

**Measuring Political Knowledge in Cross-National Contexts:
Enhancing Comparability between Different Political Information Structures**

Mathieu Turgeon
University of Brasília

Ryan Lloyd
University of Brasília

ABSTRACT

Quite a lot has been written about the extent to which ordinary citizens know about and understand politics, almost all of it focused on the American case. As a result, little has been written about how to accurately compare citizens' knowledge across different political contexts. We analyze the effects of political institutions (the nature and competitiveness of the parties, the presence or absence of compulsory voting requirements, etc.) and the information environment (the roles of public versus private media, the nature of the laws governing freedom of the press, etc.), which vary mostly cross-nationally, on citizens' political knowledge with the goal of creating an index that can be used as an explanatory variable to explain other political phenomena. Estimating multi-level models on CSES data from a wide range of countries, this paper examines both the sources of the country-level variation political sophistication and the ways in which institutional arrangements and the information environment can help or handicap citizens learn about politics.

Introduction

Despite some still-flickering dissent, it has long been widely accepted that most people know very little about most aspects of politics, and the usually implicit presumption is that this is true, in somewhat varying degree, always and everywhere. But this variation in degree, insufficient though it may be to alter descriptions of every public as knowing relatively little, may nonetheless be consequential. The timbre of a country's politics may well depend, in at least some measure, on the political knowledgeability of its citizens.¹ Where the public is more knowledgeable, the distributions of policy attitudes and votes should track those of values and interests more closely; voting and other forms of participation should be more common; and the media's treatment of politics may be less frivolous.²

From a sizable number of single-country surveys, we do know that the distribution of political knowledge is routinely right-skewed, with relatively few people knowing very much. We also know, at the individual level, that knowledge tightens the connections between interests and values, on the one hand, and policy attitudes and votes, on the other (Bartels 1996, Della Carpini and Keeter 1997, Althaus 1998), and that it increases the probability of voting (Della Carpini and Keeter 1997).

What we do not know is how knowledge's distribution, determinants, and effects may vary across countries. Scattered single-country surveys, with relatively few shared items (generally not including knowledge items) permit only rough and casual comparisons at best. At worst, though, the comparisons are actively misleading.

For example, knowing the identity of the President of the United States is not an equivalent task to knowing the identity of the President of Israel. The President of the U.S. is the preeminent figure in American politics, whereas the President of Israel occupies a far less important position in day-to-day politics. The President of Israel attracts far less media coverage, but just as importantly, exists embedded within a different institutional configuration, with different numbers of parties, different rules for apportioning legislative seats, and different cues for voters. Measurement equivalence, in other words, is a constant worry when making cross-

¹ Knowledge is one of a close-knit family of variables including "sophistication," "expertise," "awareness," "cognitive complexity," and "information" (in the sense of information held). Some of these terms are synonymous, others subtly different, but knowledge is the most straightforwardly measured and highly correlated with the rest, and the literature consequently seems to be converging on it (compare, e.g., Luskin, 2002, 2003 with Luskin, 1987).

² Although this last factor could, of course, be a cause as well as an effect of a more knowledgeable public.

national comparisons of political knowledge (see Elkins and Sides 2008; Elff 2009; Stegmueller 2011; Matsubayashi and Turgeon 2012).

In this paper, we specify a preliminary model for measuring and explaining political knowledge in cross-national contexts. We then use our results to provide the initial specifications for an index that will succinctly capture the complexity of countries' political information structures, which would be available for use as an independent variable for models seeking to explain political behavior.

Measuring Political Sophistication in a Comparative Context

Some work has indeed been done on measurement equivalence and the institutional determinants of political knowledge. Gordon and Segura (1997), for instance, use Eurobarometer data to provide one account of the determinants of knowledge in twelve Western European countries. Clark (2013), meanwhile, finds that the range of parties available, as measured by the effective number of electoral parties, increases voters' political knowledge. Banducci, Giebler, and Kritzinger (2015) argue that citizens' knowledge of party positions is affected by the strength of cues provided by the news media. These studies, however, are the exceptions.

