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Do Women Know Less About Politics Than Men? The Gender Gap in Political Knowledge in Europe

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This article analyses the gender differences in political knowledge in a rarely studied area: Europe. The results are obtained via two-level hierarchical linear models using the 2009 European Election Studies, Voter Study (EES) and show that men provide more correct answers and less "Don't Know" (DK) answers than women, whereas gender differences in providing incorrect answers are not relevant. Additionally, these findings show that even after controlling the varying access of men and women to resources and opportunities, significant gender differences in knowledge remain. Two factors distinctively affect the knowledge of men and women: age and education. First, and as a direct consequence of generational changes, the gender gap increases to a great extent with age. Second, the gender gap among low educated citizens is about twice as large as it is among their highly educated counterparts.

Introduction

The sharp differences in the political orientations and behavior of women and men reported in studies during the 1960s has become smaller in magnitude as research has advanced during the following decades. Whereas during the 1960s gender differences were exaggerated and often not even based on rigorous empirical evidence (as Bourque and Grossholtz 1974 demonstrate), by the end of the 1970s researchers had only established slight differences in the political orientations of men and women. This was partly because they avoided the methodological bias that plagued previous studies and partly because relevant structural changes took place in modern societies such as the expansion of education, changes in socialization, and the accompanying generational replacement (Lovenduski 1998). These studies predominantly focused on the U.S. case. It would be useful to draw upon broader-based research; however,

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cross-national comparative studies of differences between men and women in their political orientations and behavior are scarce.

Despite this tendency towards a greater degree of equality in the political orientations of males and females, gender differences in political participation and knowledge have proven to be remarkably persistent across time. Notwithstanding the tremendous increase in the degree of gender equality in political power and resources in industrialized democracies, women appear to participate and to know about politics to a lesser extent than men (Burns 2007; Delli Carpini and Keeter 1996, 2000; Norris 2002). Although some researchers have noted that the difference is often small in comparison to other inequalities such as education, social class, or age (Norris 2002; Burns 2007), gender differences in knowledge appears to be the most enduring and strong.

Moreover, the gender gap in knowledge is so well established in the literature, that it is a part of what is commonly referred to as the "usual suspects" in explaining political knowledge. Numerous studies have confirmed this general pattern (Burns, Schlozman, and Verba 2001; Delli Carpini and Keeter 1996, 2000; Dow 2009; Kenski and Jamieson, 2000; Verba, Burns, and Schlozman 1997; Wolak and McDevitt 2011).

Studying the gender differences in political knowledge has important implications for representative democracy. The uneven distribution of knowledge between men and women contributes to a bias in the shape of collective opinion (Althaus 2003), and raises a number of normative concerns. If women systematically have lower levels of knowledge than men, they may be less well represented in the democratic system. This would imply a clear disadvantage in women's capacity to voice their political needs and wishes, and thus to influence the political decision-making process.

This article aims to explore: (i) the extent to which there is a significant gap between men and women in their apparent knowledge about politics in Europe and (ii) the factors that contribute to explaining such a gap. Confirming previous studies (Mondak and Anderson 2004; Mondak and Canache 2004) the findings suggest that men provide more correct answers and lower levels of "Don't Know" (DK) answers than women, whereas gender differences in providing incorrect answers are not relevant. These differences however, appear to depend on the topic covered by the survey question. From the seven items analyzed here, only one can be considered to be gender relevant (that referring to knowledge about the minister of education). This is the only topic where the differences in the percentage of correct, incorrect, and DK answers between men and women do not reach statistical significance. Additionally, the findings show that even after controlling for the varying access of men and women to resources and opportunities, significant gender differences in knowledge remain. Two factors distinctively affect the knowledge of men and women: age and education. First, and as a direct consequence of generational changes, the gender gap increases to a great extent with the age of citizens. Second, the gender gap among low-educated citizens is about twice as

large as among their highly educated counterparts. These findings transcend individual political systems, since they can be generalized across Europe.

The present study makes two significant contributions to the growing debate over gender differences in political knowledge. First, it tests the gender gap hypothesis with comparative European data. The scarce previous work in the area has employed within-country research, and predominantly focused on the U.S. case (with the possible exception of Mondak and Canache 2004, who studied "knowledge of science and the environment," rather than political knowledge).[1] Second, it simultaneously tests different expectations derived from two main lines of research that often appear separately in the literature, and therefore are rarely tested at the same time.

The Gender Gap About What People Know (or Don't Know) About Politics

Previous literature has tried to explain the factors accounting for the apparent deficit in the political knowledge of women in comparison to men. The key findings can be located within two main lines of research. The first is substantive and the second is methodological. First, the most common explanation of gender bias in knowledge is based on socialization theory, which states that traditional social norms define men as those who are in charge of public life; whereas women are more in charge of the domestic or private domain, since they are more committed to childrearing and family life (Delli Carpini and Keeter 1996). To put it succinctly, females are more likely to be responsible for parenting and other caring activities, given their traditional role within the family. These responsibilities imply an additional cost in the decision to become informed about politics.

