviors (or expressed preferences), while distinctiveness has increased as the parties have separated from one another ideologically. This increasing partisan distinctiveness has likely changed the utility and cost of partisan information, just as the increase in partisan homogeneity has made party-centered information more valuable and individual information less valuable. As the parties have drifted apart in their ideological positions, the divisions in their policy preferences have become starker. Levendusky (2010, 115), for example, points out that while in the 1970’s, citizens “were not terribly clear” on the parties’ relative positions on abortion, today few citizens fail to make the correct distinctions.

⁷ In practice, one could imagine that there may be constituency service benefits to representative specific information. If one’s social security check does not arrive on time, one should know their Congressperson’s name in order to reach out for help. For the time being, however, we put these non-legislative activities aside.

The sharpening of ideological contrasts between the two parties (e.g., partisan distinctiveness) contributes to the virtuous circle of partisan information dissemination. As the two parties' positions diverge, media explanations of political issues and processes can increasingly be usefully described in terms of partisan contrasts. Correspondingly, an increasing prevalence of elite and media discussion of politics in partisan terms reduces the average voter's cost of obtaining relevant partisan information (relative to individual information). Further, in this landscape, voters will increasingly come to learn about issues in partisan terms. That is, their initial introduction to an issue, say health care reform or tax reform, will be increasingly likely to be overtly partisan – i.e., the Democratic plan pitched against the Republican plan. As new voters are socialized into the political discourse, their knowledge will be increasingly party-oriented.

Note that these changes resulting from increased partisan distinctiveness are different from the changes we attributed to increasing partisan homogeneity. While increasing homogeneity increases the number of candidates we may usefully paint with a generic party label, increasing distinctiveness increases the distance between party positions and therefore also the extent to which those labels are meaningful for communicating similarity and difference across a large number of political issues. In other words, increasing partisan distinctiveness makes answering the question, “who is more conservative, Democrats or Republicans?” easier, while increasing homogeneity makes answering that question more useful to understanding and predicting legislative behavior. As such, homogeneity, on average, to have a greater impact on citizen knowledge profiles than distinctiveness.

Hypotheses

The discussion above yields two general empirical expectations. First, as the partisan homogeneity of Congressional voting increases, voters should come to possess less information about individual candidates and more about party-centered variables. Second, as homogeneity and distinctiveness grows, voters should come to possess more information about the parties' relative ideologies. However, since parties may become increasingly ideologically polarized, while at the same time retaining a high degree of variation in the preferences and behaviors of individual members, we remain agnostic over the relationship between increasing distinctiveness and individual candidate knowledge.

To test these expectations, we will examine, relying on the ANES, whether or not voters possess the most basic elements of candidate and partisan ideological information. To assess the extent to which respondents possess individual oriented information, we measure ANES respondents' ability to name the candidates running to represent them in Congress. As discussed above, knowing the names of candidates (or incumbents) is the most basic piece of information a voter needs to cast an informed ballot in a world where individuals have primacy over parties in structuring Congressional processes. Thus, we can write our first empirical expectations as:

- As partisan homogeneity in Congressional voting *increases*, voters' ability to identify the names of their Congressional candidates will *decrease*.

To assess the extent to which respondents possess partisan ideological information, we examine whether or not ANES respondents can correctly rank-order Democrats and Republicans on the left-right ideological spectrum. This piece of information is not only critical to the voting task when Congress is highly structured by parties, but also critical to making sense of political processes and building a informed understanding of the structure of salient political issues and debate. We can write our second empirical expectation as:

- As the partisan homogeneity and partisan distinctiveness of Congress *increases*, voters' ability to correctly rank-order Democrats and Republicans will *increase*.

Data and Model Construction

To test these empirical expectations, we rely on the cumulative American National Election Studies data, which incorporates all surveys administered from 1948 through 2008 (though, the questions we rely upon were not asked in some cases). From 1978-2000, respondents were asked the following question:

“Do you happen to remember the names of the candidates for Congress -- that is, for the House of Representatives in Washington-- that ran in this district in November? [if yes:] Who were they?”