Comparing anything across countries requires at least roughly comparable measures (Elkins and Sides 2008). This is a greater challenge for political knowledge than for some other variables because the information it might matter to know varies so widely across countries. What are comparable pieces of information to have (or lack) in the U.S. versus France versus Japan versus Peru? Institutions, actors, and issues vary, both across countries and (especially in the case of actors and issues) over time, leading formally parallel facts to vary in both salience and importance. An Israeli's being able to identify the president of Israel shows more knowledge than a Brazilian's being able to identify the president of Brazil, a more salient office.

Political scientists have made advances in comparing other aspects of political systems cross-nationally while taking into account the contextual elements of each country. Laakso and Taagepera's (1979) Effective Number of Parties (ENP) index, for example, systematically takes into account the actual influence of political parties to allow for one to make more accurate cross-national comparisons of party systems. It has been cited 3288 times as of the writing of this paper.³ A similar sort of index could be made for political knowledge.

³ According to Google Scholar on 17 April 2017.

The most straightforward way of gauging political knowledge is via open- or closed-ended questions that ask for factual information about public figures, current events, the background to policy decisions, or the workings of political institutions. Their defining characteristic, and their great strength, is that they have unambiguously correct answers. Their weakness, however, is that it is difficult to know what facts are comparable across national contexts. A Canadian's knowing which party controls the Canadian House of Commons, for instance, matters more (assuming a majority government in Canada) than an American's knowing which party controls the U.S. House of Representatives, a less powerful body. The CSES affords three factual items per country, varying enormously from country to country in what they ask about.

An alternative approach, developed by Luskin (1987) and Zaller (1992), constructs knowledge items from placing parties or candidates on policy or ideological scales.⁴ A placement, say, of the British Labour Party on the left side of a left-right scale, or of the British Labour Party to the left of the British Conservative party, is treated as correct, and all other placements and don't-know (DK) responses as treated as incorrect.⁵ Following Luskin and Bullock (2004), we term the first version of this approach as gauging "absolute correctness" and the second as gauging "relative correctness."

The biggest advantage, in the comparative context, of this approach is that the ideological or policy locations of the most prominent political parties are probably more comparable pieces of information to have or lack. The number of parties, and therefore, the salience of the most salient parties (generally the biggest) may vary across countries, but placing, for example, the three biggest parties of a given country on a left-right continuum is more clearly the same task in different countries than is answering superficially parallel factual questions about political figures, institutions, or issues. Its disadvantage, however, is it is less clear what should count as correct. As a result, indices composed of such placement-based items correlate somewhat less strongly with criterion variables related to knowledge than indices based on factual items (Luskin and Bullock 2004).

A variant, adopted by Gordon and Segura (1997), measures the distance between the respondent's placement and the party's "actual" location on the left-right continuum. This

⁴ The poles of the ideological dimension space are known as "left" and "right" in Europe, as "liberal" and "conservative" in the U.S. and Japan.

method offers the advantage of more graduated measurement, but at the cost of adding a further layer of debatability because parties' "exact" locations are impossible to know with any confidence. They can, however, be estimated with mean placements, whether by the whole sample (as in Gordon and Segura 1997), by the most knowledgeable respondents, or by experts. In our view, the latter two are superior options, but the results in Luskin and Bullock (2004), as well as our own explorations, suggest that no distance-based measure works particularly well.

For present purposes, we adopt an absolute placement-based measure based on the respondent's placements of the major political parties (numbering between two and six, with a mean of 4.43 and a standard deviation of 1.31). This means that placing the Labour Party on the left side of the left-right scale would be measured as correct (and received a value of 1), regardless of where the Conservative party was placed or whether the Labour Party was placed to the left of the Conservatives. DKs and midpoint responses (which resemble DKs) are measured as incorrect (and received a value of 0). The results in Luskin and Bullock (2004), as well as our own work, suggest that this is the optimal way of converting placements into knowledge items, largely because the between-country variance is larger than that of other measures, while within-country variance is smaller, as one would expect.⁶

This paper starts by describing and trying to explain cross-national variation in political knowledge. Using data from the Comparative Study of Electoral Systems, we examine both the individual-level determinants within given countries and the ways in which their effects depend on political institutions and the information environment, which are constant at any given moment within countries, but vary across them. As a preliminary step, we also consider how to measure political knowledge in cross-national contexts, and how to use this political information context as an explanatory variable.