The knowledge gap between men and women has also been interpreted as a product of the traditional socioeconomic disadvantages that women in general have suffered, and continue to suffer, such as lower salaries or lower levels in the hierarchy of work. Therefore, it is not the fact that they are women that affects what they know or DK about politics, but that men and women are situated differently in the social structure, have different levels of material resources, divergent work tasks and responsibilities, and therefore varying amounts of available time to dedicate to informing themselves about politics (Frazer and Macdonal 2003). In short, the determinants of what people know or DK about politics are themselves gendered. Higher levels of socioeconomic and cognitive resources for men than for women explain their knowledge differences.

Nevertheless, some studies argue that even when the socioeconomic differences between men and women are slight (or even disappear), their effect on what people know or DK about politics might be different for men and women. There are two leading arguments in this respect. The first is that cognitive and economic resources have a stronger influence on knowledge for

women. Various reasons could potentially explain the greater effect of education on knowledge for women than for men. On the one hand, education promotes values such as gender equality. Education then might be more transformative for women than for men (given that women have historically suffered socioeconomic disadvantages with respect to men). On the other hand, it could be argued that women's education should be more effective in promoting civic knowledge because they study humanities to a greater extent than men.[2]

A second possibility is that the positive effect of education on political literacy is lower for women than for men. This has recently been demonstrated for the U.S. case (see Dow 2009). The reason again is connected with the static forces of socialization. Schools may be a source of unequal socialization that perpetuates women's historical exclusion from political life (Dow 2009). A direct consequence of the socialization process is that women might be less motivated and attracted to the political world than men (Delli Carpini and Keeter 1996).

The second set of explanations of the gender gap in knowledge is methodological and focuses on measurement questions and the way in which the survey instrument can influence the responses of those interviewed. According to this line of research, the differences between men and women on what they appear to know or DK about politics are only apparent, and in no way imply that women know less than men. The argument is that women answer survey questions differently, depending on various factors: such as the environment in which they are interviewed, the sex of the interviewer (McGlone, Aronson and Kobrynowicz 2006), or the format of the questions (Mondak and Anderson 2004). Moreover, Mondak and Anderson (2004) have demonstrated that at least in the U.S. case an important part of the gender gap in knowledge is a consequence of a response set effect. The special format of factual political knowledge questionnaires (which normally contains a series of questions with various options, where the respondent chooses the statement that they think is correct) means that there is room to guess to a great extent. Several studies have found that gender differences in knowledge are a function of the different propensity of men and women to guess (Mondak and Anderson 2004). Moreover, women have a higher degree of risk aversion. This risk aversion generally means that women are more fearful of choosing the wrong option. So, rather than risk a wrong answer, they prefer to choose the DK option. In contrast, men are more prone to guess when choosing what they think is the correct answer (Lizotte and Sidman 2009).

Two different solutions have been proposed to neutralize this apparent gender gap in knowledge. The first regards the format of the political knowledge questions in the surveys. The second concerns the specific topics covered by the survey questions. In relation to the format of the political knowledge items, the main debate regards the use of the DK option. Some scholars recommend the use of closed-ended items in which DKs are not explicitly offered

(Mondak and Anderson 2004) or at least discourage the use of the DK option (Mondak 2001); whereas more recent studies urge caution about discouraging DK, given the risk that respondents will be more motivated to simply provide their best guess, and therefore inflate general levels of knowledge (Luskin and Bullock 2011; Sturgis, Allum and Smith 2008).

Regarding the specific topics covered by the political knowledge items, it is argued that the traditional way to measure political knowledge is gender-biased. Moreover, women are commonly portrayed as apathetic people who do not want females in public office and who are less willing to participate or to provide their opinion about controversial political issues. This perspective is often distorted and exaggerated by research that focuses on men's interests and fields of knowledge. The alternative argument is that it is not a question of women not having opinions and/or interest in politics, it is a question of which topics are considered as being most important to politics (Bourque and Grossholtz 1974). Consequently, this latter argument contends that the gender gap in knowledge is only apparent: a product of the narrow definition of politics (limited to institutions and political parties) that excludes those interests about which women are most concerned (Smiley 1999)—such as, for instance, questions more relevant to citizens' daily lives like government programs, benefits and services, or local politics (Norris 2000: 213)

Despite the fact that these ideas were put forward during the 1970s (see the seminal article by Bourque and Grossholtz 1974), they have not been fully applied to the study of political participation until very recently. Consequently, it is clear that there has been a tendency to narrowly conceptualize political participation in the literature (Coffe and Bolzendahl 2010). However, recent studies have suggested that perhaps women do not participate less, but rather, participate in a different way than men (Harrison and Munn 2007; Hooghe and Stole 2004; Lister, 1998; Norris 2002; Stole and Hooghe 2011).

Turning to the literature on political knowledge, it is only very recently that various studies have found that there are different dimensions of political knowledge, and that there seem to be specific domains of knowledge that are more relevant to one group than the other. For instance, Delli Carpini and Keeter (1996) provide convincing evidence about race and gender-specific domains of knowledge.[3] Others have found that women were more likely than men to know the name of the person in charge of their local schools (Verba et al. 1997). These indicators hint at the possibility that many citizens who ignore details about national politics may be more interested in local affairs. The scarce literature on local political knowledge suggests that surveys of political competence do not need to center upon national politics, as the meaning of politics might differ across citizens (Lupia 2006).

