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The Gender Gap in Political Knowledge in Poland

Abstract: This paper utilizes nationally representative survey data to examine the gender gap in political knowledge in Poland. Political knowledge was assessed by asking respondents to indicate whether each of twelve national political parties was currently in the ruling coalition. We use motivation, ability, and opportunity to explain political knowledge. We predict answering ‘don’t know’ as well as answering all questions correctly. Political interest, educational attainment, previous voting behavior, having children, and age predict ‘don’t know’ responses for men and women. Having access to cable or satellite TV appears to reduce ‘don’t know’ responses, but only for men. All else being equal, men and women are equally likely to answer ‘don’t know.’ Political interest, educational attainment, previous voting behavior, age, and self-esteem predict perfect scores for women and men. Religious attendance increases perfect scores, but only for women. The gender gap in perfect scores remains significant despite controls.

Keywords: political knowledge, gender gap, political engagement, political interest, Poland

Introduction

There is a great deal of interest and research on the gender gap in political knowledge. Three basic questions often frame this literature: Is there a gender gap in political knowledge, why is there a gap, and are the sources of political knowledge the same for men and women? Research suggests that there is often a gender gap in political knowledge. Scholars disagree about its source. For some, it is a methodological artifact (e.g., [Mondak and Anderson 2004](#)). For others, it reflects differences in characteristics, such as the level of interest in politics, or differences in the return for characteristics, such as education ([Dow 2009](#)). Most of the literature on political knowledge, however, focuses on the US. We seek to add to the literature on political knowledge by addressing the following questions: What are the sources of political knowledge and are they the same for men and women in Poland, is there a gender gap in political knowledge in Poland, and are the patterns found in a consolidating democracy similar to those found in established democracies?

We use nationally representative survey data to examine how motivation, ability, and opportunity influence men’s and women’s knowledge of twelve national political parties—that is, whether they could correctly indicate if each party was currently in the ruling coalition. We predict whether or not the respondents answer ‘don’t know’ to the entire question set as well as whether or not they were able to answer all twelve questions correctly.

Independent variables include political interest (motivation); educational attainment and cognitive ability (ability); household income, access to cable or satellite TV, internet access, voting experience, employment status, religious attendance, size of place of residence, marital status, and having children (opportunity); and controls (age and self-esteem). We use multiple imputation to handle missing data and estimate interaction models to test for differences in the coefficients for women and men.

This paper makes several contributions to the literature on political knowledge. First, it examines the gender gap in political knowledge in a new political context—Poland. There are a few single-country studies that focus on the gender gap in political knowledge outside of the US—for example, in Belgium (Hooghe, Quintelier, and Reeskens 2006), Britain (Frazer and Macdonald 2003), Canada (Stolle and Gidengil 2010), and China (Tong 2003). We hope that our analysis will help to establish whether or not differences in the levels and sources of political knowledge are similar to patterns found in other countries despite differences in the political context. Second, our data include measures of both educational attainment and cognitive ability and the cognitive ability measure is based on an intelligence test rather than interviewer assessment. Third, we examine political knowledge as a two-stage process by first predicting whether the respondents answered the knowledge questions or simply indicated that they ‘don’t know’ for the entire question set. In the second step, we examine differences in knowledge among only those providing ‘yes’ or ‘no’ answers for each party.

Political Knowledge

Delli Carpini and Keeter (1996) define political knowledge as “the range of factual information about politics that is stored in long-term memory” (p. 10). The broad categories of political knowledge include: ‘rules of the game,’ ‘players,’ and ‘substance’ (e.g., domestic politics) (Delli Carpini and Keeter 1996). Most scholars argue that motivation, ability, and opportunity explain why some people know more about politics than others (see Delli Carpini and Keeter 1996, Chapter 5; Dow 2009: 120; Luskin 1990: 334).

First and foremost, political knowledge depends on motivation. Without interest in politics, people would not pay attention to politics nor would they retain any political information. The level of political knowledge is also rooted in ability. Those with more education and cognitive ability should be better able to learn and retain information about politics. There has been some debate, however, about the roles of education and intelligence in acquiring political knowledge (see Delli Carpini and Keeter 1996: 188–99). In studies finding robust education effects (Delli Carpini and Keeter 1996; Dow 2009; Gronlund and Milner 2006; Toka 2003; Toka and Popescu 2008), scholars are not typically able to control for cognitive ability. Others find that intelligence is an important predictor, but that education has no effect (Luskin 1990; Neuman et al. 1992). Measures of intelligence, however, are often not independent of political knowledge because they are based on interviewer assessments. The way that people answer the knowledge questions undoubtedly influences interviewer assessments of intelligence (Delli Carpini and Keeter 1996: 195; Dow 2009: 120). Finally, opportunity influences political knowledge. There are many possible resources that may en-

hance one's level of knowledge. Some of these include financial (e.g., household income), informational (e.g., access to cable television and the internet), social (e.g., social connections at work, church, and in the larger community), situational (e.g., based on family status), and experiential resources (e.g., previous political experience). We would expect variables measuring these concepts to work the same way in Poland as compared to other countries. Those who are more motivated, with greater abilities, and greater opportunities should have higher levels of political knowledge.

