

Explaining Political Knowledge: The Role of Procedural Quality in an Informed Citizenry

Political Studies

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psx.sagepub.com**Nicholas Clark****Abstract**

While much is known about the micro-level predictors of political knowledge, there have been relatively few efforts to study the potential macro-level causes of knowledge. Seeking to improve our understanding of country-based variation in knowledge, this article demonstrates that individuals have an easier time finding and interpreting information in political environments that provide the public with greater opportunities to engage, observe, and learn about the political process. To investigate that possibility, the article analyzes how the procedural quality of the political process affects political knowledge. Using data from the Comparative Study of Electoral Systems and the Worldwide Governance Indicators Project, survey analyses show that the transparency and responsiveness of a political system indeed influence the public's information about political parties and, to a lesser extent, the amount of factual knowledge retained by survey respondents. In other words, the quality of democratic governance affects how much individuals know about the political process.

Keywords

political knowledge, political sophistication, procedural quality, transparency, comparative political behavior

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The research on political knowledge consistently finds that most individuals know very little about their political system (Converse, 1964; Delli Carpini and Keeter, 1996; Luskin, 1987). Such ignorance may create difficulties for representative democracy because if individuals are unable to accurately evaluate the performance of their elected officials, there is less to hinder leaders who would act without considering the public interest. Additionally, if there are systematic biases in political knowledge, then groups that largely comprise ill-informed individuals may not be able to identify or capitalize on opportunities to articulate their preferences to elected leaders and/or may advocate positions that

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are counter-productive to their own interests (Althaus, 2003). This problem extends beyond the United States. Systematic information biases occur in many advanced industrial democracies (Bennett, 1988), although the magnitude of such biases varies across countries (Arnold, 2012). While recent comparative studies have examined the institutional predictors of such variation (Berggren, 2001; Hellwig, 2011), we still know very little about the political conditions that influence political knowledge.

The comparative behavioral literature largely focuses on the role of electoral and party-based institutions in explaining political knowledge. Such institutions affect knowledge by enhancing or diminishing the public's incentives for seeking out information (Gordon and Segura, 1997; Gronlund and Milner, 2006). While providing some evidence as to the potential sources of political knowledge, these studies have thus far overlooked an important component of democratic society: the procedural quality of the political process. The term *procedural quality* is here defined as the transparency, openness, and responsiveness of the governing structures of a political system, all of which determine whether individuals have opportunities to articulate their preferences and to feel involved in the political process. The availability of such opportunities have been found to affect how individuals understand democratic norms (Peffley and Rohrschneider, 2003) and conceive of their own rights and responsibilities as democratic citizens (Rohrschneider and Loveless, 2010; Sánchez-Cuenca, 2000). The central argument of this article is that procedural quality also influences the public's knowledge about the political process; that is, individuals are more likely to learn about politics when they can observe and engage with the structures of power in their political system. The prior research focuses on institutions that affect knowledge by moderating the effects of individual-level characteristics such as political interest or income. This article contributes to that work by examining political conditions, such as transparency and responsiveness, which likely have a more direct effect on knowledge. Additionally, this article examines a seemingly intuitive relationship that has not yet been considered within the literature: the extent to which structures of power include individuals in the decision-making process and the ability of individuals to act as informed citizens.

To analyze the effects of procedural quality on political knowledge, data are used from the Comparative Study of Electoral Systems Module 3 (CSES, n.d.). Two measures of political knowledge are modeled: the first an estimate of the accuracy of respondents' party placements on the left/right ideological spectrum, the second a cumulative index of correct answers to factual questions about the political process. As the CSES includes 40 democratic countries, these data permit a robust examination of the conditions facilitating a more knowledgeable electorate. To measure procedural quality, I use expert assessments provided by the Worldwide Governance Indicators (WGI) Project (Kaufmann et al., 2010). The article proceeds as follows. I first review the literature on both the individual-level and contextual predictors of political knowledge and then develop a theoretical model elaborating the relationship between procedural quality and political knowledge. Next, the theoretical expectations are tested with the CSES and WGI data. Results of these analyses demonstrate that living under more transparent and responsive political institutions is indeed associated with higher levels of political knowledge. This finding persists even when accounting for the macro-level conditions already identified in the literature.

Explaining Political Knowledge

This article adopts the definition of *political knowledge* used in prior work: facts about a political system that an individual can recall from their memory to interpret and understand

political events (Delli Carpini and Keeter, 1996; Price and Zaller, 1993). The long-standing consensus within the American behavioral research is that most people know very little about politics and governance. Many individuals, for instance, are unable to recall basic facts about the American political system (Bennett, 1988; Neuman, 1986). While some research suggests that Europeans generally know more about current policies than Americans (Bennett et al., 1996), the problem of mass political ignorance extends beyond the United States to Europe and most other advanced industrial democracies (Arnold, 2012; Gronlund and Milner, 2006).

Members of the public also exhibit low levels of political sophistication, here defined as the ability to coherently organize political ideas by consistently applying an ideological constraint to a system of political beliefs. In public opinion surveys, the same respondents articulate inconsistent, seemingly random ideological positions when queried at different points in time (Converse, 1964; Luskin, 1987). An individual's sophistication does appear to be connected with their level of factual knowledge. More knowledgeable survey respondents are more likely to convey issue positions that are consistent with their stated ideological preferences (Bennett, 1995; Campbell et al., 1960; Lodge et al., 1989; Smith, 1989).

Until recently, efforts to explain political knowledge and sophistication have focused on individual-level predictors within the context of the United States. The strongest and most consistent predictor of knowledge is an individual's level of education (Converse, 1964; Lewis-Beck et al., 2008; Zaller, 1992), which serves to enhance cognitive capabilities for processing information (thus reducing the costs involved in political learning) and to increase interest in political affairs (Gordon and Segura, 1997). The other individual-level correlates of knowledge (such as income, age, sex and race) are related to an individual's socio-economic status (Althaus, 1998; Bennett, 1988; Neuman, 1986). As Delli Carpini and Keeter (1996: 156) theorize, "many of the ways citizens become politically informed involve social and economic circumstances that are still less accessible to members of (disadvantaged) groups."