Data

The recent advent of coordinated cross-national surveys, notably including the World Values Survey, the Pew Global Attitudes Survey, and, at the regional level, LAPOP, the Eurobarometer, Latinobarometer, and Afrobarometer, opens new possibilities for systematic

⁵ This is at odds with Mondak (2001) but consistent with Luskin and Bullock (2004)

⁶ We have also tried measures based on relative placements and on factual items but do not present those results here. For more on what measures of political knowledge are best for cross-national comparison, see Turgeon (2015)

comparative analysis of political knowledge (among other variables).⁷ Here we employ data from the Comparative Study of Electoral Systems (CSES), one of the richest and widest-reaching of the lot.

The CSES is a collaborative program of cross-national research conducted in many different parts of the world. The main purpose of the CSES is to allow researchers to examine cross-national variation in political behaviors and attitudes. The data collected by the CSES are of three kinds: individual or micro-level measures of political behaviors and attitudes (e.g., vote choice, party and candidate evaluations, and the like); district-level measures about elections (e.g., electoral returns, number of candidates and parties, and the like); and national or system-level measures about the elections and political system at the time of the election (electoral rules, regime characteristics, and the like). The individual-level data include measures of political knowledge and a number of variables plausibly affecting it. So far, the CSES has completed four modules, providing information about 159 elections that have taken place between 1996 and 2016 in over 50 countries. The sampling method, sample size, method of interviewing, and other design details vary—widely—with the election study.⁸

Explanation

At the individual level, the factors affecting political knowledge can be grouped under the headings of the *opportunity*, the *ability*, and the *motivation* to learn about politics (Luskin 1990). Opportunity includes exposure to political information in the media, occupation, and education; ability includes intelligence; and motivation includes political interest and (to a lesser degree) education. In Luskin's (1990) U.S. results, motivation and ability appear to account for a great deal of variation, and opportunity for very little. Interest has by far the biggest effect, intelligence some, but education (controlling for interest and intelligence) virtually none.

But a good many more macro-level factors having to do with the nature of the political system, the circumstances of the day, the nature and behavior of the mass media, and the political culture may also affect political knowledge. These have been much less examined, though Gordon and Segura (1997) have made a nice start. Here, we offer a multilevel (HLM) model to explain variation across individuals, countries, and elections.

⁷ Accompanied, to be sure, by new challenges, for both measurement (Elkins and Sides 2008) and analysis (Kedar and Shively 2005).

Individual-Level

Our individual-level modeling is constrained by the CSES's selection of variables, and not everything that theoretically should affect sophistication is available in all CSES studies. As a result, we excluded intelligence and political interest, the prime movers in Luskin's (1990) results, for want of sufficient data. Our hope is that some of the other regressors— education, most notably—may appropriate their effects in their absence.

At the individual level, our regressors are:

Education. Findings about education's effect on political knowledge have been starkly mixed, with some studies suggesting a very large effect, and others essentially none. These differences may largely rest on other variables it has to contend with. With interest, intelligence, and occupation controlled for, any remaining effect of education should stem from its educative value (a matter of opportunity rather than ability or motivation). Here, without controlling for interest or intelligence, we may hope that education proxies them. Operationally, education here is measured on an 8-point scale where higher values indicate more formal education. A value of 1 indicates no formal education at all while 8 indicates the respondent has completed a university undergraduate degree.

Income. Higher incomes generally mean more time to devote to politics. Income may also proxy some of what Luskin (1990) calls "political impingement," or the exposure to political information and the incentives to process it as part of one's job. Higher-income occupations doubtless tend to be more politically impinged, although the correlation is doubtless far from perfect. We measure income on a 5-point scale, placing respondents into the appropriate quintile. Higher values denote higher incomes.