The Gender Gap in Political Knowledge

One of the most enduring predictors of political knowledge is gender. Despite attempts to explain it away, the gender gap in political knowledge tends to persist (Dow 2009). This is well-documented in the US (Delli Carpini and Keeter 1996; Dow 2009; Verba, Burns, and Schlozman 1997), other single countries (Belgium: Hooghe, Quintelier, and Reeskens 2006; Britain: Frazer and Macdonald 2003; Canada: Stolle and Gidengil 2010; China: Tong 2003), and cross-nationally (Fraile 2014; Gronlund and Milner 2006; Toka 2003).

Some argue that the gender gap in knowledge is the result of methodology—that is, in how political knowledge is measured (see Delli Carpini and Keeter 1996: 203–209; Stolle and Gidengil 2010: 94–96). The most common explanations for the gender gap, however, mirror explanations for political knowledge itself—motivation, ability, and opportunity. These variables may contribute to a gender gap in political knowledge in several ways. First, gender differences in the average levels of these variables might explain a gender gap in knowledge (see Dow 2009). If, for example, political knowledge is greater among those who have more education, then men and women will differ in knowledge if there is also a gender difference in the level of education. Second, gender differences in the return for characteristics might explain a gender gap in knowledge (see Dow 2009). If, for example, education has a stronger effect on knowledge for men, then men and women with the same level of education will have different levels of knowledge.

Prior research has shown that differences in the level of motivation from gender role socialization create the basis for a lasting gender gap in political knowledge. Children learn that politics is a “man’s world” (Jennings 1983) and that the behaviors and skills necessary to be politically competent are often not those adopted by girls (Wolak and McDevitt 2011). As a result, women are often less interested in politics and have a greater sense of inefficacy. The effects of gender role socialization have been hypothesized to vary among women of different generations (Inglehart and Norris 2003). Fraile (2014) finds the gender gap in political knowledge to be much larger among older men and women in Europe than among younger cohorts. She argues that women who were socialized during low rates of female participation or under non-democratic political systems are less politically knowledgeable than their male counterparts.

Many studies have found that education plays a critical role in generating political knowledge (Delli Carpini and Keeter 1996; Dow 2009; Gronlund and Milner 2006) as well as explaining the gender gap (Dow 2009; Fraile 2014). In Dow’s (2009) US-based study, results indicate that only two variables have different effects for men and women: the positive effect of education is stronger for men and group membership increases knowledge, but

only for women. Dow (2009) concludes that gender differences in individual characteristics (e.g., average levels of education) explain about one third of the gender gap in knowledge while gender differences in the return for some characteristics explain two thirds of the gender gap (e.g., men get more political knowledge from the same level of education). While Dow (2009) finds that education has a greater impact on American men's political knowledge than women's, Fraile (2014) finds the opposite in the European context.

Gender differences in opportunities may also explain the gender gap in political knowledge. We divide opportunity-related resources into several categories: financial, informational (i.e., access to the media), experiential (i.e., previous political experience, such as voting), social (i.e., social connections at work, church, and in the community), and situational (i.e., marital status and having children). Some of these have been explored in previous research. Previous studies suggest that income affects political knowledge for men and women (Dow 2009; Stolle and Gidengil 2010), although a few do find a significant difference in the effect (e.g., Thomas 2012). Employment status does not typically explain the gender gap in political knowledge (Anderson and Cook 1985; Schlozman, Burns, and Verba 1999). However, working in a male dominated field (Carnaghan and Bahry 1990) or an occupation that increases interaction with others interested in politics can increase political knowledge (Verba, Burns and Schlozman 1997). Gendered roles are also used to explain why women have different opportunities to share political interests and develop skills through their associational involvement. For example, American men develop civic skills in the workplace, while women develop them in places of worship (Schlozman, Burns, and Verba 1994: 977; see also Burns, Schlozman, and Verba 2001: 248). Research in Canada also suggests that religious membership increases self-perceived political competency among women (Gidengil, Giles, and Thomas 2008; Thomas 2012).

The situational argument claims that women's roles as wives and mothers often keep them isolated and busy with little time to pay attention to politics (Kay et al. 1987; Parry, Moyser, and Day 1992; Sapiro 1983). Empirical studies typically include the number of children under the age of 18 to measure the "double day" associated with having children. These studies consistently find that having children negatively affects women's political knowledge, but that it has no effect on men's (Dow 2009; Stolle and Gidengil 2010; Verba, Burns, and Schlozman 1997).