The largest obstacle to comparative studies has been the absence of reliable and consistent measures of political knowledge. For example, the CSES, which pools cross-country survey data, did not offer factual knowledge questions until relatively recently. One approach to overcoming this hurdle is to rely on factual questions about the European Union (EU) from the Eurobarometer and European Election Study, both of which use the same format and type of question in each EU member state (Clark and Hellwig, 2012; de Vries et al., 2011; Karp et al., 2003; Tillman, 2012). This research has focused on explaining the effects of political knowledge on voting behavior (Arnold, 2012; de Vries et al., 2011; Hobolt, 2007) and public opinion (Anderson, 1998; Clark and Hellwig, 2012; Elenbaas et al., 2012; Karp et al., 2003; Tillman, 2012), providing few clues as to the macro-level conditions that affect the public's understanding of politics.

Another approach to comparative knowledge studies is to assess the accuracy of survey respondents in placing political parties on left/right ideological scales (Arnold, 2012; Berggren, 2001; Gordon and Segura, 1997). Those adopting this approach have largely focused on investigating the effects of electoral institutions on knowledge. Gordon and Segura (1997), for example, theorize that the type of party system and electoral laws moderates the costs and benefits of becoming politically informed; information is more readily available in multi-party systems where parties must better differentiate themselves from the alternatives and the motivation to acquire information is greater in electoral systems that encourage more competitive elections (district size) and more predictable outcomes

(electoral disproportionality). Similarly, in comparing the accuracy of left/right placements in Sweden and the United States, Granberg and Holmberg (1988) attribute the greater accuracy of the Swedish public to Swedish parties articulating clearer issue positions than their American counterparts.

Heidi Berggren (2001) finds that institutional configurations also condition the effects of an individual's socio-economic position; education, for instance, has a weaker effect on knowledge under institutional arrangements that disperse information to a wider breadth of the population. Timothy Hellwig (2011) argues that the concentration of responsibility may also influence knowledge because attributing credit or blame for policy outcomes requires far less information when responsibility is limited to a few actors. While demonstrating that political knowledge is low outside of the United States and that the extent of political ignorance varies across countries, this research has yet to consider other contextual variables that might influence the public's information-processing capabilities and interest in the political process. Towards that end, the next section outlines the potential links between the procedural quality of the political process and political knowledge.

The Potential Effects of Procedural Quality

Democratic theory instructs us that governance must be open to the people in order to ensure a vibrant citizenry. Robert Dahl (1989), for example, conceptualizes a procedural dimension to democratic governance, meaning that citizens have opportunities to express their preferences and demands within the political system.¹ To ensure high procedural quality, there must be mechanisms for the public to access information about the actions of decision-makers (transparency), opportunities for the public to engage with political and bureaucratic actors (openness), and mechanisms through which these actors respond to public input (responsiveness). The extent to which a political system creates such conditions has an effect on the public's attitudes towards democracy. Where political structures perform poorly on the procedural dimension, individuals tend to develop a negative impression of the political process and a detached outlook towards democratic governance (Rohrschneider, 2005; Sánchez-Cuenca, 2000). Where these structures perform well, individuals develop a more active sense of democratic citizenship and begin to expect a greater role in the political process (Rohrschneider, 2002; Rohrschneider and Loveless, 2010). Building on this research, my claim is that procedural quality also encourages a higher level of political knowledge among a democratic public.

Foremost among the reasons why procedural quality may promote knowledge is that greater transparency in governance may allow individuals to obtain factual information about the political process more easily. In a more transparent system, the public may attend many, if not most, meetings of policy-makers and the minutes from those meetings are published and accessible. The government has passed and respects laws ensuring the public has access to government documents. Political structures transmit a higher quantity and quality of political information with greater frequency to the public, and individuals thus have more opportunities to directly observe and learn about the political actors and decision-making processes in their political system.

Beyond greater transparency, more open and responsive structures of power may encourage a better understanding of the political process. For individuals are able to more closely observe and learn about the political process when making use of opportunities to express their preferences and demands to political leaders. To illustrate, an unhappy citizen who attends a local council meeting to protest about a new zoning law may have to sit

through a number of other agenda items before having the opportunity to speak. During that waiting process, this individual may learn more about how their local representative body functions as well as specific issues under consideration at that time.

Turning to a higher level of governance, if that individual writes a letter to their regional or national representative about the zoning law, they may receive a response that offers some explanation of the division of policy-making responsibilities in a multi-level political system. This individual may not fully absorb all of the information they encounter in this process, but they are more likely to develop a better understanding of the political process as a result. Similarly, under a more centralized system of governance, an unhappy citizen may appeal against a specific zoning decision to the relevant bureaucratic authorities. If those authorities take the time to listen to the citizen's complaints and to explain the government's reasoning for that law, the citizen may learn more about the logic by which the government functions. In this regard, open and transparent structures have a direct effect on knowledge by ensuring that the public is better able to learn about the political process. To examine these possibilities, I test the following hypothesis.

H1. Increasing transparency, openness, and responsiveness in the political system corresponds with higher levels of political knowledge at the individual level.

To summarize, transparency promotes greater knowledge by conveying more substantive political information to the public at a higher frequency than in more opaque systems. Openness encourages knowledge by allowing individuals to more closely observe the political process. Responsiveness bolsters knowledge by creating situations in which individuals interact with political actors and, through such interactions, learn more about the process.

Such a political system may also indirectly influence knowledge by improving the public's capabilities for interpreting and storing political information. The better educated are not only more knowledgeable, but also better equipped to acquire new information than politically ignorant individuals (Aidt, 2000; Price and Czilli, 1996; Price and Zaller, 1993). Their advantage is not simply having greater access to the political process but also being able to mentally organize and reconcile new information with the old. Berggren (2001), however, finds that redistributive policies can moderate the effects of education on knowledge by providing the less educated with access to the resources that promote greater levels of political knowledge. In a similar fashion, open and transparent political structures may allow a greater swath of society to observe the political process and, in so doing, develop cognitive abilities for processing and interpreting political information.

H2. Increasing education has a weaker effect on knowledge at the individual level in political environments with a greater degree of transparency and openness.

As the refinement of cognitive abilities is a primary causal pathway by which education influences political knowledge (Delli Carpini and Keeter, 1996), conditions that allow the less educated to develop such abilities may weaken the relationship between education and knowledge.