In addition to House candidates, respondents were also asked about Senate races in several surveys.⁸ We use all such responses to create the first dependent variable for our analysis. Respondents who could not correctly recall any candidate names were coded as a 0, respondents that could recall one name were coded a 1, and respondents that could correctly recall two or more names were coded as a 2.⁹

⁸ The ANES asked respondents to name senate candidates in all iterations over that period save 1984, and the period from 1994-2000. We should also note that previous iterations asked respondents if they recalled the names of the candidates, but it was not until 1978 that they were actually asked for the names themselves. Thus, we cannot tell for sure if respondents to iterations prior to 1978 actually knew the candidate names.

⁹ An admirable number of respondents could actually recall 3 candidate names, however, it was not a sufficient number to add an additional category to the dependent variable.

We measure party-centered information using the Republican and Democratic Party versions of the following question:

“We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place [party name] on this scale?”

If the respondent places the Democrats to left of the Republicans, we code dependent variable as “correct,” if the respondent places the Republicans to the left of the Democrats *or* places both parties at the same point on the scale, we code the variable as “incorrect.”¹⁰ Finally, if the respondents decline to place one or both of the parties, we code the variable as “don’t know.”

To test our expectations, these two dependent variables are regressed on measures of the partisan organization of Congress. We have constructed two measures of partisan organizations –one to capture the degree of partisan homogeneity in the relevant chambers of Congress and one to capture the degree of partisan distinctiveness. Both measures are built from dynamic ideal point estimates of MCs over the past several decades.

The homogeneity measure is actually measured here as its opposite “*heterogeneity*” and is an estimate of the lack of cohesiveness of legislative voting within the parties. For each chamber, in each session, we calculated the standard deviation of the first dimension dynamic weighted NOMINATE estimates for each party. For our first dependent variable, we take the mean of the party standard deviations for each house and match that estimate to the contest for which respondents are asked to identify candidates. Thus, for a respondent asked to name her candidates for the US House in 1988, the independent variable would be the average of the standard deviation of Republican ideal points in the 100th House and the standard deviation Democratic ideal points in the 100th House. For a respondent asked to name her senate candidates in 1992, the independent variable would be the average of the standard deviation of Republican ideal points in the 103rd Senate and the standard deviation Democratic ideal points in the 103rd Senate, and so on.¹¹

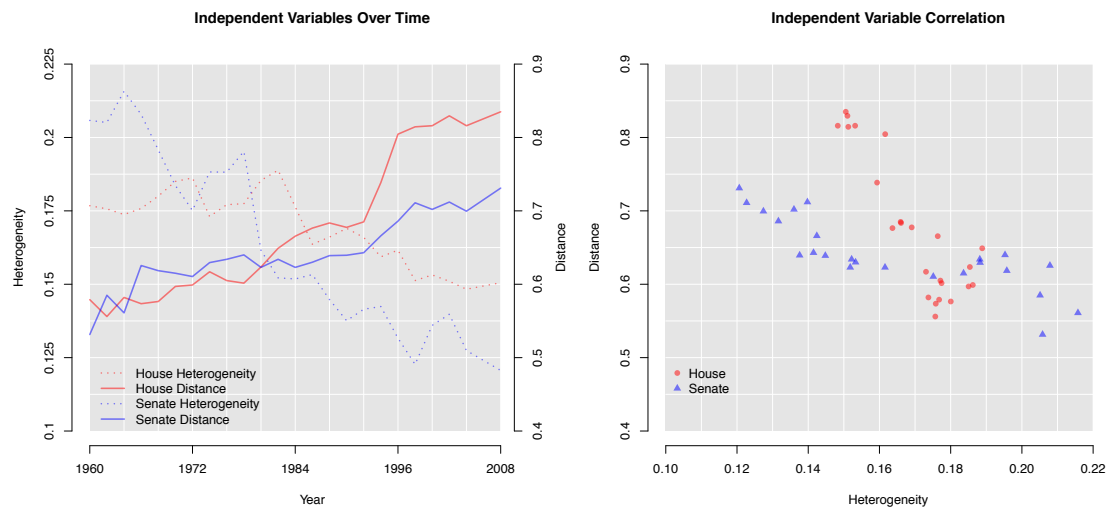
¹⁰ Changing “tied” placements from “incorrect” to “correct,” or even “don’t know” responses, does not change the substantive conclusions of our estimates.