While most agree that a gender gap in political knowledge exists, there is a great deal of debate regarding the size of the gap and if it exists for all types of political knowledge. The attention paid to methodological effects has increased over time and has added to our understanding of political knowledge in several important ways (see Mondak and Anderson 2004). First, some researchers find that political knowledge is gendered; women know more about local government and specific policy issues, such as health, education, and taxation (see Delli Carpini and Keeter 1996; Dolan 2011; Stolle and Gidengil 2010; and Verba et al. 1997 for a discussion). A second stream of research indicates that women are more risk averse than men and, therefore, less likely to guess when answering factual questions on surveys (Lizotte and Sidman 2009). As a result, women are much more likely than men to choose 'don't know' (Atkeson and Rapoport 2003; Fraile 2014; Mondak and Anderson 2004). When 'don't know' and missing responses are treated as incorrect answers, women seem less knowledgeable than they really are. Third, experimental studies have documented

that stereotype threat influences measures of knowledge. In addition, the gender gap closes when female participants are interviewed by a female interviewer (McGlone, Aronson, and Kobrynowicz 2006) and when more questions about female politicians are included (Hooghe, Quintelier, and Reeskens 2006).

The Sources of Political Knowledge in Poland

Prior research on the gender gap in political knowledge is often limited to data from the US. By using data from Poland, we add to the existing literature in several ways. We know of only a few studies that have examined the determinants of political knowledge in post-communist democracies (e.g., Kunovich 2013; McManus-Czubinska et al. 2004; Toka and Popescu 2007), and none that examine the gender gap. This is a significant omission given that gender scholars have widely discussed how women's unique experiences during communism and the transition affected women's political attitudes and behaviors (e.g. Corrin 1992; Einhorn 1993; Jancar 1978, Reading 1992; Regulska 1994). Women in communist and post-communist countries have been found to be less supportive of democratic norms (Oakes 2002; Waldron-Moore 1999), less politically engaged (Carnaghan and Bahry 1990; Tworzecki 2008), and engaged in fewer political behaviors (Kunovich 2012; Letki 2004; Markowski 2008).

These data will also allow us to consider the extent to which time spent living under the communist system affects the gender gap in knowledge. In our sample, 77 percent of men and women turned 18 before the beginning of the democratic transition in 1989. Despite women's descriptive representation in the communist parties and legislatures in Eastern Europe, women were consistently found to believe that politics was largely a "man's world" (Carnaghan and Bahry 1990; Jancar 1978). Examining the gender gap in the European Union, Fraile (2014) found that older women who were socialized under authoritarian regimes and/or during periods of low female representation are less politically knowledgeable than other women. In addition, younger women in post-communist countries have been found to have distinct political behaviors and attitudes in comparison to those who spent many years living under communism (Hesli et al. 2001; Kunovich 2012).

Poland also provides a rich context in which to further consider the role of religious attendance on the gender gap in political knowledge. Even during the communist period, the Catholic Church played a central role in Polish culture and politics; its influence continues to define the political identities of voters and politicians as well as the ideologies and platforms of political parties (Eberts 1998). While the church advocates for traditional roles in the home for women, it relies heavily on women's political support and influence to remain relevant. We expect religiosity to affect women's political knowledge more than men's.

Hypotheses

We test the following hypotheses:

1. (Motivation) Those who are more interested in politics have greater political knowledge in Poland—that is, they are less likely to answer 'don't know' to political knowledge questions and they are more likely to answer political knowledge questions correctly.

2. (Ability) Those with greater ability (e.g., more education and greater cognitive ability) have greater political knowledge in Poland.
3. (Opportunity) Those with greater opportunities (e.g., financial, information, social, situational, and experiential resources) have greater political knowledge in Poland.
4. Gender Differences—There are gender differences in political knowledge in Poland.
 - a. The motivation, ability, and opportunity variables have different relationships with political knowledge for men and women.
 - b. Women are more likely to answer ‘don’t know’ and less likely to provide correct answers to political knowledge as compared to men.