Three additional (and more recent) studies show that there are policy areas and practical political information that are more directly relevant to women than to men. More specifically, Stolle and Gidengil (2010) have demonstrated that Canadian women know more about practical aspects of political

knowledge (such as government benefits and services) than men. Dolan (2011) shows that gender-relevant political knowledge such as women candidates and women officeholders close the gender gap between men and women. Finally, Shaker (2012) shows that the gender gap in knowledge about national politics disappears in the case of local politics.

Unfortunately, cross-national studies about the gender gap in knowledge are scarce. The present article aspires to work towards addressing this gap in the literature. It is acknowledged that the data are not perfectly suited to fully test the hypothesis that the gender gap in politics is a function of what is defined as knowledge; nonetheless, it is argued that the data allow a first comparative exploration of this topic.

To sum up, existing scholarship leads us to a number of empirical expectations that are tested here with cross-national European data. The first hypothesis is that there are gender differences in the propensity to guess, and that the magnitude of such gender differences might change with the type of item covered by the survey. The second is that women are less likely than men to possess the antecedents of knowledge (socioeconomic and cognitive resources) and this might explain part of their knowledge differences; and the third is that the magnitude of the effects of all factors that contribute to explaining knowledge might be different for men and women.

Data and Explorative Findings

To analyze the gender gap in political knowledge, I employ the 2009 European Election Studies, Voter Study (EES),[4] which includes up to seven questions (using a true/false format) that relate to various aspects of citizens' knowledge on the EU and on national politics (details are given in footnote 4). The questions vary in their level of difficulty.[5] The content of these long-term factual political questions are standardized across countries, allowing for a cross-country comparison. This true–false closed format is argued to increase the chances of guessing responses, and therefore to artificially increase the gender gap in both political knowledge and ignorance. In addition, the topics covered by the survey refer to knowledge of both the EU and national politics. As previously discussed, these constitute conventional measures of politics (since they refer to the functioning of the democratic system-both at the national and European level and to specific political actors) that might be of less interest to women who (according to the literature discussed above) might care more about questions that are more relevant to their daily lives such as government programs, benefits, and services, or questions related to local politics.

To summarize, at least part of the gender gap in knowledge that arises from these data could be due to: first, the format of the questions; second, the fact that the majority of the topics covered in the survey refer to conventional politics; and third, the fact that the dimensions of politics that are touched on in this

survey are European and national but not local. I shall explore all these possibilities in the subsequently.

With this evidence I have created three different additive measures of the number of correct, incorrect, and DK answers to the aforementioned seven factual knowledge questions, where 1 refers to a correct (incorrect or DK, respectively) answer and 0 to the other two possibilities. Therefore, the indexes range from 0 to 7 correct, incorrect, and DK answers, respectively.

Table 1 shows the distribution of gender differences in the mean number of correct, incorrect, and DK answers (columns 2, 3, and 4, respectively). The most evident result is that the size of the gender gap differs widely, not only across nations, but also across the three indicators of knowledge (or ignorance). Moreover, a measure of the magnitude of the gender gap in the mean value of the number of correct answers is that on average men offered 0.79 more correct responses than women (recall that the indicator of political knowledge ranges from 0 to 7). The gender gap in the mean value of the number of DK responses seems to mirror the previous figure, since on average men offered 0.69 fewer DK answers. These differences are statistically significant in all 27 nations and for both the number of correct and DK responses.

In contrast, the gender gap for wrong answers is low. On average, men offered only 0.10 fewer incorrect responses than women. The gap between men and women on the number of incorrect answers reaches statistical significance only in less than half of the nations analyzed here. This suggests that the differences between men and women in the number of incorrect answers are negligible.

Previous literature has interpreted the gender gap in knowledge as a function of what is defined as knowledge (Dolan 2011). As previously stated, our index of seven items comprises mainly civic or general knowledge. However, there is a certain degree of variation in the contents of the items. The first four items refers to questions related to knowledge of the EU (Item 1—Switzerland is a member of the EU; Item 2—The European Union has 25 member states; Item 3—Every country in the EU elects the same number of representatives to the European Parliament; Item 4—Every 6 months, a different Member State becomes president of the Council of the European Union) whereas the last three items refers to knowledge about national politics (Item 5—The [Minister of Education] is [Correct name]; Item 6—Individuals must be 25 or older to stand as candidates in [COUNTRY] elections; Item 7—There are [150 percent of real number] members of the [COUNTRY Parliament]). Among these seven items there is only one that could be considered to be gender-relevant political knowledge: Item 5, which relates to the name of the minister of education. Education in itself is a topic that is closer to women than other more abstract political topics (such as the number of members of the Parliament) (Stolle and Gidengil 2010). In addition, there are eleven countries out of the twenty-seven for which the minister of education was a woman when the survey was done in 2009.[6] Previous findings point to the lack of differences

Table 1. Gender differences in the number of correct, incorrect, and DK answer. EUROPE, 2009