Gender (Male). This is a dummy variable with a value of 1 denoting men. In many places, men appear to know more politics than women. This is likely because politics has

⁸ For further information, see <http://www.umich.edu/~cses/>.

historically shut women out of the profession or deprived them of the vote, and still creates difficulties for women to engage in politics in many places (see Fraile and Gomez 2015; Lizotte and Sidman 2009).

Age. This is simply measured in years. In established democracies, age is well known to affect knowledge. Older people are less distracted by life's start-up costs, and even those who remain relatively uninterested in politics have had a longer period in which to pick up incidental knowledge as they grow older. It is plausible to see this life-cyclical effect as non-monotonic, with the largest gains coming between youth and middle age (as is true of turnout) and then declining from there. As a result, we modeled this variable as an exponential term.

Marital Status (Married). This is a dummy variable, with a value of 1 denoting people who are married or living in marriage-like relationships. Being married increases one's probability of voting, although the reason is unclear. It may be that being married makes people happier and likelier to engage in all manners of pro-social behavior, including voting. It may also be that it is harder to hide a failure to vote from a spouse than to do so from friends and coworkers. At any rate, it is at least plausible that some of this effect on voting may carry over to political knowledge.

Employment Status (Unemployed). This is another dummy variable, with the value being 1 for those who are unemployed. We think that it is plausible that it has an effect on political knowledge because it has a well-established parallel effect on turnout. In this case, however, there is a clearer extension of the same logic to political knowledge. Being unemployed is demoralizing, and the search for employment distracting. The unemployed therefore have both diminished motivation and diminished opportunity to inform themselves about politics.

Occupation (Blue-Collar). This is an admittedly pale version of occupation qua political impingement, a dummy variable with a value of 1 for those who hold blue-collar jobs. Blue-collar jobs only rarely involve much political information or incentives to pay it heed, although not all white-collar jobs or forms of self-employment do either. Some jobs considered here as

blue collar jobs include occupations related to agriculture and fishery, clerk positions in the service industry, and all jobs requiring workers to operate machinery.

Residence (Rural). This is another dummy variable, with a value of 1 if the respondent lived in a rural area. We use another rationale borrowed from the literature on turnout to justify its presence. Even controlling for education, income, and occupation, people in urban areas tend to have higher voter turnout and, it is reasonable to suspect, higher knowledge levels as well.

Public-sector jobs. This is another dummy variable, with a value of 1 if the respondent had a job in the public sector and 0 if she did not. Working in the government could make one more attentive to politics, particularly given that changes in the political fortunes of certain groups can easily result in the loss of one's job in certain contexts.

System/Election-Level

At the system/election level, we consider variables having to do with political institutions, the party system, and the mass media (a number of them familiar from Gordon and Segura 1997). Some vary over time as well as across countries—operationally, given the timing of the observations, they vary by election. Others vary, at least, in practice, over a span of a just a few decades, only with the country. To save words, we shall make references to the “election level,” although a good part of the variance at that level is in fact by country. We do not necessarily, of course, think the present roster of variables is exhaustive.

Effective Number of Parties. Contrary to Gordon and Segura (1997), who argue that more numerous parties should *decrease* the costs of acquiring political information, up to a point, we believe that more numerous parties should monotonically *increase* them. It is harder to keep track of three parties than two, of four parties than three, etc. We use the Laakso and Taagepera (1979) measure of the effective number of parties, which gives less weight to marginal parties. The measure is where s_i is the proportion of seats of the i th party. The measure is based on the CSES's information about the six largest parties.

District Magnitude. This is a variable that measures how many officials are elected in each district. It is a four-category measure, rather inaptly known as “electoral competitiveness” or “district magnitude.” This measure ranges from single-member districts to three broad varieties of PR. On the one hand, the more candidates to be selected in one district, the more complex the institutional environment might become, thereby decreasing knowledge (Lloyd 2016). On the other hand, however, proportional representation systems might also induce voters to seek out more information by encouraging them to express their first preference more readily at the ballot box (Arnold 2007).