Methodology

Data

Survey data are from the 2003 wave of the Social Structure in Poland study (Polish Panel Study, POLPAN). The sample of respondents from 2003 consists of 868 women and 831 men for a total sample size of 1,699. This is a national probability sample of Poles. Data are archived online at the Leibniz Institute for the Social Sciences and the Polish Social Data Archive (zacad.gesis.org and www.ads.org.pl). Data collection was supported and administered by the Institute of Philosophy and Sociology of the Polish Academy of Sciences. Interviews were conducted with respondents every five years from 1988 to 2013. New panel members have been added to the sample over time to deal with attrition and to add younger cohorts (i.e., to maintain a nationally representative sample). We limit the sample to respondents who participated in 2003 for several reasons. First, existing research focuses on current motivation, ability, and opportunity rather than on changes in these over time. Second, political knowledge and some independent variables (e.g., cognitive ability) are measured only in the 2003 wave. Third, including data from the 1998 wave to measure changes in a few independent variables significantly reduces the sample size. Despite all of this, we investigated whether or not changes in political interest from 1998 to 2003 and voting behavior in 1998 were related to political knowledge in 2003 in exploratory models. Those who became more interested in politics over time were less likely to answer ‘don’t know’ and more likely to answer all of the questions correctly. Previous voting behavior, however, was not associated with political knowledge.

Measurement

The primary variable of interest is political knowledge. Twelve items are available to measure respondents’ knowledge of national political parties (see [Table 1](#) for the list of parties). Respondents were presented with a list of twelve national political parties and asked to indicate for each if it is ‘in the governing coalition now’—that is, whether or not the party is a member of the ruling majority. Parties may be included in the government as a member of the ruling majority, included in the government as a member of the opposition, or excluded from government due to poor electoral performance. Research suggests that women know

more about local government and specific policy issues, such as health, education, and taxation (Delli Carpini and Keeter 1996; Dolan 2011; Stolle and Gidengil 2010; and Verba et al. 1997). Because these questions focus on national parties, this measure may overestimate the size of the gender gap. Unfortunately, no other measures of political knowledge are available in the data.

The independent variables used to predict political knowledge include measures related to motivation, ability, and opportunity. The only available measure of motivation is political interest (see Appendix A for a detailed discussion of each independent variable). Ability-related measures include educational attainment and cognitive ability. We measure cognitive ability with the number of correct responses out of ten on Raven's Test (see Appendix A for more information). An ANOVA indicates that there is a significant, but weak relationship between educational attainment and cognitive ability. The cognitive ability group means for 'elementary or less,' 'vocational,' 'high school,' and 'more than high school' are: 2.8, 4.4, 5.3, and 5.9 (on a scale from 0 to 10). Eta-squared indicates that only 16 percent of the variation in cognitive ability is between these educational attainment categories. Educational attainment and cognitive ability are, therefore, related, but only weakly so.

Opportunity-related measures include household income, access to the internet, access to cable or satellite TV, political experience (i.e., self-reported voting in a prior election), employment status, religious attendance, size of place of residence (i.e., living in a village), marital status, and the presence of young children in the household. Control variables include age and self-esteem.

The percentage of missing data is less than 4 percent for all variables except for cognitive ability (13.4 percent) and religious attendance (6.3 percent). We use multiple imputation to deal with all missing data. In particular, we utilize the method of sequential imputation using chained equations, which ensures that imputed values conform to the characteristics of the original variables. We use Stata to generate 40 complete data sets as well as to analyze and pool the results. Results from these models are very similar to those based on listwise deletion of missing data. Under listwise deletion, two variables for each outcome are no longer significant. This is not unexpected due to the loss in statistical power with a smaller sample. When cognitive ability (the variable with the most missing data) is dropped from the analysis, the results converge with those based on multiple imputation. We use multiple imputation because this approach is superior to traditional methods, such as listwise deletion of missing data (see Enders 2010 for more information).

Results

The Gender Gap in Political Knowledge

Table 1 presents the percent of correct and incorrect responses separately by sex for each of the twelve political parties as well as the percent of men and women who answered 'don't know' to the overall question set. Several results stand out. First, women are over twice as likely as men to say that they 'don't know' whether any of the parties is in the governing coalition. Almost seventeen percent of women responded 'don't know' compared to just

over seven percent of men. The significant sex differences in the percent correct for all twelve parties (see the final column) are primarily a reflection of this 9.4 percent gender difference in the ‘don’t know’ responses. This reinforces the finding from other studies that it is important to treat ‘don’t know’ responses as distinct from incorrect answers. Second, there are significant (at $p < .05$) gender differences in the percent incorrect for only three parties: 37.1 percent of women were incorrect about UP compared to 27.0 percent for men, 14.7 percent of women were incorrect about SRP compared to 11.3 percent for men, and 6.1 percent of women were incorrect about UW compared to 3.9 percent for men. Both UP and SRP were represented in the Sejm—UP as a member of the ruling coalition and SRP as opposition. It should be noted, however, that although UP was a member of the ruling coalition with SLD, those from UP held only 16 of 216 seats in the coalition. This imbalance within the ruling coalition may explain why the percent incorrect is so much higher for UP for men and women. UW was not represented in the Sejm at the time of the survey.