	Correct gap	Incorrect gap	Don't Know gap
Austria	0.87***	− 0.18*	− 0.66***
Belgium	0.44***	0.15	− 0.61***
Bulgaria	0.45***	0.05	− 0.53***
Cyprus	1.37***	− 0.38**	− 0.96***
Czech Republic	0.48***	0.00	− 0.51***
Denmark	0.77***	− 0.26**	− 0.50***
Estonia	0.32**	− 0.12	− 0.24*
Finland	0.43***	− 0.07	− 0.36***
France	0.99***	− 0.17*	− 0.82***
Germany	1.09***	− 0.25**	− 0.53***
Greece	0.76***	− 0.16*	− 0.61***
Hungary	0.62***	0.08	− 0.72***
Ireland	1.01***	− 0.42***	− 0.60***
Italy	0.72***	0.11	− 0.80***
Latvia	0.28**	− 0.01	− 0.31**
Lithuania	0.39***	− 0.03	− 0.36**
Luxembourg	0.84***	− 0.21**	− 0.65***
Malta	1.42***	− 0.14	− 1.27***
Netherlands	0.98***	− 0.28**	− 0.68***
Poland	0.83***	− 0.01	− 0.83***
Portugal	1.06***	0.08	− 1.15***
Romania	0.92***	0.30**	− 1.25***
Slovakia	0.38***	0.10	− 0.46***
Slovenia	0.82***	− 0.24**	− 0.58***
Spain	1.04***	− 0.29**	− 0.73***
Sweden	0.61***	− 0.22**	− 0.40***
UK	1.03***	− 0.31**	− 0.74***
Mean	0.79***	− 0.10***	− 0.69***

Source: My elaboration on 2009 EES Voter Study (Advance Release, July 2010).
Entries are the mean value of correct, incorrect, and DK responses for men minus the mean value of correct, incorrect, and DK responses for women.
Note: Stars indicate statistically significant differences between values for men and women within each nation.
***$P < 0.001$; **$P < 0.01$; *$P < 0.05$.

between men and women when asked about gender-relevant political knowledge such as women candidates and women officeholders (Dolan 2011).

Table 2 provides preliminary evidence in favor of the gender-relevant political knowledge hypothesis. Moreover, from all items covered in the index of

Table 2. Gender differences in the number of correct answers to each of the seven items. Europe, 2009

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Austria	0.05**	0.08**	0.14***	0.14***	0.04	0.17***	0.25***
Belgium	0.06*	0.06*	0.10**	0.05	0.02	0.07*	0.10***
Bulgaria	0.09**	0.04	0.06*	0.11***	0.02	0.05	0.08*
Cyprus	0.23***	0.26***	0.21***	0.19***	0.11***	− 0.01	0.37***
Czech Republic	0.08**	0.11***	0.05	0.08**	0.00	0.06*	0.09**
Denmark	0.13***	0.05	0.07**	0.22***	0.01	0.08**	0.21***
Estonia	0.12***	0.09**	0.04	0.14***	− 0.02	− 0.03	− 0.01
Finland	0.12***	0.07**	0.09***	0.05	− 0.09**	0.09**	0.10***
France	0.13***	0.12***	0.21***	0.14***	0.04	0.12***	0.23***
Germany	0.09***	0.10***	0.17***	0.17***	0.11**	0.16***	0.28***
Greece	0.11***	0.13***	0.22***	0.20***	0.05	− 0.02	0.09***
Hungary	0.12***	0.08**	0.07*	0.12***	0.05	0.05	0.12***
Ireland	0.14***	0.08**	0.17***	0.18***	0.08**	0.13***	0.24***
Italy	0.11***	0.04	0.15***	0.17***	0.02	0.04	0.18***
Latvia	0.09**	0.06*	0.05	0.10**	− 0.05	0.02	0.01
Lithuania	0.11***	0.06*	0.07*	0.07*	0.04	0.01	0.03
Luxembourg	0.07***	0.14***	0.14***	0.11***	0.03	0.11***	0.23***
Malta	0.24***	0.20***	0.16***	0.30***	0.04	0.19***	0.29***
Netherlands	0.11***	0.04	0.09**	0.24***	0.08***	0.15***	0.27***
Poland	0.12***	0.10***	0.16***	0.16***	0.04	0.05	0.20***
Portugal	0.17***	0.11***	0.22***	0.19***	0.06	0.08*	0.25***
Romania	0.19***	0.12***	0.17***	0.21***	0.10***	0.06*	0.06*
Slovakia	0.13***	0.01	0.08**	0.06*	0.01	0.01	0.08*
Slovenia	0.11***	0.09**	0.13***	0.08***	0.03	0.16***	0.23***
Spain	0.15***	0.09**	0.18***	0.19***	0.10**	0.14***	0.19***
Sweden	0.12***	0.01	0.08**	0.11***	0.05*	0.06*	0.18***
UK	0.19***	0.00	0.17***	0.25***	0.08*	0.14***	0.19***
Total	0.14***	0.08***	0.13***	0.15***	0.03***	0.09***	0.16***

Source: My elaboration on 2009 EES Voter Study (Advance Release, July 2010).
Entries are the percentage value of correct responses to each of the items for men minus the percentage value of correct responses to each of the items for women.
Notes: Stars indicate statistically significant differences between values for men and women within each nation.
***$P < 0.001$; **$P < 0.01$; *$P < 0.05$.
(Item 1) Switzerland is a member of the EU; (Item 2) The European Union has 25 member states; (Item 3) every country in the EU elects the same number of representatives to the European Parliament; (Item 4) every six months, a different Member State becomes president of the Council of the European Union; (Item 5) the [Minister of Education] is [Correct name]; (Item 6) individuals must be 25 or older to stand as candidates in [COUNTRY] elections; (Item 7) there are [150 percent of real number] members of the [COUNTRY Parliament].