¹¹ DW-NOMINATE scores are, of course, measures with error. To account for this error in our estimates we use the ideal points and standard errors to specify a series of normal distributions for each caucus in each chamber-session. For each observation we draw new estimates from these distributions and recalculate our measures. Thus, each *heterogeneity* value is unique. Given that we have nearly a thousand respondents in each survey year, assigning each observation a unique

In measuring partisan heterogeneity for our models of how well respondents know the left-right ordering of the parties, we must deviate somewhat from the above construction because this dependent variable does not make a distinction between the House and the Senate. In this case, then, we average the estimated standard deviations across all the party caucuses in both the House and Senate.

Our second independent variable, “*distance*,” is designed to capture partisan distinctiveness. This variable is calculated from the absolute cardinal distance between the two parties’ median ideal points (estimated in a manner similar the variable above). For example, if a respondent is asked to name candidates in a House race in 1988, the corresponding value of our *distance* measure will be the absolute ideological distance between the Democratic and Republican caucus medians in the 100th House. Again, for our ideological rank-ordering dependent variable, we take the average across both Congressional chambers.

Figure 1 plots our main independent variables (distance and heterogeneity) over time and against each other. As the figure shows, these variables are correlated with time and each other. Fortunately, we have a sufficiently large time series and a sufficiently high number of observations that we can account for these temporal correlations hierarchically. We discuss this in a bit more detail below. More importantly, including both of these measures will allow us to assess which has had a greater effect on the political knowledge profile of the electorate.



value is sufficient to model the error inherent in the measurements and alternative processes, bootstrapping, for example, are unnecessary.

We also add several control variables to our independent variables of interest, *heterogeneity* and *distance*. These are the usual suspects: the respondents' age, income, race ("white" or otherwise), gender, level of education and political interest, as well their strength of partisanship. This last variable is simply folds the usual directional measure of partisanship, such that 0 indicates a self-reported independence, 3 indicates either "Strong Republican" or "Strong Democrat" and the numbers in between represent the intermediate levels of partisanship. We also include an indicator for presidential election years to control for the possibility that presidential elections change the information environment in which voters are operating. In our individual candidate knowledge model, we also include an indicator for whether or not the election was for a senate seat.

Both main models have nominal dependent variables taking on one of three potential values.¹² Both models also present relatively complex data structures. More specifically, we have several nested and crossed levels in the data (e.g., a survey level, a year level, a party level, a party-survey level, etc.). Of course, there may be unmeasured variables associated with each such level that, if unaccounted for, may create correlations between observations in the data and bias the estimates of our main variables of interest.¹³

We address these unmeasured factors by estimating hierarchical multinomial logit models where we allow random intercepts at the level of the choice-alternative. That is, we allow a random intercept at each alternative relative to the baseline response category. For example, in our model of respondents' individual-centered knowledge, where the baseline category is 0 candidates identified, we estimate random intercepts for identifying 1 or 2 (or more) candidates for *each survey response*. Likewise, in the case of our party knowledge model, where "don't know" serves as the

¹² Our individual knowledge dependent variable could also be considered ordinal. Nonetheless, we treat the variable as nominal in estimation for two reasons. First, we can imagine several reasons an informed voter would want to know the name one candidate, but not two, recall, for example, that the second name is superfluous for retrospective voting. Second, an ordinal model is simply a special case of a nominal model, thus, we do not lose inferential power in treating the data this way.

¹³ For example, there are likely to be unmeasured factors that vary over time that must be accounted for. Likewise, it is possible that there are differing contexts of individual Congressional campaigns that make respondents more or less likely to be able to identify the candidates. Finally, because several iterations of the ANES are panel studies, several respondents enter the data multiple times and their responses are very likely to be correlated with each other.

baseline category, we estimate random intercepts for answering correctly or incorrectly for each survey response. Since these random intercepts allow for unmeasured heterogeneity in each and every response in the data, this approach allows us to effectively capture the impact of unmeasured variables at *every level* of the data. So, for example, if there are important survey level effects that are not captured by the variables in the model, these will be apparent when we aggregate the estimated response level random effects to the survey level.