Table 1

Knowledge of Governing Parties: Responses by Gender and Party (2003; $N_{Men} = 831$, $N_{Women} = 868$)^a

		Percent Don't Know			Percent Incorrect			Percent Correct		
		Men	Women	z	Men	Women	z	Men	Women	z
		7.2	16.6	-5.939						
RS	Ruch Społeczny				0.5	0.1	1.393	92.3	83.3	5.648
SK-L	Stronnictwo Konserwatywno-Ludowe				0.8	0.3	1.338	91.9	83.1	5.510
UPR	Unia Polityki Realnej				1.2	1.0	0.326	91.6	82.4	5.616
ZCh-N	Zjednoczenie Chrześcijańsko-Narodowe				0.5	1.2	-1.529	92.3	82.3	6.186
SLD	Sojusz Lewicy Demokratycznej				0.8	1.7	-1.614	91.9	81.7	6.222
<i>LPR</i>	Liga Rodzin Polskich				4.5	5.8	-1.223	88.3	77.6	5.840
UW	Unia Wolności				3.9	6.1	-2.131	88.9	77.3	6.375
<i>PO</i>	Platforma Obywatelska				9.1	9.9	-0.535	83.6	73.5	5.078
<i>PiS</i>	Prawo i Sprawiedliwość				9.1	10.3	-0.771	83.6	73.2	5.236
PSL	Polskie Stronnictwo Ludowe				14.2	13.8	0.223	78.6	69.6	4.224
<i>SRP</i>	Samoobrona Rzeczpospolitej Polskiej				11.3	14.7	-2.100	81.5	68.7	6.087
UP	Unia Pracy				27.0	37.1	-4.474	65.8	46.3	8.096

^a At the time of the survey the SLD and UP electoral alliance comprised the governing coalition (in bold above). PSL had been part of the governing coalition since October 2001, but was expelled in March 2003—eight months prior to the start of the survey (bold italics). Other parties that were represented in the 2001 Sejm included: LPR, PiS, PO, and SRP (italics).

For those people who attempted to answer the political party knowledge questions, the distribution of correct answers is similar for men and women from 0 to 9 correct answers (see Table 2). Gender differences begin to appear only at about 10 correct responses and up:

6.0, 23.1, and 57.5 percent of men were correct about 10, 11, and 12 parties, respectively, compared to 11.3, 32.3, and 39.4 percent of women. On average, men provided correct answers for 11.1 political parties and women provided correct answers for 10.8 parties ($t = 4.340$). When ‘don’t know’ is treated as an incorrect answer rather than missing data, these averages drop to 10.3 for men and 9.0 for women ($t = 7.247$). Once again, it is clear that treating ‘don’t know’ responses as incorrect answers exaggerates the size of the gender gap in political knowledge.

Table 2

The Percentage of Correct Answers Including and Excluding ‘Don’t Know’ Responses

	Percent		Percent	
	Men	Women	Men	Women
Don’t know	7.2	16.6		
Number of correct answers				
0	0.0	0.0	0.0	0.0
1	0.0	0.0	0.0	0.0
2	0.4	0.1	0.4	0.1
3	0.0	0.1	0.0	0.1
4	0.0	0.1	0.0	0.1
5	0.1	0.0	0.1	0.0
6	0.4	0.6	0.4	0.7
7	2.6	3.1	2.9	3.7
8	3.5	3.7	3.8	4.4
9	5.5	6.5	6.0	7.7
10	5.5	9.4	6.0	11.3
11	21.4	27.0	23.1	32.3
12	53.3	32.8	57.5	39.4
Sum	100.0	100.0	100.0	100.0
N	831	868	771	724
Mean ^a	10.3	9.0	11.1	10.8
Median	12.0	11.0	12.0	11.0
Standard deviation	3.2	4.2	1.5	1.5
Interquartile range	2.0	3.0	1.0	2.0

^aBoth gender gaps are significant at $p < .001$.

The data in **Table 2** indicate that the distribution of correct answers is skewed for both men and women and is not suitable for OLS regression. We, therefore, create two dummy variables for use in additional analyses. The first divides respondents into two groups—those who answered ‘don’t know’ to the question set and those who provided answers (correct or not). The second excludes ‘don’t know’ responses and divides the remaining respondents into two groups—those who answered all twelve questions correctly and those who answered one or more questions incorrectly. We use logistic regression to analyze both outcomes. Although multinomial regression would also be a possibility (i.e., for a dependent variable with categories of ‘don’t know,’ missed one or more, and all correct), separate logistic regressions are preferable because of the nested nature of the political knowledge data—that is, respondents had to first decide to provide an answer. While the number of

correct responses is a count variable, its distribution exhibits considerable over-dispersion (the variance is much larger than the mean). Given the large percentage of cases in the most extreme category (12 correct), we dichotomize this variable (12 correct and everyone else) rather than utilize a model for count data. Further differentiating between those with one or more errors makes little difference to the conclusions.