Disproportionality of Representation. Distributions of seats that visibly and chronically fail to reflect the distribution of votes are an irritant to many voters, especially those on the losing side of the mistranslation, which in turn stimulate greater interest and learning. Following Lijphart (1984), we measure this as the mean difference between the vote and seat shares of the two largest parties.

Compulsory Voting. Given that compulsory voting induces citizens to vote, often under threat of punishment, we expected a positive effect on political knowledge. Knowing that voting was required could give citizens added motivation to seek out information on politics (Gordon and Segura 1997).

Unicameral Legislature. Bicameral legislatures figure to make the relationship between votes and policy outcomes murkier, thereby increasing information costs and decrease political knowledge. Again following Lijphart (1984), we use a dummy variable distinguishing countries coded in the CSES dataset as having national legislatures consisting of a single chamber.

Public TV Viewership. This is the percentage of the aggregate market share of the five most-viewed TV stations that belongs to state-owned stations, as measured by Djankov et al. (2003). Given the tendency of public TV stations to be richer in political information content (Fraile and Iyengar 2014), people living in countries with larger public TV viewership should have greater exposure to political information.

Age of Regime. In some countries regimes and parties rapidly appear and vanish, in others they last for decades or longer. The longer the same regime stays in place, the easier it should be for people to discern parties' and candidates' left-right locations. Operationally, therefore, this variable is the number of years since the last time that the country's Polity score changed by at least three points from the previous year. This data comes from the Electoral Integrity Project (Norris et al. 2016).

Media (Non-)Freedom. This is the degree to which each country's press is free, according to Freedom House's Freedom of the Press study. Higher scores mean less freedom: a score between 0 and 30 signified that the country in question had a free press. A country scoring between 31 and 60 was classified as partly free. Lastly, a score between 60 and 100 meant that the country was considered not free (Freedom House 2016). Following Schoonvelde (2013), we argue that a free media is essential for ensuring an informed electorate, and that government-controlled press organs will make it more difficult for voters to learn about politics.

Extremity of the Parties. Parties nearer the center are harder to locate. More people will place a party whose real location is 6 (slightly right of center) at 0-5 (dead center or left-of-center) than one whose real location is 8, as the results in Luskin, Cautres, and Lowrance (2003) confirm. For present purposes, we use the parties' mean distance from the midpoint (5), a variable that thus ranges from 0 (when all the parties are exactly at the midpoint) to 5 (when they are all at 0 or 10). Again, we take the "real" locations from the CSES expert ratings.

Public Purchasing Power (log) and Gini coefficient. These variables follow the same logic as the income variable at the individual level, but from a macro standpoint, with the Gini coefficient included to also measure inequality within each country.

Model

Because these variables are multilevel, with individual-level observations embedded within countries, we express the hypotheses that they all affect individual-level political knowledge in a multilevel model (Bryk and Raudenbush 1992; Steenbergen and Jones 2002). This avoids the likely violation of classical assumptions in the "naïve pooling" of all individual-

level observations, regardless of country (as in Gordon and Segura 1997). The problem is that the disturbances associated with given observations are unlikely to be “spherical”—i.e., to be independent or have the same variance across elections (Burton, Gurrin, and Sly 1998). Naïve pooling tends to bias the estimated standard errors downward and thus to produce falsely “significant” results (Barcikowski 1981).

More precisely, we propose the following two-level linear multilevel model:

$$\text{Individual - level: } PK_{ij} = \beta_{0j} + \sum \beta_{pj} x_{pij} + \varepsilon_{ij}, \quad (1)$$

$$\text{System - level: } \beta_{0j} = \gamma_{00} + \sum \gamma_{0q} z_{qj} + \delta_{0j} \quad (2)$$

Implying

$$PK_{ij} = \gamma_{00} + \sum \gamma_{0q} z_{qj} + \delta_{0j} + \sum \beta_{pj} x_{pij} + \varepsilon_{ij} \quad (3)$$

where PK_{ij} is the political knowledge of the i th individual in the j th election study, x_{pij} is the i th individual observation in the j th election study on the p th individual-level regressor, x_{qj} is the j th country-level observation on the q th country-level regressor, β_{0j} and β_{pj} are the j th election’s intercept and the p th regressor’s slope in the individual-level equation for political knowledge, and γ_{00} and γ_{0q} are the intercept and the q th regressor’s slope in the election-level equation for the j th election’s individual-level intercept β_{0j} , and are the disturbances of individual and election-level equations (1) and (2) respectively (both assumed to be multivariate normal and assumed to be independent of each other).