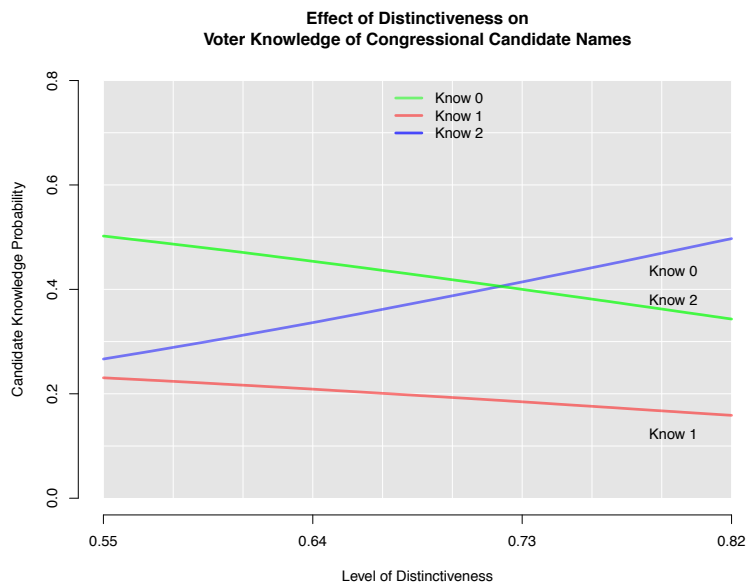
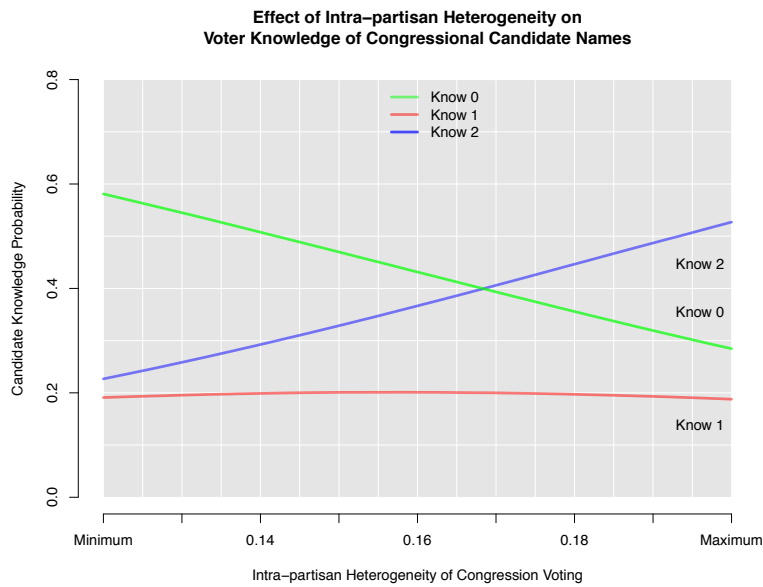
Results

We present the results of our model of individual-centered information first. Recall that the dependent variable can take on one of three values: respondents are able to identify 0, 1, or 2 or more candidates. This dependent variable is regressed on our independent variables of interest, *heterogeneity* and *distance*, as well as our control variables. Our expectation is that heterogeneity, our measure of how undisciplined partisan voting is in Congress, will exert a positive effect on the number of candidates known – the more variation there is in the behaviors of individual MCs, the more voters must know about individual candidates in order to cast an informed vote.

Individual information model: Hierarchical Multinomial Logit. Baseline category is 0 candidates named.