The Sources of Political Knowledge for Men and Women

What are the sources of political knowledge in Poland and do these sources differ for men and women? Is there a gender gap in political knowledge in Poland? The logistic regression results presented in [Tables 3](#) and [4](#) answer these questions and test the four hypotheses stated above. The model presented in [Table 3](#) predicts answering 'don't know' as compared to providing answers for the twelve political parties (correct or not). The model in [Table 4](#) predicts answering all twelve questions correctly and excludes 'don't know' responses. We tested for gender differences in the coefficients for all independent variables by estimating a separate model for each possible gender interaction. Only one interaction is significant for each outcome. We present these results in [Tables 3](#) and [4](#), but complete results are available upon request.

Results provide strong support for the first hypothesis that motivation increases political knowledge in Poland. Those who are interested in politics are less likely to answer 'don't know' to the set of questions on political parties. Each one unit increase in interest reduces the odds of answering 'don't know' by 63.0 percent ($[0.370 - 1] \times 100$; see [Table 3](#)). Also, the likelihood of answering all questions correctly is higher for those who are more interested in politics. Each one unit increase in interest increases the odds of answering all questions correctly by 35.3 percent ($[1.353 - 1] \times 100$; see [Table 4](#)).

The second hypothesis predicts that ability increases political knowledge. There is only some support for this hypothesis. Our study includes two measures of ability: educational attainment and cognitive ability. Educational attainment is related to both dependent variables. The odds of answering 'don't know' are about twice as high for those people with an elementary education or less and those with basic vocational training as compared to those with some high school or more. Those with elementary education or less and basic vocational training are also less likely to answer all questions correctly compared to those who have completed some high school education or more. Cognitive ability, on the other hand, is not associated with political knowledge in Poland.

The third hypothesis predicts that opportunity increases political knowledge. There is some support for this hypothesis. Several opportunity variables predict answering 'don't know' in Poland: previous voting experience and having a child. Those who reported voting in 2001 and who remember for whom they voted are less likely to answer 'don't know.' Respondents with a child, regardless of their gender, are more likely to answer 'don't know.' Only one opportunity variable impacts correct responses: previous voting experience. Those who reported voting in 2001 and remember for whom they voted are more likely to answer the questions correctly compared to those who did not vote. On the other hand, those who reported voting, but cannot recall for whom they voted are less likely to answer the questions correctly compared to those who did not vote.

Table 3
Logistic Regressions Predicting a ‘Don’t Know’ Response

	Logged odds	Standard error	Odds
Sex (Male = 1)	-0.313	0.252	0.731
Political interest	-0.995 ^a	0.121	0.370
Elementary or less (yes = 1)	0.810 ^a	0.290	2.249
Basic vocational (yes = 1)	0.641 ^a	0.251	1.898
Some high school or more (reference)			
Cognitive ability	-0.070	0.048	0.932
Household income, logged	-0.079	0.126	0.924
Cable/satellite TV access (yes = 1)	0.455	0.235	1.577
Cable/satellite TV access * male interaction	-0.801 ^a	0.382	0.449
Internet access (yes = 1)	-0.270	0.290	0.763
Voted, remembers vote (yes = 1)	-1.260 ^a	0.216	0.284
Voted, doesn’t remember vote (yes = 1)	0.018	0.238	1.018
Did not vote in 2001 (reference)			
Currently employed (yes = 1)	-0.149	0.214	0.862
Religious attendance	-0.168	0.092	0.845
Residence in a village (yes = 1)	0.176	0.203	1.192
Currently married (yes = 1)	0.112	0.208	1.118
Child under 18 in house (yes = 1)	0.424 ^a	0.199	1.528
Age	-0.134 ^a	0.034	0.874
Age-squared	0.001 ^a	0.000	1.001
Low self-esteem	0.099	0.169	1.104
Intercept	3.536	1.262	34.327
Imputations	40		
N	1,699		
Average Relative Variance Increase (RVI)	0.031		
Largest Fraction of Missing Information (FMI)	0.291		
F	11.150		
DF 1	19		
DF 2	722,293		

^a $p < .05$ (two tailed).

Several control variables also influence political knowledge in Poland. Age is related to both dependent variables. The significant squared term indicates that answering ‘don’t know’ is more common among younger and older respondents. The odds of answering ‘don’t know’ decrease with every additional year of age until 67, at which point the odds of answering ‘don’t know’ begin to increase. Age also has a nonlinear relationship with obtaining a perfect score. The odds of answering all questions correctly increase with every additional year of age until 42 at which point the odds decrease. Finally, those with lower self-esteem are less likely to answer all questions correctly.