knowledge, only one of them presents non-significant differences on the percentage of correct answers provided by men and women: Item 5, which refers to the name of the minister of education. The average difference between men and women is about 3 percent (0.03 in the last raw of table 2, column corresponding to Item 5), and does not reach statistical significance in the majority of the countries analyzed here (18 out of the 27). Moreover, in the Finnish case (where the minister of education was a women: Henna Virkkunen) the percentage of women providing correct answers is higher than the percentage of men: a difference of 9 percent.[7] It is also possible that the absence of significant gender differences in the percentage of correct responses given to this specific item might be explained by the fact that from all seven items studied here this is the one presenting the lowest level of difficulty. However, this does not seem to be true. Of all items considered here, Item 7 appears to be the easiest (see the mean value of the percentage of correct answers across the seven items summarized in table A1).[8]

Regarding the other items included in table 2, the differences in the percentages of men and women providing correct answers are always significant, although with distinct magnitude not only across countries but also across items. Whereas Items 2, 3, 4, and 7 present differences that are statistically significant in all countries, Items 2 and 6 present non-significant differences between men and women in seven and ten countries, respectively. Additionally, no clear pattern appears from the comparison of knowledge about the EU and domestic politics. For instance, Item 2 that refers to the number of member states of the EU presents a gender gap of a smaller magnitude than Item 7 (which refers to the size of the national parliament). Therefore, the mix of European and national dimensions of knowledge does not seem to be related to the gender gap in knowledge. Unfortunately, there are no items that refer to the local dimension of politics in this survey, but the expectation would be that on such a dimension the gender differences might disappear (Shaker 2012).[9]

The same pattern is identified in table 3 where the differences in the percentage of DK answers between men and women, and across countries, are shown. In general, women present significantly smaller percentages of DK answers than men. However, the magnitude of the differences is smaller (and not statistically significant in twenty-one countries) for the case of Item 5 (again, that referring to the name of the minister of education).

In contrast, table 4 reveals very small differences in the percentage of incorrect answers between men and women and for all of the seven items distinguished, thereby confirming the pattern found in table 1, where the gender differences are negligible.

In summary, this first explorative analysis demonstrates the existence of a systematic gender gap in which people appear to know or DK about conventional EU and domestic politics. Nevertheless, it also shows that at least a small part of this gap is due to a measurement problem: the higher propensity of women who choose to use the DK option. Whereas, there is a significant

Table 3. Gender differences in the number of DK answers to each of the seven items. Europe, 2009

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Austria	− 0.03*	− 0.12***	− 0.13***	− 0.08***	− 0.03	− 0.10***	− 0.18***
Belgium	− 0.06**	− 0.06**	− 0.11***	− 0.09***	− 0.07**	− 0.05	− 0.17***
Bulgaria	− 0.09**	− 0.10***	− 0.09**	− 0.14***	− 0.03	− 0.01	− 0.08**
Cyprus	− 0.13***	− 0.11***	− 0.15***	− 0.18***	− 0.09***	− 0.02	− 0.28***
Czech Republic	− 0.09***	− 0.11***	− 0.06*	− 0.08***	− 0.01	− 0.07*	− 0.10***
Denmark	− 0.06**	− 0.11***	− 0.05**	− 0.09***	− 0.02	− 0.04*	− 0.11***
Estonia	− 0.08**	− 0.08**	− 0.05	− 0.05	0.02	0.01	− 0.01
Finland	− 0.07**	− 0.14***	− 0.04*	− 0.05*	0.02	− 0.05*	− 0.04*
France	− 0.07**	− 0.09***	− 0.19***	− 0.11***	− 0.03	− 0.08**	− 0.24***
Germany	− 0.04*	− 0.07**	− 0.09***	− 0.08***	− 0.04	− 0.05*	− 0.17***
Greece	− 0.12***	− 0.13***	− 0.11***	− 0.12***	− 0.03	− 0.04	− 0.06**
Hungary	− 0.13***	− 0.10***	− 0.09***	− 0.15***	− 0.08*	− 0.07*	− 0.10***
Ireland	− 0.06**	− 0.10***	− 0.09***	− 0.11***	− 0.03	− 0.01	− 0.20***
Italy	− 0.09***	− 0.13***	− 0.15***	− 0.16***	− 0.02	− 0.06*	− 0.20***
Latvia	− 0.08**	− 0.09**	− 0.07**	− 0.08**	0.05*	0.01	− 0.05
Lithuania	− 0.09**	− 0.07*	− 0.04	− 0.10***	− 0.03	− 0.02	− 0.01
Luxembourg	− 0.06**	− 0.09***	− 0.12***	− 0.08***	− 0.02	− 0.07**	− 0.22***
Malta	− 0.21***	− 0.19***	− 0.14***	− 0.27***	− 0.07**	− 0.13***	− 0.27***
Netherlands	− 0.06**	− 0.15***	− 0.04	− 0.14***	− 0.07**	− 0.06*	− 0.16***
Poland	− 0.13***	− 0.16***	− 0.15***	− 0.14***	− 0.07*	− 0.04	− 0.14***
Portugal	− 0.13***	− 0.16***	− 0.20***	− 0.24***	− 0.03	− 0.14***	− 0.25***