Variable	One Candidate		Two Candidates	
	Parameter	(SE)	Parameter	(SE)
Heterogeneity	8.079	1.699	22.296	1.910
Distance	-0.175	0.390	3.814	0.472
Education	0.239	0.017	0.351	0.018
Income	0.145	0.018	0.179	0.020
Female	-0.307	0.038	-0.398	0.041
White	0.452	0.049	0.974	0.068
Folded Party ID	0.111	0.019	0.149	0.022
Campaign				
Interest	0.540	0.036	0.776	0.039
Age	0.023	0.002	0.013	0.001
Senate Race	0.373	0.054	1.899	0.096
	0.010	0.035	0.134	0.041
Intercept	-6.453	0.579	-13.524	0.766
Random				
Intercept	-0.501	0.433	0.457	0.312

The results from the individual knowledge model offer strong support for the general expectation that knowledge about the names of candidates for congress is negatively correlated with the strength of partisanship in Congress. Partisan heterogeneity is a robust predictor of individual-oriented knowledge, just as we expected. The substantive strength of this relationship is illustrated in Figure 2, which calculates predicted probabilities of each outcome for a typical respondent in the usual way (i.e., King et al 2000). The particular respondent pictured here is a 45 year-old white woman with mean education, income, partisanship, and campaign interest, naming candidates competing for seat in the U.S. Senate. We plot over the range of each focal variable while holding the other constant at its mean.



As the top pane in the figure shows, the overwhelming shift in probability due to heterogeneity is a transfer from not being able to recall any candidate names correctly, to being able to name two as party discipline in Congressional voting breaks down. Indeed, on average, ANES respondents went from being to identify 1.4 candidates when heterogeneity was at its sample maximum in 1978, to only 0.6 candidates when heterogeneity bottomed out in 1998. This is a substantial shift in knowledge profiles in just two decades. Importantly ***we do not contend that voters are becoming less well informed over this period, but that this change represents a shift in the utility of the individual candidate knowledge to the task of voting or otherwise engaging in politics – as party discipline increased, individual-oriented information lost its relative value.***

The distance between the parties, as shown by the bottom pane of Figure 2, also seems to have a positive effect on candidate-centered knowledge. The data suggest that, all else equal, as the parties separate ideologically, voters become more able to identify two candidates. We did not predict this effect and our initial reaction in finding it here was to worry that that putting our two focal variables in the same equation, given their fairly highly correlation, might be causing sign reversals due to colinearity. However, this does not appear to be the case, since omitting *heterogeneity* from the model does not change the substantive effects pictured above. One possibility worth considering in future research is that the polarization of the two parties causes alienation at the center, thus, moderate voters, forced to choose between two generally unappealing alternatives, are motivated to invest in more candidate information to make an informed choice.

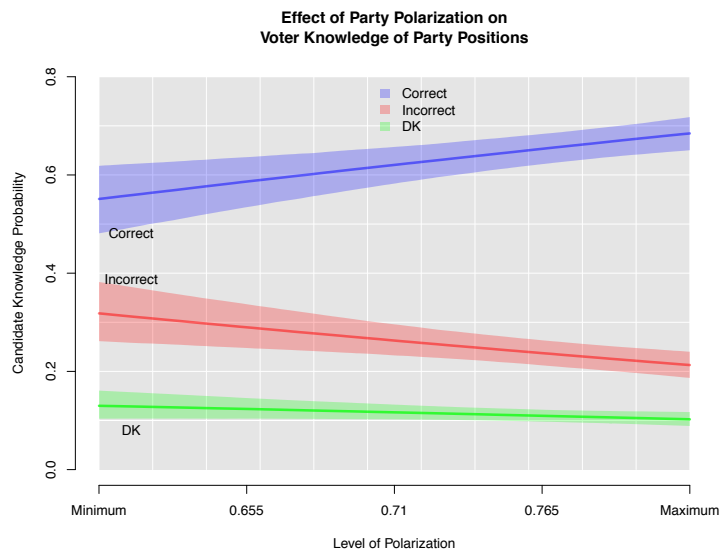
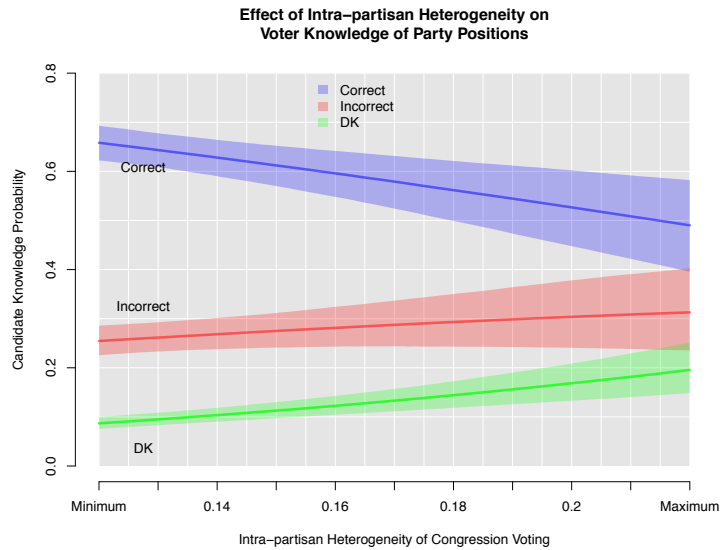
We take the same approach to assess our second empirical expectation. Again, we estimate a hierarchical multinomial logit model, where we may observe one of three values of the dependent variable: respondents may rank-order the Democrats and Republicans correctly, incorrectly, or respond that they “don’t know.” We include in the model the same focus and control variables as in the previous model. The results can be seen in Table 2. Recall that our empirical expectation is that both homogeneity and polarization will have a positive effect on partisan left-right knowledge.