Moreover, greater procedural quality may foster a deeper sense of purpose and obligation to the broader political community that compels individuals to seek out information on current events in order to offer the most informed input possible. Robert Putnam (1994), for instance, finds that perceptions of representative political structures are related to the

public's level of social and political engagement; that a dynamic relationship exists between the openness of political structures, the extent to which individuals feel invested in the larger community, and the likelihood of political participation. Those individuals who are more invested in their political community may also find value in being informed about politics. Believing that elected leaders will listen to the public's views, such individuals may follow the political process more closely in order to uphold the perceived responsibilities of a democratic citizen and to be able to better contribute to their community. In contrast, absent genuine opportunities to influence decision-making, many individuals may stop paying attention due to a sense of futility.

H3. Increasing transparency, openness, and responsiveness interacts with increasing political efficacy to promote higher levels of political knowledge at the individual level.

The following section outlines the data and methods used to test these hypotheses.

Data and Methods

To investigate these hypotheses, this article primarily relies on data from the CSES Module 3.² The core component of the CSES data is a module of common survey questions, developed by the CSES Planning Committee, which is attached to post-election surveys in several democratic countries. Participating survey teams report the responses from their country along with demographic, district-level, and country-level measures to the Planning Committee, which then standardizes and merges this information into a single dataset for use in comparative analyses. Module 3 includes data on national elections taking place between 2006 and 2011. Two different elections fall within that period of time in some of the participating countries. In those instances, this article uses data on the election immediately prior to 2010, the most recent year in which data are available on the quality of governance in these countries.

The following analyses examine the correlates of two different dependent variables. The first variable is constructed by measuring the accuracy of respondents' left/right party placements using the following survey item:

In politics people sometimes talk of left and right. Where would you place [PARTY X] on a scale from 0 to 10 where 0 means the left and 10 means the right?

Applying the methods used in past comparative studies of knowledge (Berggren, 2001; Gordon and Segura, 1997), the values of this variable are estimated by first taking the absolute difference between a respondent's left/right placement (of a single party) and the mean placement of all respondents³ from that country and then averaging the differences for the three largest parties.⁴ The final estimates are multiplied by -1 so that higher values of the measure correspond with greater levels of sophistication. The resulting scores range from -8.27 (the lowest level of sophistication) to -0.07 (the highest level of sophistication) with a mean of -1.68 and a standard deviation of 1.09 .

One brief comment about the accuracy of left/right placements: this variable is perhaps better suited as a measure of *political sophistication* and thus likely to represent a different type of knowledge than measures of factual recall.⁵ However, as the relevant comparative research uses this measure, efforts to build on that work should take into account

the accuracy of left/right placements. Moreover, accurate left/right placements likely stem from domain-specific knowledge about the current positions of political actors as much as the sophistication of an individual's belief structures.⁶ In that regard, this variable should serve as a reliable gauge of how well survey respondents understand their political system.

As a second dependent variable, knowledge is measured with a battery of survey questions that test the accuracy of each respondent's factual knowledge about their political system. Most of the participating CSES surveys include three objective knowledge questions, allowing the construction of a four-part index that varies from respondents unable to answer any of the knowledge questions correctly (0) to those able to answer correctly all three questions (3). Such indices have offered valid measures of political knowledge in past research (Delli Carpini and Keeter, 1996). One drawback to the CSES data is the use of multiple types and formats of questions across national surveys (Elff, 2009).⁷

The measures of procedural quality are drawn from the WGI Project (Kaufmann et al., 2010), which evaluates the quality of governance in 212 countries between 1996 and 2008. The WGI project relies on a number of independent sources that evaluate governance through mass opinion surveys and interviews of experts from the public, private, and non-governmental organization (NGO) sectors. WGI investigators use an unobserved components model to construct aggregate indicators (from the different sources of data) measuring the quality of governance along six dimensions: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. On each dimension, estimates range between -2.5 and 2.5 , with higher scores indicating better performing political structures. After averaging scores on the six dimensions, the lowest performing CSES country is the Philippines at -0.48 and the highest performing is Denmark at 1.85 , with a mean of 1.01 and a standard deviation of 0.69 .

The voice and accountability dimension has the clearest connection with procedural quality, combining expert assessments of transparency, openness, and responsiveness.⁸ However, some of the other WGI indicators may also be associated with the transparency and openness of a political system. The degree of political stability, respect for the rule of law, and control of corruption may each affect the public's access to political information, since corrupt, unstable, and unlawful governments are less likely to behave in an open and transparent fashion. Moreover, with increasing corruption and instability, individuals may believe that efforts to observe or participate in the political process will result in threats to their personal safety and thus withdraw from the process. The following analyses focus on these four indicators; government effectiveness and regulatory quality concern the outputs of the political process and are thus excluded from these analyses.⁹

Additional individual and country-level variables are included as controls. Each respondent's level of education, income, sense of political efficacy, partisanship, sex, and age, all of which have been found to influence knowledge (see Delli Carpini and Keeter, 1996), are included to account for many of the standard individual-level predictors of knowledge. The construction of these measures is described in greater detail in the Appendix. Furthermore, to account for institutional explanations of political knowledge, measures of the range of party alternatives, competitiveness of elections, and predictability of electoral outcomes are included in the statistical model. As individuals from newer democratic countries may still be learning the importance of acting as informed citizens, I include an additional control for the number of years since the creation of the current regime. Information about the electoral laws and party systems in each country is taken from the CSES and described in greater detail in the Appendix. As these analyses

Table 1. Variance in knowledge measures across levels of analysis.

Fixed effect	Left/right placements	SE	Knowledge index	SE
Constant	-1.69*	0.05	1.63*	0.004
Variance: individual level	0.86*		0.88*	
Variance: country intercept	0.14*		0.12*	
N individual-level observations	41,559		51,777	
N country-level observations	36		34	

SE: standard error.

*Denotes significance at the 0.01 level.

combine individual and country-level measures, this article makes use of multi-level modeling. This approach is necessary to avoid problems associated with mis-estimating standard errors within nested datasets and to allow for estimation of cross-level interactions (Raudenbush and Bryk, 2002).