Continued

Table 3. *Continued*

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Romania	− 0.24***	− 0.23***	− 0.21***	− 0.24***	− 0.10***	− 0.10**	− 0.14***
Slovakia	− 0.08***	− 0.09***	− 0.09***	− 0.06*	− 0.04	− 0.03	− 0.08**
Slovenia	− 0.06**	− 0.11***	− 0.09***	− 0.06**	− 0.03	− 0.05	− 0.19***
Spain	− 0.10***	− 0.08**	− 0.11***	− 0.14***	− 0.05	− 0.09**	− 0.16***
Sweden	− 0.05*	− 0.08**	− 0.05*	− 0.04*	− 0.03	− 0.03	− 0.12***
UK	− 0.11***	− 0.10***	− 0.14***	− 0.15***	− 0.08*	− 0.04	− 0.12***
Total	− 0.10***	− 0.11***	− 0.11***	− 0.13***	− 0.04***	− 0.06***	− 0.14***

Source: My elaboration on 2009 EES Voter Study (Advanced Release, July 2010).
Entries are the percentage value of DK responses to each of the items for men minus the percentage value of DK responses to each of the items for women.
Notes: Stars indicate statistically significant differences between values for men and women within each nation.
***$P < 0.001$; **$P < 0.01$; *$P < 0.05$.
(Item 1) Switzerland is a member of the EU; (Item 2) The European Union has 25 member states; (Item 3) every country in the EU elects the same number of representatives to the European Parliament; (Item 4) every 6 months, a different Member State becomes president of the Council of the European Union; (Item 5) the [Minister of Education] is [Correct name]; (Item 6) individuals must be 25 or older to stand as candidates in [COUNTRY] elections; (Item 7) there are [150 percent of real number] members of the [COUNTRY Parliament].

Table 4. Gender differences in the number of incorrect answers to each of the seven items. Europe, 2009

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Austria	− 0.01	0.05	0.00	− 0.06**	− 0.01	− 0.07*	− 0.08**
Belgium	0.00	0.01	− 0.01	0.03	0.06**	− 0.01	0.07*
Bulgaria	0.01	0.06*	0.02	0.01	0.01	− 0.04	− 0.02
Cyprus	− 0.09**	− 0.14***	− 0.05*	− 0.01	− 0.02	0.03	− 0.08***
Czech Republic	0.00	0.00	0.00	− 0.01	0.00	0.01	0.00
Denmark	− 0.07**	0.06*	− 0.01	− 0.12***	0.01	− 0.03	− 0.09***
Estonia	− 0.05	− 0.01	0.00	− 0.09**	0.00	0.01	0.01
Finland	− 0.05*	0.06*	− 0.05*	0.00	0.07***	− 0.04	− 0.06**
France	− 0.07**	− 0.02	− 0.02	− 0.03	− 0.01	− 0.04	0.01
Germany	− 0.04*	0.01	− 0.02	− 0.05	− 0.04*	− 0.09**	− 0.03
Greece	0.00	0.00	− 0.10***	− 0.08**	− 0.01	0.06*	− 0.03
Hungary	0.00	0.01	0.02	0.03	0.03	0.02	− 0.02
Ireland	− 0.08**	0.02	− 0.08**	− 0.06*	− 0.05*	− 0.12***	− 0.04
Italy	− 0.03	0.09**	0.00	0.00	0.00	0.02	0.03
Latvia	− 0.01	0.02	0.03	− 0.02	− 0.01	− 0.04	0.03
Lithuania	− 0.02	0.02	− 0.03	0.02	− 0.01	0.01	− 0.02
Luxembourg	− 0.02	− 0.06*	− 0.02	− 0.03	− 0.01	− 0.05	− 0.02
Malta	− 0.03	− 0.01	− 0.02	− 0.04	0.03	− 0.06	− 0.02
Netherlands	− 0.05*	0.11***	− 0.04	− 0.10**	− 0.01	− 0.08**	− 0.11***
Poland	0.01	0.06*	− 0.01	− 0.02	0.02	− 0.01	− 0.07*
Portugal	− 0.04	0.05*	− 0.01	0.05	− 0.03	0.06*	0.00

Continued

Table 4. *Continued*

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Romania	0.04	0.10***	0.04	0.02	− 0.01	0.03	0.07**
Slovakia	− 0.04	0.08**	0.01	0.00	0.02	0.02	0.00
Slovenia	− 0.05*	0.02	− 0.04*	− 0.02	0.00	− 0.11***	− 0.04
Spain	− 0.04	− 0.01	− 0.07*	− 0.06*	− 0.05	− 0.04	− 0.02
Sweden	− 0.08**	0.07*	− 0.03	− 0.07*	− 0.01	− 0.03	− 0.06*
UK	− 0.09**	0.09**	− 0.03	− 0.10***	0.00	− 0.10***	− 0.07*
Total	− 0.04***	0.03***	− 0.02***	− 0.03***	0.00	− 0.03***	− 0.02***

Source: My elaboration on 2009 EES Voter Study (Advance Release, July 2010).
Entries are the percentage value of incorrect responses to each of the items for men minus the percentage value of incorrect responses to each of the items for women.
Notes: Stars indicate statistically significant differences between values for men and women within each nation.
***$P < 0.001$; **$P < 0.01$; *$P < 0.05$.
(Item 1) Switzerland is a member of the EU; (Item 2) The European Union has 25 member states; (Item 3) every country in the EU elects the same number of representatives to the European Parliament; (Item 4) every six months, a different Member State becomes president of the Council of the European Union; (Item 5) the [Minister of Education] is [Correct name]; (Item 6) individuals must be 25 or older to stand as candidates in [COUNTRY] elections; (Item 7) there are [150% of real number] members of the [COUNTRY Parliament].