Again, the coefficient estimates offer evidence that our empirical expectations are supported by the data, however, we find it easier to examine the model results graphically. Therefore we produce predicted probabilities of voter knowledge over the observed range of our focal variables while holding the other variables constant at approximately the same levels as above (we have a different sample, thus the variables held at their mean will be held at different values).

Partisan information model: Hierarchical Multinomial Logit. Baseline category is a “don’t know” response.

Variable	Correct		Incorrect	
	Parameter	SE	Parameter	SE
Heterogeneity	-58.999	34.279	-16.119	1.257
Distance	43.140	26.983	6.540	0.415
Education	9.319	5.959	0.135	0.015
Income	4.422	2.784	0.099	0.019
Female	-7.629	4.752	-0.353	0.040
White	9.199	5.980	0.008	0.046
Folded Party ID	6.077	3.829	0.200	0.020
Campaign Interest	12.099	7.565	0.360	0.029
Age	0.144	0.097	-0.011	0.001
Presidential Year	2.005	1.540	-0.212	0.038
Intercept	-105.933	68.858	-2.554	0.397
Random Intercept	39.451	25.219	0.381	0.225

These predicted probabilities are plotted in the Figure below. As the figure shows, reducing the intra-partisan homogeneity in voting behaviors from the sample maximum to their sample minimum (roughly equivalent to transitioning from the unity of the 110th Congress to the unity of the 88th Congress) reduces voter knowledge of the ideological rank-ordering of the parties by approximately 16%. Making a similar change in polarization, transitioning from the sample minimum to the sample maximum would *increase* voter knowledge of the ideological rank-ordering of the parties by about 14%, all else equal. This is a dramatic shift in the aggregate distribution of voter knowledge and very much supports the general idea that voters come to possess the information that is most useful and economical to fulfill their role in the democratic process.



A Cross-sectional Robustness Check

Though we have done our best to account for the potentially confounding factor of time and unmeasured factors that may covary with time or our measured focal variables, we understand that some readers may still be skeptical of our results. Perhaps some confounding variable that has been changing over time is driving both partisanship in congress and changes in voter knowledge. To put these readers at ease and to demonstrate the applicability of our larger argument in different settings, in this section we present a cross-sectional analysis of voter knowledge, leveraging state-level variation in the partisan organization of state legislative chambers. Our central challenge here is to find high quality cross-sectional measurements of

our focal variables, as well as finding a measure of *state level* individual or partisan knowledge that is comparable across all the states.

Fortunately, Shor and McCarty (2011) provide an excellent and informative mapping of the distribution of left-right ideologies across all 101 state and federal legislative chambers of the United States (though, we omit the non-partisan Nebraska Unicameral from our analysis). This mapping of the expressed preferences of individual legislators across all 50 states provides us with the measure of intra-partisan homogeneity as well as the cardinal ideological distance between Democrats and Republicans across the chambers that we require. To meet our next challenge, we turn to the 2011 Cooperative Congressional Election Survey which asked respondents in all 50 states to identify the majority party in each of their legislative chambers.