Results

Before identifying the correlates of political knowledge, it is useful to confirm that country-specific factors explain variation in knowledge. As shown in Table 1, just over 14% of the variation in the accuracy of left/right placements and just over 12% of the variation in performance on the factual knowledge index can be attributed to country-level conditions.

To better illustrate the country-based variation, Figure 1 displays the distribution of mean country scores on both measures of political knowledge. European publics tend to perform the best on both measures. France, Finland, Portugal, and Poland comprise four of the top five highest performers on the factual knowledge index (with South Korea at the top). Thailand, Japan, South Africa, and Peru fall at the lowest end of the index.¹⁰ On the measure of ideological placements, the most sophisticated countries (with lower mean scores) are the Czech Republic, Germany, Sweden, and Norway. On the other end of the scale, Romania, Mexico, Peru, South Africa, and Brazil appear to be the least accurate in identifying the ideological positions of the largest political parties. While being careful in attributing too much importance to the patterns in the accuracy of left/right placements, it is noteworthy that European countries tend to perform better on both measures of knowledge.

Table 2 documents the results from a series of analyses examining the effects of the four WGI indicators on the accuracy of left/right placements. To provide a baseline for comparison with the later contextual analyses, the first model includes only the individual-level variables. Consistent with earlier research (Delli Carpini and Keeter, 1996), rising levels of education and income both correspond with greater political knowledge. Note that as partisanship decreases, respondents are better able to accurately position the three largest parties, suggesting that strong partisan attachments may distort an individual's perception of both their own party and the opposition parties. Additionally, older respondents and males appear to register higher levels of national knowledge. For all of these variables, the estimates of the coefficients are at the 1% level of significance. An individual's sense of political efficacy does not appear to have a significant effect on their knowledge about the ideological positions of the largest political parties. Other individual-level predictors

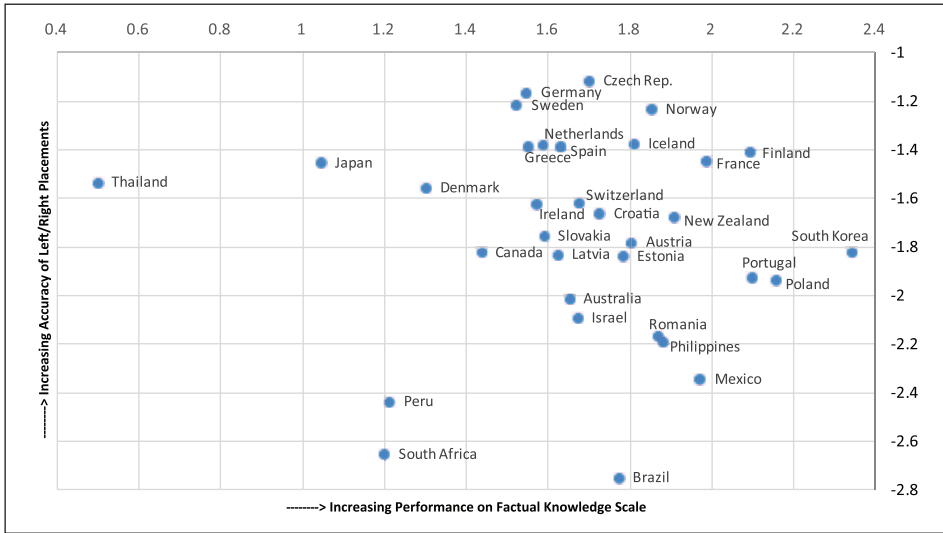


Figure 1. Mean Country Scores on Knowledge Measures.

Source: CSES.

Each dot represents the mean score of all respondents in a country on two different measures of political knowledge. The horizontal axis tracks performance on the factual knowledge scale, while the vertical axis tracks performance on the accuracy of left/right placements. The uppermost right quadrant represents the best performance on both scales, with a mean score of 2.4 on the 3-part factual knowledge scale and a mean score of -1 on the 10-point left/right placement scale.

may be accounting for the effects of efficacy in this analysis; better educated, higher earning individuals may be the most efficacious within the sample.

The next four models in Table 2 each incorporate a different WGI indicator, along with the other contextual controls.¹¹ Each of the estimates of the WGI indicators yields a statistically significant result at the 5% level or better, with a higher score on the relevant WGI dimension corresponding to more accurate left/right party placements. These results demonstrate that, as expected, better performing political structures create an environment conducive to political learning. Comparing the country intercepts in the baseline (Model 1) with each of the four subsequent models, the WGI measures of procedural quality account for between 6% (political stability) and 14% (rule of law) of the variation in the accuracy of left/right placements due to country-specific factors. The voice and accountability dimension explains 7% of this variation.

Among the contextual controls, only the measure of the effective number of electoral parties (ENEP) reaches statistical significance (with the exception of Model 4). Note, though, that the ENEP measure does not have the expected effect on the accuracy of left/right placements. Gordon and Segura (1997) theorize that a wider range of party alternatives enhances the incentives and opportunities for political learning, but these results suggest that a higher number of parties is actually associated with greater inaccuracy in identifying the ideological positions of the largest parties in one's country. One possible explanation for this finding is that an over-crowded party system increases the time required to monitor political elites and better distinguish between the party alternatives. These greater information costs may then outweigh any advantage gained through enhanced incentives or more plentiful information.