gender gap in the mean number of correct and DK answers, the gap is almost negligible for the number of incorrect answers. Additionally, these explorative findings show preliminary evidence in favor of the hypothesis, suggesting that part of the gender gap in knowledge might be a function of the specific topics covered by the political knowledge items in the surveys (Dolan 2011). From the seven items covered by the EES, there is only one that could be considered more salient to women than to men: the name of the minister of education. Not only are more women in charge of the ministry of education in comparison with other ministries (such as, for instance, the ministry of economy or foreign affairs),[10] but also general education can be considered a topic where women have a special interest, together with other practical aspects of political knowledge such as government benefits and services, given that they are more likely to be beneficiaries of public services and welfare state policies and to be employed in the public sector (Stolle and Gidengil 2010).

Unfortunately, it is not possible to go further in the analysis of the aforementioned hypothesis that the gender gap in knowledge might be a function of what is defined as knowledge (Dolan 2011), since we have no other items to compare with (apart from the seven covered by the EES). These results therefore can only be considered preliminary. Further empirical evidence is needed to systematically test this hypothesis. To this end, it would be extremely useful to consider questions about benefits and services that are directly relevant to citizens' daily lives (Norris 2000; Stolle and Gidengil 2010) as well as questions that refer to local politics (Shaker 2012).

In addition to the measurement problem, resources and motivation appear to be the two main forces that explain the gender gap in knowledge according to existent scholarship. The following section presents the results of a systematic analysis of the role of these factors in accounting for the gender differences identified here.

Results

From the results of the previous exploratory analysis, we can reject the existence of relevant gender differences in the number of incorrect responses. Consequently, table 5 provides a summary of the results of the prediction of the number of correct and DK answers across individuals and polities. In order to address the hierarchical structure of the data (observations are structured both at the individual and country levels) the equations in table 5 are estimated through multilevel regression. Hierarchical linear models are a well-known strategy to estimate correct standard errors when combining different levels of analysis (Goldstein 1995; Hox 2010).

The first column of table 5 identifies the name of the independent variables. Apart from gender, the estimations control for the other "usual suspects," or antecedents, of citizens' political knowledge. Much of the empirical variation

Table 5. Gender as a determinant of number of Correct, and DK responses. Multilevel estimations. Europe 2009

	Correct			DK		
	Equation 1	Equation 2	Equation 3	Equation 1	Equation 2	Equation 3
Fixed part						
General exposure to media		0.659*** (0.045)	0.662*** (0.045)		− 0.561*** (0.045)	− 0.566*** (0.045)
Exposure to television news		− 0.084 (0.041)	− 0.089 (0.041)		− 0.207** (0.041)	− 0.198*** (0.041)
Exposure to newspapers' news		0.584*** (0.050)	0.582*** (0.050)		− 0.694*** (0.049)	− 0.692*** (0.049)
Level of education		1.619*** (0.050)	1.752*** (0.066)		− 1.029*** (0.049)	− 1.321*** (0.065)
Gender (male = 1)	0.776*** (0.057)	0.651*** (0.039)	0.487*** (0.098)	− 0.661*** (0.048)	− 0.541*** (0.033)	− 0.553*** (0.094)
Age		0.008*** (0.000)	0.005*** (0.000)		− 0.001** (0.001)	− 0.005*** (0.000)
Political interest		0.674*** (0.022)	0.676*** (0.022)		− 0.552*** (0.022)	− 0.554*** (0.022)
Employed (unemployed ref. cat.)		0.237*** (0.042)	0.239*** (0.042)		− 0.161*** (0.042)	− 0.185*** (0.042)
Inactive (unemployed ref. cat.)		0.218*** (0.044)	0.222*** (0.044)		− 0.178*** (0.043)	− 0.185*** (0.043)
Subjective standard of living		0.370*** (0.056)	0.362*** (0.056)		− 0.547*** (0.055)	− 0.536***
Education × male			− 0.339*** (0.093)			0.693*** (0.092)
Age × male			0.007*** (0.001)			− 0.007*** (0.001)
Intercept	3.551*** (.109)	0.876*** (0.107)	0.962*** (0.116)	1.769*** (0.098)	3.616*** (0.096)	3.614*** (0.103)

Random part						
Var (gender)	0.078 (0.025)	0.031 (0.011)	0.027 (0.010)	0.052 (0.017)	0.018 (0.008)	0.012 (0.006)
Var (cons)	0.315 (0.087)	0.198 (0.055)	0.198 (0.055)	0.255 (0.071)	0.136 (0.038)	0.129 (0.036)
Var residual	3.031 (0.026)	2.566 (0.023)	2.561 (0.022)	2.915 (0.025)	2.532 (0.022)	2.522 (0.022)
N level 1	27,068	25,355	25,355	27,068	25,355	25,355
N level 2	27	27	27	27	27	27

Source: My elaboration on EES (2009), European Parliament Election Study 2009, Voter Study, Advance Release, July 2010. Figures in parentheses are standard errors.

$^{***}P < 0.001$; $^{**}P < 0.01$; $^{*}P < 0.05$.