Recall the discussion above about the shape of political knowledge in two idealized contexts: one in which there were no parties and one in which parties dominated legislative agenda and organized perfect discipline among their members. In the first case voters wishing to punish or reward their current representative would have to learn their representative's name and voting record and then figure out if the representative was on the "right side" of a sufficiently high proportion of votes in order to win their support. Conversely, in the world of perfect party discipline, the voter would need learn the identity of the majority party and then punish or reward the majority on the basis of its policy outcomes. Thus, our expectation is that in states where legislative voting is relatively individualized (i.e., partisan heterogeneity is high), fewer voters would come to possess information regarding the identity of the majority party in the state assemblies. Conversely, in states where legislative voting is highly partisan (i.e., partisan heterogeneity is low), our expectation is that more voters will come to know the identity of their chamber majorities. In short, the greater party homogeneity, the more legislative are dominated by the majority, thus the more important it is to know the identity of the majority so that it may be punished or rewarded.

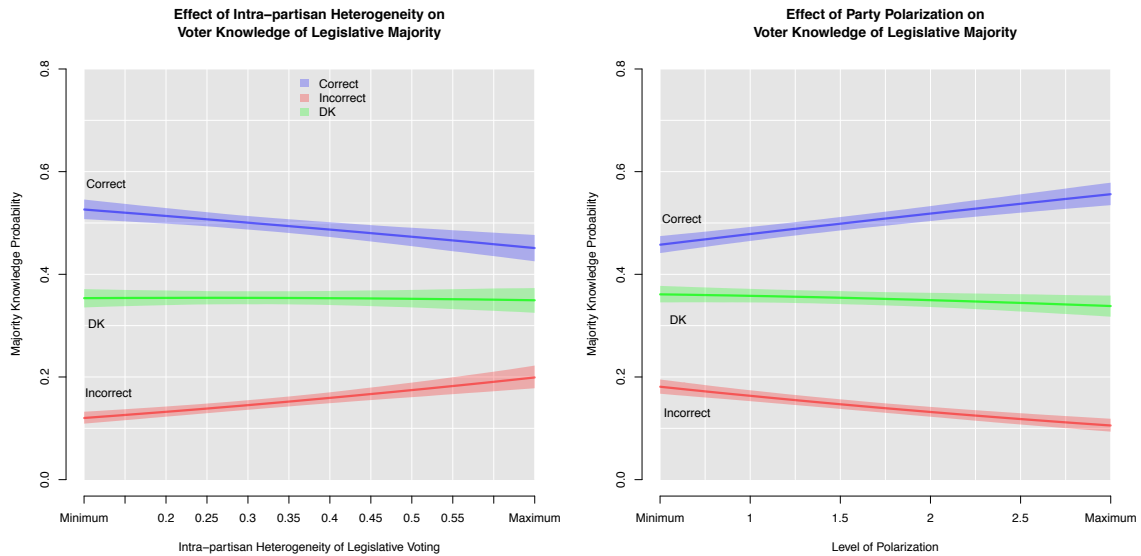
To test these expectations, we convert the responses of the 2011 CCES questions into trichotomous dependent variables indicating that the respondent was "correct," "incorrect," or responded "don't know" in attempting to identify each of her state legislative majorities. We include the same focal variables as above, the standard deviation in the ideal point estimates within a party caucus in a given chamber, "*heterogeneity*," and the cardinal distance between party medians in a given chamber, "*distance*." Recall that the Shor and McCarty estimates are "bridged" between chambers by legislator responses to the NPAT survey, thus, these values are comparable across states. We also include the same individual-level control variables, education, income, gender, race, political interest, and (folded) party identification. Further, we include a contextual control variable to

account for the possibility that voters in states that are fairly homogenous in their partisanship will simply infer that that party controls the legislature. This enters the models as the share of the 2012 two-party presidential vote that the majority in each chamber received (we call this “*State Identification*”). Finally, we included an individual-level variable indicating that the respondent identifies with the party that actually controls the majority of each chamber to account for the possibility that voters are broadcasting their preferences into their response (we call this “*Party Agreement*”).