Table 2. Procedural Quality and Left/Right Placements.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual-level variables							
Education	0.07** (0.003)	0.07** (0.003)	0.07** (0.003)	0.07** (0.003)	0.07** (0.003)	0.04** (0.01)	0.07** (0.003)
Income	0.05** (0.004)	0.05** (0.004)	0.05** (0.004)	0.05** (0.004)	0.05** (0.004)	0.05** (0.004)	0.05** (0.004)
Sense of efficacy	0.01 (0.004)	0.01 (0.004)	0.01 (0.004)	0.01 (0.004)	0.01 (0.004)	0.01 (0.004)	0.03** (0.01)
Partisanship	0.02** (0.01)	0.02** (0.01)	0.02** (0.01)	0.02** (0.01)	0.02** (0.01)	0.02** (0.01)	0.02** (0.01)
Sex	-0.05** (0.01)	-0.05** (0.01)	-0.05** (0.01)	-0.05** (0.01)	-0.05** (0.01)	-0.05** (0.01)	-0.05** (0.01)
Age	0.001** (0.0003)	0.001** (0.0003)	0.001** (0.0003)	0.001** (0.0003)	0.001** (0.0003)	0.001** (0.0003)	0.001** (0.0003)
Constant	-2.3** (0.09)	-2.18** (0.28)	-2.19** (0.22)	-2.07** (0.28)	-2.04** (0.24)	-2.02** (0.28)	-2.04** (0.28)
Contextual-level variables							
ENEP		-0.09* (0.04)	-0.07* (0.03)	-0.08 (0.04)	-0.1** (0.04)	-0.09* (0.04)	-0.09* (0.04)
District Magnitude		0.0005 (0.001)	0.0003 (0.001)	0.001 (0.001)	0.0008 (0.001)	0.0005 (0.001)	0.0005 (0.001)
Predictable Outcomes		0.01 (0.03)	0.01 (0.02)	0.01 (0.03)	0.02 (0.02)	0.01 (0.03)	0.01 (0.03)
Age of Regime		-0.002 (0.002)	-0.01** (0.002)	-0.0007 (0.002)	-0.01** (0.002)	-0.002 (0.002)	-0.002 (0.002)
Voice and accountability		0.41** (0.14)				0.24 (0.15)	0.26 (0.15)
Rule of law			0.46** (0.08)				
Political stability				0.21* (0.09)			
Control of corruption					0.38** (0.09)		
Interaction Term 1 (educat*V&A)						0.03** (0.01)	
Interaction Term 2 (efficacy*V&A)							0.04** (0.01)
Variance Components							
Random intercept between countries	0.42 (0.05)	0.35 (0.04)	0.28 (0.04)	0.36 (0.05)	0.31 (0.04)	0.35 (0.04)	0.35 (0.04)
Wald χ^2	713.93	728.01	750.87	725.16	739.79	766.16	747.95
N obs contextual level	32	32	32	32	32	32	32
N obs individual level	28,592	28,592	28,592	28,592	28,592	28,592	28,592

Source: CSES.

ENEP: effective number of electoral parties.

Cells report coefficients with standard errors in parentheses from a series of linear mixed effects models (using the xtmixed command in STATA). The dependent variable is the accuracy of left/right party placements relative to the mean placements of all other respondents from one's country.

*Significant at the 0.05 level.

**Significant at the 0.01 level.

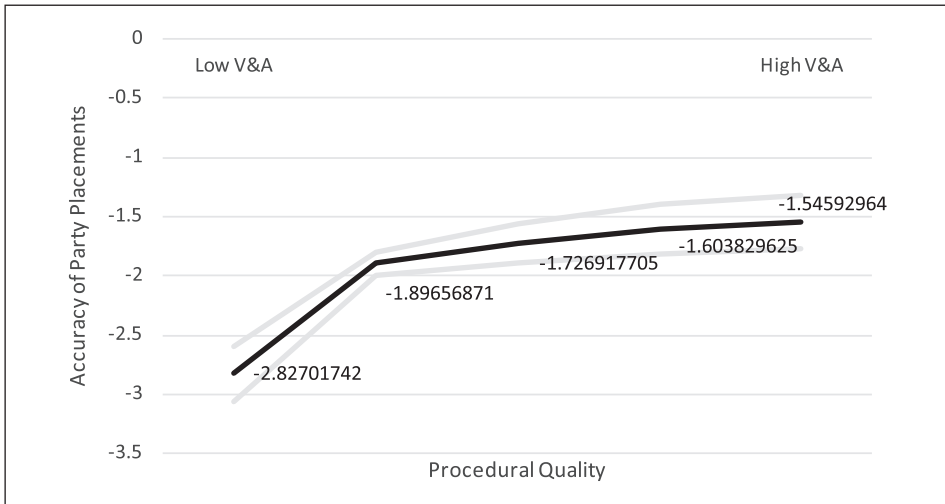


Figure 2. The Effects of Procedural Quality on Left/Right Party Placements.

Source: CSES.

The horizontal axis moves from the least accountable to the most accountable political structures. The vertical axis tracks performance on the accuracy of left/right party placements. Higher scores on the vertical dimension indicate better performance.

The measures of district magnitude and vote/seat proportionality are not significant in any of the Table 2 models, suggesting that the competitiveness of elections and the predictability of electoral outcomes may not have much influence on knowledge after taking into account other conditions (such as procedural quality) that account for country-based variation in political knowledge. The longevity of the democratic regime only affects the accuracy of left/right placements under certain conditions; older democracies appear to maintain a more informed citizenry under corrupt leaders, but not in the absence of stable or transparent political structures.

To better understand the substantive effects of greater accountability, Figure 2 plots the accuracy of left/right placements under different degrees of accountability and transparency. Moving from the country with the lowest voice and accountability score (–1.59 for Belarus) to the highest (1.56 for Norway), the accuracy of left/right placements on the 10-point scale moves from –2.83 to –1.55 (a difference of 1.28). Moving from the second lowest centile (0.702 for Taiwan) to the highest score, the accuracy still shifts from –1.9 to –1.55. These shifts are particularly noteworthy as the mean value on the left/right measure is –1.68.

The last two models in Table 2 include interaction terms capturing the relationship between the voice and accountability indicator and education (Model 6) and political efficacy (Model 7). The estimates of the coefficients for both interaction terms are significant at the 1% level, suggesting that procedural quality may indeed condition the effects of each of these individual-level predictors on the accuracy of left/right placements. Adding the interaction terms to these models does not alter the effects of the individual-level and contextual predictors, with two exceptions. The voice and accountability indicator loses significance in the last two models, while the measure of efficacy gains significance in the last model.