In substantive terms, the individual-level equation (1) expresses political knowledge as a linear function of education, income, age, gender, blue collar worker, rural residence, being unemployed, and being married. The election-level equation (2) expresses the individual-level equation’s intercept β_{0j} and thus political knowledge as a linear function of the age of the parties, the electoral system’s district magnitude, the national legislature’s being unicameral, the disproportionality of representation, the effective number of parties, public TV’s percentage of

TV viewership, and the party mean extremity.

Note that “linear” here means linear and additive in the parameters. There is actually one nonlinearity (strictly speaking, non-additivity) in the variables. As a crude approximation of the argument above, we include the product of the respondent’s age and the age of the parties, thereby allowing age to be less of an advantage in younger democratic systems (which tend to have younger parties).

Results

We estimate equation (3) by maximum likelihood. The results, in Table 1, show all eight individual-level regressors as having statistically significant effects in the expected direction.

Table 1. ANOVA

Parameter	Estimate
<i>Fixed Effects</i>	
Constant	.543* (.028)
<i>Variance Components</i>	
Election-level	.026
Individual-level	.080
ICC	.246
Number of observations	49,199
Number of groups (elections)	34

*Note: Table entries are maximum likelihood estimates with estimated standards errors in parentheses. * $<.05$*

To derive something like a pseudo- R^2 for this individual-level equation, we estimate the linear model expressing K_{ij} as a function simply of a full set of election dummies ($Q - 1$, where Q is the number of elections. This can also be seen as an ANOVA model. The relevant results are the election-level and residual variances, the latter attributed to the individual-level.

Table 2. Determinants of Political Knowledge⁹

Parameter	Model 1	Model 2
<i>Fixed Effects</i>		
Individual-level predictors		
Constant	-.388(.828)	.457 (.125)
Education	.035*(.001)	.035* (.001)
Income	.014*(.001)	.014* (.001)
Age	.005*(.000)	.004* (.000)
Age ²	-.000*(.000)	
Male	.071*(.003)	.071* (.003)
Blue-collar worker	-.031*(.003)	-.032* (.003)
Rural resident	-.008*(.003)	-.008* (.003)
Unemployed	-.024*(.006)	-.024* (.006)
Married	.009*(.003)	.009* (.003)
Public-sector job	.007*(.003)	.007* (.003)
System-level predictors		
Regime age	-.001(.000)	-.001*(.000)
Unicameralism	-.059(.04)	-.069 (.037)
Compulsory voting	-.037(.026)	-.047* (.02)
District magnitude	.019(.019)	

⁹ Union membership was also included at the individual level, but with no significant effect.

Disproportionality	-.001(.01)	
Effective number of parties	.017(.03)	.031 (.019)
% public TV	-.003*(.001)	-.003* (.001)
Party extremity	.145*(.048)	.106* (.037)
Media non-freedom	-.009*(.004)	-.014* (.002)
Log(PPP)	.06(.076)	
Gini	.000(.003)	
<i>Variance Components</i>		
Election-level	.01	.009
Individual-level	.073	.073
ICC	.115	.111

*Note: Table entries are maximum likelihood estimates with estimated standard errors in parentheses. *<.05*

One can see from these results that, as expected, virtually all the individual-level variables had a significant effect on political knowledge. Income, education, and age had positive effects, as did being married, male, or having a public-sector job. Being unemployed, a blue-collar worker, or living in rural areas, however, have negative effects.