Results provide very limited support for the hypothesis that motivation, ability, and opportunity have different effects on political knowledge for men and women (hypothesis 4A). Only two of the independent have different relationships with political knowledge for men and women: cable/satellite TV and religious attendance. The coefficient for cable/satellite TV in Table 3 (0.455) is the logged odds of answering ‘don’t know’ for women who have

Table 4

Logistic Regressions Predicting a Perfect Score

	Logged odds	Standard error	Odds
Sex (Male = 1)	1.488 ^a	0.295	4.428
Political interest	0.302 ^a	0.067	1.353
Elementary or less (yes = 1)	-0.386 ^a	0.184	0.680
Basic vocational (yes = 1)	-0.413 ^a	0.155	0.662
Some high school or more (reference)			
Cognitive ability	0.042	0.025	1.043
Household income, logged	0.135	0.108	1.145
Cable/satellite TV access (yes = 1)	0.235	0.127	1.265
Internet access (yes = 1)	0.047	0.159	1.048
Voted, remembers vote (yes = 1)	0.426 ^a	0.141	1.531
Voted, doesn't remember vote (yes = 1)	-0.457 ^a	0.226	0.633
Did not vote in 2001 (reference)			
Currently employed (yes = 1)	-0.118	0.138	0.889
Religious attendance	0.226 ^a	0.087	1.254
Religious attendance * male interaction	-0.362 ^a	0.118	0.696
Residence in a village (yes = 1)	0.125	0.134	1.133
Currently married (yes = 1)	0.263	0.149	1.300
Child under 18 in house (yes = 1)	-0.137	0.130	0.872
Age	0.083 ^a	0.024	1.087
Age-squared	-0.001 ^a	0.000	0.999
Low self-esteem	-0.282 ^a	0.109	0.754
Intercept	-5.805	0.992	0.003
Imputations	40		
N	1495		
Average Relative Variance Increase (RVI)	0.015		
Largest Fraction of Missing Information (FMI)	0.062		
F	9.790		
DF 1	19		
DF 2	3,200,000		

^a $p < .05$ (two tailed).

access to cable or satellite (because women are coded as 0 on the sex dummy variable that interacts with access). This coefficient is not statistically different than zero. The significant interaction effect, however, indicates that the coefficient for men differs from that of women. The logged odds for men is -0.346 (i.e., $0.455 - 0.801 = -0.346$). This result suggests that men who have access to cable or satellite TV are less likely to answer 'don't know' as compared to men who do not have access. The influence of religious attendance also differs for men and women. Religious attendance increases the likelihood of obtaining a perfect score, but only for women. Each one unit increase in attendance increases the odds of answering all questions correctly by 25.4 percent for women ($[1.254 - 1] \times 100$).

Finally, despite the large gender gap in 'don't know' responses seen in [Tables 1 and 2](#), women are no more likely than men to answer 'don't know,' all else being equal. An additional model (not shown) indicates that the gender difference in the level of political interest explains away the gender gap in 'don't know' responses. When political interest is

removed from the final model, the gender gap in 'don't know' responses becomes significant. An independent samples t test indicates that men are significantly more interested in politics than women ($t = 10.304$). Similar to previous research in other political contexts, the gender gap in political knowledge (i.e., in correct responses) remains significant despite numerous controls. All else being equal, the odds of answering all of the questions correctly are over four times higher for men as compared to women. In sum, there is partial support for hypothesis 4B.

Discussion and Conclusions

Is there a gender gap in political knowledge in Poland? After controlling for the independent variables, men and women are equally likely to answer 'don't know.' Despite numerous control variables, however, men are more likely to answer all of the political party questions correctly compared to women. This gap may result from our inability to control for all of the relevant variables or, perhaps, from the measurement of political knowledge itself, which focuses on a rather limited set of political knowledge questions. Recent studies indicate that the gender gap in political knowledge depends, in part, on how political knowledge is defined (Delli Carpini and Keeter 1996; Dolan 2011; Hooghe, Quintelier, and Reeskens 2006; Lizotte and Sidman 2009; Stolle and Gidengil 2010; Verba et al. 1997). Unfortunately broader measures of political knowledge that may be more relevant to women, such as how government works or specific government services, are not available in these data.

A similar set of predictors explains both don't know responses and perfect scores: political interest, educational attainment, previous voting experience, and age. These variables represent motivation, ability, and opportunity. Opportunity-related variables are perhaps less important overall because only a small number of these are significant. It is interesting to note that educational attainment, but not cognitive ability predicts both outcomes. Those who scored better on the Raven test, which measures cognitive ability, are no more likely to answer the questions (as opposed to answering 'don't know') or to answer all of the questions correctly. This non-finding for cognitive ability cannot be explained away by multicollinearity because cognitive ability is only weakly related to educational attainment. The fact that educational attainment is significant for both outcomes despite controlling for political interest, cognitive ability, and resources (e.g., household income, access to cable/satellite TV, and access to the internet) suggests that the mechanism linking education to knowledge may be exposure to political information in school.