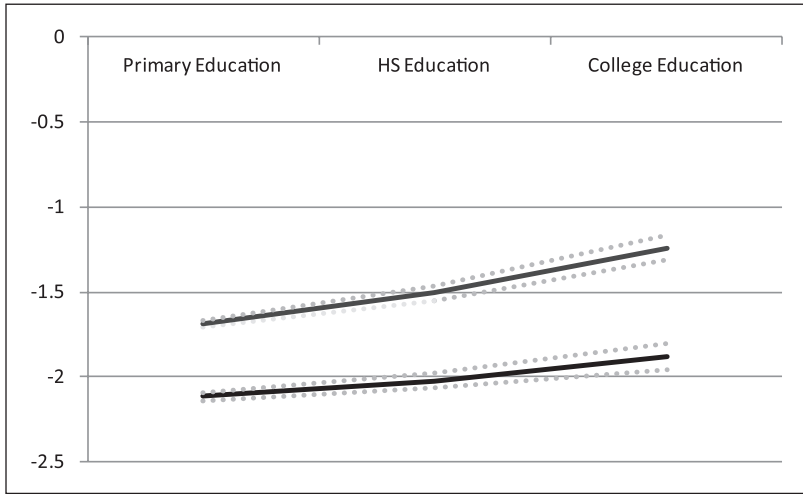


Figure 3. Conditional Effects of Procedural Quality on Left/Right Party Placements.

Source: CSES.

The horizontal axis moves from having completed a primary education to having completed a college education. The vertical axis indicates distance from the mean left/right party placement, holding constant the other individual-level and contextual variables. The darker line tracks the change in the predicted distance moving from a primary education to a college education under conditions of low accountability and transparency; the lighter line tracks the change in the predicted distance under conditions of high accountability and transparency.

Figure 3 illustrates the substantive effects of transparency and accountability on the relationship between education and the accuracy of left/right placements, holding constant the other individual-level and contextual variables. The difference between having a primary education and a college education is about 0.22 greater with the highest performing structures (Norway) than it is with the lowest performing (Belarus). However, while the second hypothesis expects the effects of education to weaken under more accountable structures, these results suggest the reverse: procedural quality actually widens the knowledge gap between the less and better educated segments of society. Rather than having an equalizing effect on different segments of society, open and transparent political processes most benefit those already in a position to receive and interpret political information, suggesting that the mechanism by which procedural quality influences knowledge may simply be assuring greater access to information rather than improving cognitive resources for processing political information. Similar efforts at identifying the substantive effects with the efficacy measure reveal that procedural quality has only a slight effect on the relationship between efficacy and the accuracy of left/right placements (that figure is not displayed here to conserve space).

Next, these models are estimated again with the measure of factual knowledge, using multi-level analysis with a cumulative logit link function. The results are summarized in Table 3. Nearly all of the individual-level predictors have the same effects on factual knowledge and the accuracy of left/right placements. Better educated, wealthier, older males tend to display higher levels of factual knowledge about their political system. There are two differences from the analysis of left/right placements: stronger partisanship here corresponds with higher knowledge and the measure of efficacy reaches statistical significance (a greater sense of efficacy also corresponds with higher knowledge). The

Table 3. Procedural Quality and Factual Knowledge.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual-level variables							
Education	0.28** (0.01)	0.28** (0.01)	0.28** (0.01)	0.28** (0.01)	0.28** (0.01)	0.36** (0.01)	0.26** (0.01)
Income	0.16** (0.01)	0.16** (0.01)	0.16** (0.01)	0.16** (0.01)	0.16** (0.01)	0.15** (0.01)	0.16** (0.01)
Sense of efficacy	0.12** (0.01)	0.12** (0.01)	0.12** (0.01)	0.12** (0.01)	0.12** (0.01)	0.12** (0.01)	0.16** (0.03)
Partisanship	-0.13** (0.01)	-0.13** (0.01)	-0.13** (0.01)	-0.13** (0.01)	-0.13** (0.01)	-0.13** (0.01)	-0.11** (0.02)
Sex	-0.54** (0.02)	-0.54** (0.02)	-0.54** (0.02)	-0.54** (0.02)	-0.54** (0.02)	-0.53** (0.02)	-0.57** (0.03)
Age	0.01** (0.0006)	0.01** (0.0006)	0.01** (0.0006)	0.01** (0.0006)	0.01** (0.0006)	0.01** (0.0006)	0.01** (0.0008)
Contextual-level variables							
ENEP		0.06 (0.07)	0.05 (0.05)	0.07 (0.05)	0.01 (0.03)	0.05 (0.08)	0.05 (0.06)
District magnitude		-0.01 (0.003)	-0.003 (0.003)	-0.004** (0.001)	-0.002 (0.002)	-0.01** (0.002)	-0.004 (0.003)
Predictable outcomes		-0.04** (0.02)	0.02 (0.03)	0.02 (0.02)	0.03 (0.02)	-0.03 (0.02)	0.03 (0.03)
Age of regime		-0.01* (0.003)	-0.004 (0.004)	-0.01** (0.002)	-0.004** (0.001)	-0.01** (0.003)	-0.01** (0.001)
Voice and accountability		0.52** (0.19)				1.04** (0.3)	0.65** (0.21)
Rule of law			0.09 (0.19)				
Political stability				0.23** (0.07)			
Control of corruption					0.08 (0.07)		
Interaction Term 1 (Educat*V&A)						-0.09** (0.01)	
Interaction Term 2 (Efficacy*V&A)							-0.04 (0.02)
Variance components							
Random intercept between countries	0.66 (0.17)	0.49 (0.08)	0.56 (0.09)	0.58 (0.05)	0.61 (0.1)	0.51 (0.11)	0.46 (0.1)
N obs contextual level	30	30	30	30	30	30	30
N obs individual level	33,168	33,168	33,168	33,168	33,168	33,168	33,168

Source: CSES.

ENEP: effective number of electoral parties.

Cells report coefficients with standard errors in parentheses from a series of multi-level analyses with a cumulative logit link function (using the GLAMM command). The dependent variable is the number of correctly answered factual questions about politics.

*Significant at the 0.05 level.

**Significant at the 0.01 level.

different results with the partisanship measure suggest that the two dependent variables are capturing different behaviors (with the accuracy of left/right placements tied much closer to ideological sophistication) and that any cognitive advantages that accompany strong partisanship may be counter-balanced by some distortion in perceptions of the different actors in one's political system.