At the systemic level, party extremity has positive effects on political knowledge and a lack of media freedom had negative effects, as predicted. However, other systemic variables diverged from our expectations. Firstly, PPP and the Gini coefficients, along with unicameralism, ENP, district magnitude, and disproportionality all had no effect on political knowledge. Furthermore, regime age, compulsory voting, and percent public TV had effects opposite those we predicted. These results deserve further research in order to better understand why they diverged so far from our theoretical expectations.

Another important result to take into account is the effect of our model on the variance components. The unexplained variance at the election-level for the initial ANOVA model in Table 1 is more than halved by our two multilevel models (conversely, the individual-level

unexplained variance hardly budges). This indicates that our model does an effective job at explaining election-level variance in political knowledge and indicates that our index will indeed have promise.

Discussion

This paper, far from representing the end of our project, instead represents the beginning. Firstly, we plan to update our results with the most recent modules from CSES to determine if our results still hold. Secondly, and more importantly, we will take the system-level variables that have an effect on political knowledge—namely, regime age, party extremity, media non-freedom, compulsory voting, and percent public TV. We will use item response theory to determine the precise combination for these variables (see Elff 2009; Stegmueller 2011 for examples of this technique).

We hope that, much like Laakso and Taagepera's (1979) index for the effective number of parties in a political system, this index can be used as independent variable in other analyses. For example, Lloyd (2016) uses the effective number of parties as a proxy variable for the complexity of political information structures when trying to explain why increases in income lead to decreases in clientelist voting in some countries but not others. This index will be a more accurate measurement of this important concept, thereby allowing for an indicator that is more accurate and causally proximate to the concept of political information structures.

Our hope, consequently, is that the results of this analysis and its successors may ultimately be helpful for future researchers looking to understand country effects of political knowledge. We also hope that it will prove useful for both reformers of existent political systems and designers of nascent democracies to the extent that more knowledgeable publics, as we firmly believe, make for better—more representative—democracy.

REFERENCES

- Althaus, Scott L. 1998. "Information Effects in Collective Preferences." *American Political Science Review* 92: 545–81.
- Arnold, Jason Ross. 2007. *Contextualizing Political Knowledge: A Cross-National, Multilevel Approach*.
- Banducci, Susan, Heiko Giebler, and Sylvia Kritzing. 2015. "Knowing More from Less: How the Information Environment Increases Knowledge of Party Positions." *British Journal of Political Science*: 1–18. http://www.journals.cambridge.org/abstract_S0007123415000204.
- Barcikowski, Robert S. 1981. "Statistical Power with Group Mean as the Unit of Analysis." *Journal of Educational Statistics* 6(1967): 267–85.
- Bartels, Larry M. 1996. "Uninformed Votes: Information Effects in Presidential Elections." *American Journal of Political Science* 40: 194–230.
- Bryk, Anthony, and Stephen W Raudenbush. 1992. *Hierarchical Linear Models: Applications and Data Methods*. Newbury Park, CA: Sage Publications.
- Burton, A, L Gurrin, and P Sly. 1998. "Extending the Simple Linear Regression Model to Account for Correlated Responses: An Introduction to Generalized Estimating Equations and Multi-Level Mixed Modeling." *Statistics in Medicine* 17(March): 1261–91.
- Carpini, Michael Delli, and Scott Keeter. 1997. *What Americans Know about Politics and Why It Matters*. New Haven: Yale University Press.
- Clark, Nicholas. 2013. *Contextual Dynamics and Political Knowledge : The Role of Institutional Quality in an Informed Citizenry*.
- Djankov, Simeon, Caralee McLiesh, Tatiana Nenova, and Andrei Shleifer. 2003. "Who Owns the Media." *Journal of Law and Economics* XLVI(October): 341–81. <http://scholar.harvard.edu/files/shleifer/files/media.pdf>.
- Elff, Martin. 2009. "Political Knowledge in Comparative Perspective: The Problem of Cross-National Equivalence of Measurement." In *Midwest Political Science Association*, , 1–27. <http://www.elff.eu/uploads/Elff-PolKnowledgeEquivMeasMPSA2009.pdf>.
- Elkins, Zachary, and John Sides. 2008. 1997 *The Vodka Is Potent, but the Meat Is Rotten: Evaluating Equivalence in Cross-National Survey Data*.
- Florida, J Mondak. 2015. "Developing Valid Knowledge Scales." 45(1): 224–38.
- Fraile, Marta, and Raul Gomez. 2015. "Why Does Alejandro Know More about Politics than