State legislative majority model: Hierarchical Multinomial Logit. Baseline category is a “don’t know” response.

Variable	Correct		Incorrect	
	Parameter	SE	Parameter	SE
Heterogeneity	-0.261	(0.146)	0.940	(0.199)
Distance	0.104	(0.025)	-0.190	(0.037)
Education	0.186	(0.010)	0.025	(0.014)
Income	0.086	(0.005)	0.037	(0.007)
Female	-0.700	(0.028)	-0.291	(0.039)
White	-0.014	(0.034)	-0.458	(0.044)
Political Interest	0.862	(0.019)	0.382	(0.023)
Folded Party ID	0.217	(0.013)	0.140	(0.018)
Age	0.005	(0.001)	0.000	(0.001)
Party Agreement	-0.436	(0.029)	-0.020	(0.040)
State Identification	2.836	(0.190)	-2.908	(0.254)
Intercept	-4.432	(0.136)	-0.359	(0.169)
Random Intercept	-0.080	(0.213)	0.049	(0.374)

The model results can be seen in Table 3, where, again, “don’t know” serves as the baseline response category. Again, the raw statistical results generally comport with our expectations about the contextual distribution of political knowledge: voters seem to have a higher degree of partisan knowledge in contexts where that knowledge is more useful. In this case, the partisan identity of state legislative majorities is more widely known in states where parties are more salient to legislative voting. Again, we plot these relationships graphically to ease substantive interpretation, where the relationship between heterogeneity and majority knowledge is on the left and the relationship between polarization and heterogeneity is on the right.



As the graphic shows, increasing heterogeneity from its minimum (the North Dakota Senate), to its maximum (the Vermont Senate), holding all other variables constant, would result in a decrease chamber majority knowledge of about 7%. Though these effects are smaller in magnitude than the effects uncovered at the national level over time that we presented above, they are still quite robust statistically, and, given how few survey respondents even bother attempt to answer this question, under 65% as compared to nearly 73% for the rank-ordering of national parties analyzed above, we believe that these results provide a strong buttress to our arguments.

The data also show that party distinctiveness affects knowledge of legislative majorities. Increasing polarization from its minimum (the Louisiana Senate) to its maximum (the California Assembly), holding all other variables constant, would result in an increase in chamber majority knowledge of about 10%. We can think of two reasonable explanations of why increasing distinctiveness increases majority knowledge at the state level. First, the degree of overlap in the distribution of expressed preferences is indicative of the degree to which minority members support the majority agenda. The greater the overlap, the more the minority shares in blame (or approval) for legislative outcomes, thus, the less salient majority status knowledge becomes. As for the second possibility, recall that Shor and McCarty (2011) conclude that levels of party distinctiveness are lowest in states that are extraordinarily ideologically homogenous (Rhode Island, Delaware, Louisiana, etc.). These are precisely the contexts in which status matters the least – the parties are more similar in their preferences, thus variation in actual legislative outcomes is relatively insensitive to alternating majorities.

Conclusion

In this manuscript we argued that political knowledge should be utilitarian, obtained and maintained because it is useful for accomplishing political tasks. We theorized that the increasing salience of party to the organization and behaviors of Congress should fundamentally change the information profile of American voters. By increasing the homogeneity of legislative behaviors, the relative value of individually-oriented information has decreased nearly monotonically over the past four decades. At the same time, the relative value in knowing partisan ideologies for understanding political processes, voting, and discussing politics in a relatively informed manner has risen in kind.

Using nearly 50 years of data from the American National Election Survey, we provided evidence that the type of political information Americans possess is, in fact, conditioned by the patterns of parliamentary voting in the Congress. As party discipline has increased, voters have become more likely to know the ideological rank-ordering of Democrats and Republicans, and less likely to be familiar with their individual Congressional candidates. Further, we provided evidence that these contextual differences in political knowledge are present cross-sectionally, as well as temporally, by analyzing differences in voter knowledge of state legislative assembly majority. Here, we found voters were more likely to know the identity of the chamber majority where voting discipline is and ideological differences are stark.

Appendix

Real change in House voting over time.