As with the prior analyses, the next four models in Table 3 each include a different WGI indicator of the procedural quality of governance. The coefficient for the voice and accountability indicator again reaches significance at the 1% level, providing additional support for the first hypothesis. Moreover, comparing country intercepts, adding the voice and accountability indicator to the baseline model (Model 1) accounts for 17% of the country-based variation in factual knowledge. Among the other three WGI indicators, only political stability achieves statistical significance. Turning to the other contextual variables, these analyses offer mixed cues. In contrast with the analyses of left/right placements, the ENEP measure does not appear to influence factual knowledge. The predictability of electoral outcomes and the district magnitude each reach significance in a single model. The longevity of the regime influences factual knowledge when modeled together with the voice and accountability, political stability, and control of corruption indicators. The last two models include interaction terms to determine whether greater transparency conditions the effects of education and political efficacy on factual knowledge. The individual-level and contextual predictors are largely unaffected by the inclusion of these interaction terms. The interaction term reaches significance in Model 6, suggesting a possible relationship between education and transparency. However, there does not appear to be any such interaction between efficacy and transparency. While affirming the earlier conclusion that transparency influences knowledge, the analyses in Table 3 reveal few other clear patterns in the country-level variation.

To account for variation in the format of knowledge-based questions, I estimated the model excluding countries that used true/false questions (Australia, Brazil, Czech Republic, France, Hong Kong, New Zealand, Romania and Sweden). All of the other countries in the CSES sample use open-ended, short-response questions, most asking respondents to identify the positions of prominent individuals and the number of representatives in different institutional bodies. Excluding the countries using true/false questions does not significantly alter the results reported in this article.

Discussion

The extent to which an individual understands the political process matters for his or her ability to effectively influence outcomes. Political theorists posit that the ill-informed are more likely to support political actors and advocate policy positions that are counter-productive or damaging to their own well-being (Connolly, 1972; Lippmann, 1955; Mansbridge, 1983). As evidence of such behavior, the empirical research suggests that collective vote choices and policy positions (in both the United States and Europe) would shift if the ill-informed knew more about politics (Althaus, 2003; Bartels, 1996; Clark and Hellwig, 2012; de Vries et al., 2011). Scholars have good reason to identify the conditions that shape knowledge, for as Scott Althaus (2003) argues, any systematic distortions in the public's level of political knowledge may undermine the extent to which the political process fairly and proportionately represents different interests in society. However, while scholars have focused their attention on identifying the individual-level correlates of political knowledge (see Delli Carpini and Keeter, 1996), we still know very little about how the broader political context shapes knowledge about the political process.

The preceding analyses examined the effects of a number of individual-level and contextual predictors on political knowledge using data from the CSES. These analyses largely confirm prior findings about the individual-level predictors of knowledge: better educated, higher earning individuals tend to know more about politics. Perhaps more importantly, the results suggest that certain country-level conditions may also shape the public's understanding of political affairs. Across different systems, the procedural quality of the political process has a strong relationship with both the public's knowledge of the ideological positions of the largest political parties and factual knowledge about the political system. More accountable, transparent, and responsive structures appear to provide greater opportunities for the public to observe and learn about political actors involved in the process. These results suggest that efforts by the international community to promote democracy through institutional reforms may have dual benefits: creating a more accountable political process and, as a result, fostering a more vibrant democratic citizenry.

These findings diverge from past comparative studies of political knowledge, which argue that the type of party system and electoral system influences the public's motives for seeking out information (Berggren, 2001; Gordon and Segura, 1997). Of the three such variables included in these analyses, only the range of party choices (as measured by ENEP) has an effect on the accuracy of left/right placements. None of the institutional variables appear to have much influence on factual knowledge. The difference in results may be due to the methods used in past studies. Gordon and Segura (1997), for instance, rely on an aggregated measure of sophistication, preventing an analysis of variation within countries. We clearly require better data on knowledge. While providing the most comprehensive sources of data on knowledge, the CSES measures have significant limitations. To better understand both the systematic causes of information biases and the effects of low information on political behavior, the survey research needs to include a larger number of more rigorous questions (open-ended or multiple choice items) that are consistently applied across countries.

This article does, however, suggest that the broader context matters for explaining knowledge. The findings reveal that country-specific factors play a role in explaining knowledge. Future efforts might expand upon this literature to consider contextual variables that have not previously been analyzed in comparative knowledge studies. Perhaps the most obvious candidate is the information environment. The media and elites serve to deliver and interpret relevant factual content to the public, informing individuals who are not otherwise able to observe the political process (Barabas and Jerit, 2009; Delli Carpini and Keeter, 1996; Lupia and McCubbins, 2000; Nicholson, 2003). Future research efforts might focus on developing media measures for comparative studies. Other efforts might examine alternative contextual predictors, such as socio-economic development or the quality of civic culture. Such efforts might allow us to better understand the conditions that lead to an informed electorate and to better evaluate the quality of democracy in comparative perspective.

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Notes

- 1 The actors to whom citizens express their preferences and demands include decision-making bodies, bureaucratic organizations, and judicial authorities (Rohrschneider, 2002).
- 2 I rely on the Comparative Study of Electoral Systems (CSES) largely because the Eurobarometer and the European Election Study (EES) (2009) do not permit an analysis of knowledge in countries outside of Europe. The Eurobarometer also only includes questions about the European Union, which may not be as relevant to measuring the type of (national) political knowledge on which this study is focused.
- 3 The CSES also offers an item with expert left/right placements for each political party. Across the participating CSES countries, expert placements of the largest three parties are correlated with mean respondent placements at 0.81, 0.86, and 0.85. The mean respondent placements thus appear to be fairly reliable estimates of each party's actual positions.
- 4 As a robustness check, I ran the same models with measures of left/right placements for only the two largest parties and then for all parties within each country. The results were upheld by each of these alternative measures, and indeed were stronger for the measure of all parties within each country.
- 5 Indeed, left/right placements are correlated with the factual knowledge measure at 0.08.
- 6 The behavioral literature identifies two types of knowledge: general knowledge about the structures and institutions that comprise a political system and domain-specific knowledge about current actors, policies, and issues within that system (Delli Carpini and Keeter, 1996; Zaller, 1992).
- 7 A small number of countries do not include factual knowledge questions or left/right placement questions in their post-election surveys. The Appendix details the countries included in each analysis.
- 8 Unfortunately, the Worldwide Governance Indicators (WGI) data do not allow us to parse out the differential effects of transparency, openness, and responsiveness. While such an effort would be useful towards distinguishing the effects of these different concepts, the cumulative indicator still allows an assessment of whether the overall procedural quality has an effect on knowledge.
- 9 In unreported analyses, both of these dimensions (government effectiveness and regulatory quality) are significantly correlated with the accuracy of left/right placements, as is the composite indicator that averages all six of the WGI dimensions. These results are not reported, again, because the theory advanced in this article concerns procedural quality (or the inputs of the system) and these two dimensions measure the quality of outputs.
- 10 The complexity of left/right ideology may vary across countries. For instance, the patterns in Figure 1 may, in part, be due to the greater salience of left/right ideology in Western Europe. To account for this possibility, I run each of the models through iterations with different regions removed. The results of these efforts suggest an even stronger procedural effect on the accuracy of left/right placements when the West European countries are excluded from the analysis.
- 11 There are strong inter-correlations among the four WGI indicators, ranging from 0.75 between the political stability and voice and accountability indicators to 0.96 between the rule of law and control of corruption indicators. Given these high inter-item correlations, I do not run a model with all four indicators together.