- Catalina? Explaining the Latin American Gender Gap in Political Knowledge.” *British Journal of Political Science*: 1–22. <https://www.cambridge.org/core/article/why-does-alejandro-know-more-about-politics-than-catalina-explaining-the-latin-american-gender-gap-in-political-knowledge/F8811505F4A0DD14D46874D11DF2B59D>.
- Fraile, Marta, and Shanto Iyengar. 2014. “Not All News Sources Are Equally Informative: A Cross-National Analysis of Political Knowledge in Europe.” *The International Journal of Press/Politics* 19(3): 275–94.
- Gordon, Stacy B., and Gary M. Segura. 1997. “Cross–National Variation in the Political Sophistication of Individuals: Capability or Choice?” *The Journal of Politics* 59(1): 126–47. http://www.journals.cambridge.org/abstract_S0022381600051100.
- Kedar, Orit, and W. Phillips Shively. 2005. “Introduction to the Special Issue.” *Political Analysis* 13(4): 297–300.
- Laakso, Markku, and Rein Taagepera. 1979. “‘Effective’ Number of Parties: A Measure with Application to West Europe.” *Comparative Political Studies* 12(1): 3–27.
- Lijphart, Arend. 1984. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*.
- Lizotte, Mary-Kate, and Andrew H. Sidman. 2009. “Explaining the Gender Gap in Political Knowledge.” *Politics & Gender* 5(2): 127.
- Lloyd, Ryan. 2016. “Explaining Resilience in Clientelist Voting.”
- Luskin, Robert C. 1987. “Measuring Political Sophistication.” *American Journal of Political Science* 31(4): 856–99.
- . 1990. “Explaining Political Sophistication.” *Political Behavior* 12: 331–61.
- . 2002. “From Denial to Extenuation (and Finally Beyond): Political Sophistication and Citizen Performance.” In *Thinking About Political Psychology*, ed. James H. Kuklinski. New York: Cambridge University Press.
- . 2003. “The Heavenly Public: What Would a Fully Informed Citizenry Be Like?” In *Electoral Democracy*, eds. Michael MacKeun and George Rabinowitz. Ann Arbor: University of Michigan Press, 238–61. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:The+Heavenly+Public:+What+Would+a+Fully+Informed+Citizenry+Be+Like?#0> (July 29, 2014).
- Luskin, Robert C, and John Bullock. 2004. “Re(:)Measuring Political Sophistication.” In

Midwest Political Science Association,.

Luskin, Robert C, Bruno Cautres, and Sherry Lowrance. 2003. *Measuring Political Sophistication in France*.

Matsubayashi, Tetsuya, and Mathieu Turgeon. 2012. *Citizen Competence and the Institutional Environment*.

Norris, Pippa, Ferran Martinez i Coma, Alessandro Nai, and Max Groemping. 2016. *Perceptions of Electoral Integrity, August 2016 Release (PEI_4.5 Codebook)*.

Schoonvelde, Martijn. 2013. "Media Freedom and the Institutional Underpinnings of Political Knowledge." *Political Science Research and Methods* (October): 1–16.
http://www.journals.cambridge.org/abstract_S2049847013000186.

Steenbergen, Marco R, and Bradford S Jones. 2002. "Modeling Multilevel Data Structures." *American Journal of Political Science* 46(1): 218–37.

Stegmueller, Daniel. 2011. "Apples and Oranges? The Problem of Equivalence in Comparative Research." *Political Analysis* 19(4): 471–87.

Turgeon, Mathieu. 2015. *Measuring and Explaining Political Sophistication in a Comparative Context*.

Zaller, John. 1992. *The Nature and Origins of Mass Opinions*. New York: Cambridge University Press.