While a number of well-known studies have drawn attention to the importance of considering how the 'don't know' response choice affects our understanding of the gender gap in political knowledge (Lizotte and Sidman 2009; Mondak and Anderson 2004), only a few have tried to predict why women are more likely than men to respond 'don't know' to questions about politics. Our findings are similar to those from Fraile (2014). Across twenty-seven countries in the European Union, Fraile (2014) finds that education and age are the key factors in predicting what individuals living in Europe don't know about politics (Fraile's measure covers knowledge of the European Union as well as general national characteristics).

Only two variables have different relationships with political knowledge for men and women in Poland. Access to cable or satellite TV decreases ‘don’t know’ responses, but only for men. Also, religious attendance increases political knowledge, but only for women. Having access to cable or satellite TV appears to make men more willing to venture a guess for each political party, but having access to this resource is not related to answering the political party questions correctly.

Similar to the American context, the results for religious attendance in Poland suggest that some social resources are relevant for women (e.g. Dow 2009). Women who attend church more frequently may have more opportunities to discuss politics outside of the home. The Catholic Church is very involved in national politics in Poland and relies heavily on the mobilization of women to support its preferred candidates and parties in local and national elections (Millard 2010). One of the most effective tools at its disposal is the national news network, Radio Maryja (Millard 2003). In the context of Poland, it is possible that women become more politically informed and engaged through religious attendance. Future research in Poland should further explore why religious attendance matters (e.g., is it the people you come in contact with or is it the information that you receive from the institution?).

In sum, men and women in Poland are equally likely to state that they ‘don’t know’ whether certain political parties are members of the ruling coalition. Although there was initially a large difference in the percentage of ‘don’t know’ responses for men and women, it disappeared once the motivation, ability, and opportunity variables were controlled (differences in political interest are particularly important). Similar to previous research in other political contexts, there remains a significant gender gap in correct responses even when treating ‘don’t know’ as missing data rather than an incorrect response. Also similar to previous research in other political contexts, motivation, ability, and opportunity-related variables predict political knowledge in Poland and most of the predictors work the same way for women and men. In conclusion, the results from Poland are very similar to those from studies in other countries. Researchers should continue to work to understand the source of the gender gap in political knowledge.

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Appendix A. Measurement of Independent Variables (Maximum N = 1,699)

Variable	Description	Missing cases
Political interest	One question measures political interest: To what extent are you interested in politics? The five response choices range from 'not interested' to 'very interested.'	6 (5 women, 1 man)
Educational attainment	We measure educational attainment with a set of dummy variables: elementary or less, basic vocational, and at least some high school or more (the reference category).	0
Cognitive ability	We measure cognitive ability with Raven's Test scores, which are based on the correct evaluation of a series of ten images. For each item, the respondents are asked to identify the missing pattern. Each item becomes progressively more difficult and requires greater cognitive capacity to encode and analyze. The final score represents the number of correct responses out of 10.	228 (132 women, 96 men)
Household income	We logged average monthly household income to reduce skewness.	55 (29 men, 26 women)
Cable/satellite TV access	We measure cable or satellite TV access with a dummy variable (yes = 1).	7 (5 women, 2 men)
Internet access	We measure internet access with a dummy variable (yes = 1).	7 (4 men, 3 women)
Political experience	We measure political experience with a set of dummy variables: voted in 2001 and can recall for whom (yes = 1), voted in 2001 but cannot recall for whom (yes = 1), and did not vote in 2001 (the reference category).	0
Employment status	We measure employment status with a dummy variable (currently employed = 1).	
Religious attendance	One question measures religious attendance: How frequently do you attend mass? Response choices include: never, once a month or less frequently, between once a month and once a week, about once a week, and more than once a week.	107 (67 men, 40 women)
Size of place of residence	We measure size of place of residence with a dummy variable (village = 1). The reference includes Warsaw down to towns with less than 10,000 residents. Exploratory analyses suggest that there are no differences in knowledge between the categories within the reference group.	0
Marital status	We measure marital status with a dummy variable. Those who are currently married are coded as 1.	2 (2 women, 0 men)
Children	We measure having young children in the household with a dummy variable. Those living in a household with a child younger than 18 years of age are coded as 1.	0
Age	Age is measured in years.	0
Self-esteem	We measure self-esteem with the average of 5 Likert-type questions: I tend to think I don't succeed, there are only a few things I can be proud of, I feel good about myself, I feel useless at times, and I regret I can't give myself more respect.	17 (9 women, 8 men)