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Author biography

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Appendix

Construction of Measures

Countries

Accuracy of Left/Right Party Placements. Of the 41 countries in the Comparative Study of Electoral Systems (CSES) dataset, only 39 were ranked by the Worldwide Governance Indicators (WGI) project (Hong Kong and Iceland are excluded). Three additional countries were removed from the sample due to their surveys not including a sufficient number of left/right questions (Belarus, Taiwan, and the United States). Of the remaining 36 countries, another four countries did not include questions about income (Latvia and South Africa) or political efficacy (Ireland and Switzerland). The following 32 countries were used for the left/right placements analyses: Australia, Austria, Brazil, Canada, Chile, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Israel, Japan, Mexico, the Netherlands, New Zealand, Norway, Peru, Philippines, Poland, Portugal, Romania, Slovakia, Slovenia, South Korea, Spain, Sweden, Thailand, Turkey, and Uruguay.

Factual Knowledge Scale. Of the 41 countries in the CSES dataset, only 39 were ranked by the WGI project (Hong Kong and Iceland are excluded). Four additional

countries were removed from the sample due to their surveys not including any factual knowledge questions (Belarus, Slovenia, Turkey, and Uruguay). A fifth country (Chile) was removed due to only including two factual knowledge questions. Of the remaining 34 countries, another four countries did not include questions about income (Latvia and South Africa) or political efficacy (Ireland and Switzerland). The following 30 countries were used for the factual knowledge analyses: Australia, Austria, Brazil, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Israel, Japan, Mexico, the Netherlands, New Zealand, Norway, Peru, Philippines, Poland, Portugal, Romania, Slovakia, South Korea, Spain, Sweden, Taiwan, Thailand, and the United States.

The differences between the two sample sizes are that Chile, Slovenia, Turkey, and Uruguay are only included in the left/right analyses, while Taiwan and the United States are only included in the factual knowledge analyses.

Dependent Variables

Accuracy of Left/Right Party Placements. This measure uses the CSES question: “In politics people sometimes talk of left and right. Where would you place [PARTY X] on a scale from 0 to 10 where 0 means the left and 10 means the right?” The absolute difference between a respondent’s placement and the mean placement of all respondents from their country is estimated for the three largest political parties. The three resulting scores are then averaged together and multiplied by -1 such that higher values indicate more accurate placements.

Factual Knowledge Scale. From the CSES Codebook: “Some studies include a series of political information items, designed to test respondents’ general knowledge. These items are of varying difficulty and responses are simply reported as correct or incorrect.” The number of correct responses was tallied for each respondent producing a range from no correct answers (0) to correctly answering all three questions (4). Please consult the CSES Codebook for more information on how factual knowledge is measured in each participating country survey.

Individual-Level Predictors

Education. None (1), Incomplete Primary (2), Primary Completed (3), Incomplete Secondary (4), Secondary Completed (5), Post-Secondary Trade/Vocational School (6), University Undergraduate Degree Incomplete (7), University Undergraduate Degree Completed (8).

Income. Lowest Household Income Quintile (1), Second Household Income Quintile (2), Third Household Income Quintile (3), Fourth Household Income Quintile (4), Highest Household Income Quintile (5).

Sense of Efficacy. “Some people say that it doesn’t make any difference who is in power. Others say that it makes a big difference who is in power. Using the scale on this card, (where ONE means that it doesn’t make any difference who is in power and FIVE means that it makes a big difference who is in power), where would you place yourself?”

Partisanship. Respondents were first asked “Do you usually think of yourself as close to any particular party?” Those who replied “Yes” were then asked, “Which party do

you feel closest to” and then “Do you feel very close (1), somewhat close (2), or not very close (3).” To construct a more comprehensive measure of partisanship, I then coded respondents who answered “No” to the first question as 4.

Sex: Male (1), Female (2).

Age. Age of respondent (in years).

Contextual Predictors

Procedural Quality. The WGI project collects and aggregates data on perceptions of the quality of governance in 200 countries and territories from 31 different survey sources (including mass surveys and surveys targeting experts from the public, private, and non-governmental organization (NGO) sectors). The data are organized into six clusters: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The WGI uses an Unobserved Components Model to standardize the data and construct composite indicators (the weighted average of all scores provided by the different data sources) for each of the six clusters. The indicator for each of the six clusters ranges from a low score of -2.5 to a high score of 2.5 . The composite indicator averages the six cluster scores for each country.

Effective number of electoral parties (ENEP). The CSES constructs a measure for the ENEP, based on electoral data from lower house elections. This article uses the corrected measure, which seeks to better control for countries with large numbers of independent candidates who are thrown into an “other” category.

District Magnitude. The CSES constructs this measure using the first or lowest electoral segment (tier). The total number of seats in the segment is divided by the total number of districts in the segment.

Predictable Outcomes. Based on Gordon and Segura (1997) and Berggren (2001), this measure is constructed by estimating the absolute difference between the percentage of votes received and the percentage of seats allocated for the two largest parties and averaging those two figures.

Age of Regime. The CSES constructs this measure by estimating “the number of years since the most recent regime change (defined by a three-point change in the POLITY score over a period of three years or less) or the end of a transition period defined by the lack of stable political institutions.”