Notes: Dependent variable is the number of correct, and DK answers, respectively (from 0 to 7). Independent variables include: general exposure to the Media ("In a typical week, how many days do you follow the news?" From 0 to 7 days, re-codified from 0 to 1); exposure to the two main broadcasting news in each country (re-codified from 0 to 1); Exposure to the three main newspapers' news in each country (re-codified from 0 to 1); education (from 0 to 6, re-codified from 0 to 1); male (1 for male, 0 for female); age (in years); political interest (1 for those who declare to be very and quite interested in politics, 0 for those who are not interested in politics). Subjective standard of living (from one poor family to seven rich family, re-codified from 0 to 1).

in knowledge is explained in the literature by individual differences in motivation, ability, and opportunity (Althaus 2003; Delli Carpini and Keeter 1996; Luskin 1990). Whereas there is uncontested agreement about the influence of these three factors on political knowledge in the existing literature, the debate is more open about the potential effects of the mass media on what citizens know about politics. In principle, a greater level of political knowledge is expected among citizens who declare themselves to be intensively exposed to media news. Nevertheless, the informative effects of media depend very much on the content of news programs and whether they offer a preponderance of soft or hard news programing (Curran et al. 2009; Iyengar et al. 2010). In this article I include as independent variables self-reported exposure to print and broadcast news outlets as well as weekly self-reported exposure to the media as additional controls.[11]

The measurement of all these variables is shown at the bottom of table 5, whereas their descriptive statistics are given in table A1. Unfortunately, there was no information in the survey about domestic life or the parenting of those interviewed. These aspects of the social structure and social process can be expected to be shared equally by men and women; but to affect them differently regarding their degree of available time to dedicate to the political world. However, other studies have shown that even when domestic and parenting responsibilities are controlled for, women continue to be less aware than men of what is going on in public life (Stolle and Gidengil 2010; Verba et al. 1997).

For each of the two dependent variables (number of correct and DK answers), Equation (1) in table 5 contains the simplest model (random slope parameter for the effect of gender under the expectation that the differences between men and women are of different magnitude across countries, as suggested in table 1). Equation (2) in table 5 adds all individual predictors under the expectation that men and women have different access to resources and opportunities, and these differences contribute to explaining the gender gap in knowledge. Finally, Equation (3) in table 5 adds the significant interaction terms of all the individual-level independent variables and gender under the expectation that men and women may respond differently to the same factors. From all the interactions however, only two turned out to be statistically significant: education and age, suggesting that the effect of education on knowledge is greater for women than for men, and that the gender gap is smaller for the younger generations. These findings will now be dealt with in more detail.

To start with, the variance of the random slope for gender is not significantly different from zero (see Equation (3) for both Correct and DK), despite the fact that table 1 shows cross-country differences in the magnitude of the gender gap. An alternative strategy would be to analyze the extent to which gender differences on knowledge are influenced by contextual factors at country level. For space reasons, however, I keep the focus of the analysis on the individual factors that contribute to explain the gender gap in knowledge in Europe.

The results summarized in table 5 demonstrate significant resource differences in the levels of political knowledge of European citizens. Accordingly, the expected value of the number of correct answers increases with education, age, and standard of living; whereas the number of DK answers decreases. Not surprisingly, motivation and capabilities each affects what people appear to know or DK about politics. As expected, knowledge is greater among those who declare themselves to be interested, and to be intensively exposed to media news (with the exception of television news, which presents negligible effects). Additionally the number of DK answers decreases as political interest and exposure to media news increases.

But more importantly for the purposes of this article, the gender gap in the number of correct and DK answers is slightly reduced in the face of the main explanations for what people know or DK know about politics, but by no means do these gender differences vanish.[12] What are the factors that account for these differences? The next step is to investigate the extent to which the main explanatory factors at individual level distinctively affect what men and women appear to know or DK about politics; or, to put it simply, if men and women respond differently to the same factors. The results of Equation (3) in table 5 suggest that only two factors distinctively affect what men and women appear to know or DK about politics: education and age.

I start first by examining the gender differences in knowledge conditioned to education. The negative and significant coefficient corresponding to the interaction term of education with gender (see Equation (3) for Correct in table 5) suggests that the positive effect of education on the number of correct answers is of a smaller magnitude for men in comparison to women. To better assess these differences the first graph in figure 1 shows the marginal effects of gender on the number of correct answers across different values of citizens' education. The solid sloping line denotes the marginal effect, and the dashed lines indicate a 95 percent confidence interval based on the estimates of table 5, Equation (3) for Correct. When the value zero of the predicted marginal effect is not within the upper and lower bounds of the confidence interval, the marginal effect is statistically significant. This graph shows that the magnitude of the gender gap on the number of correct answers decreases as citizens' level of education increases. Moreover, gender differences on the number of correct answers are always significant, but decrease to a great extent (from 0.93* to 0.47*) when citizens' level of education increases from its lowest to its highest level. Or, to put it in another way, among low educated people the gender differences on knowledge (0.93*) are about twice as large as among highly educated citizens (0.47*).

These findings are confirmed when we look at the negative effect of education on the number of DK answers (and the positive coefficient corresponding to the interaction term between education and gender, see table 5, Equation 3—the column corresponding to the number of DK answers). Again, this effect is higher for females than for males. The next graph in figure 1 shows

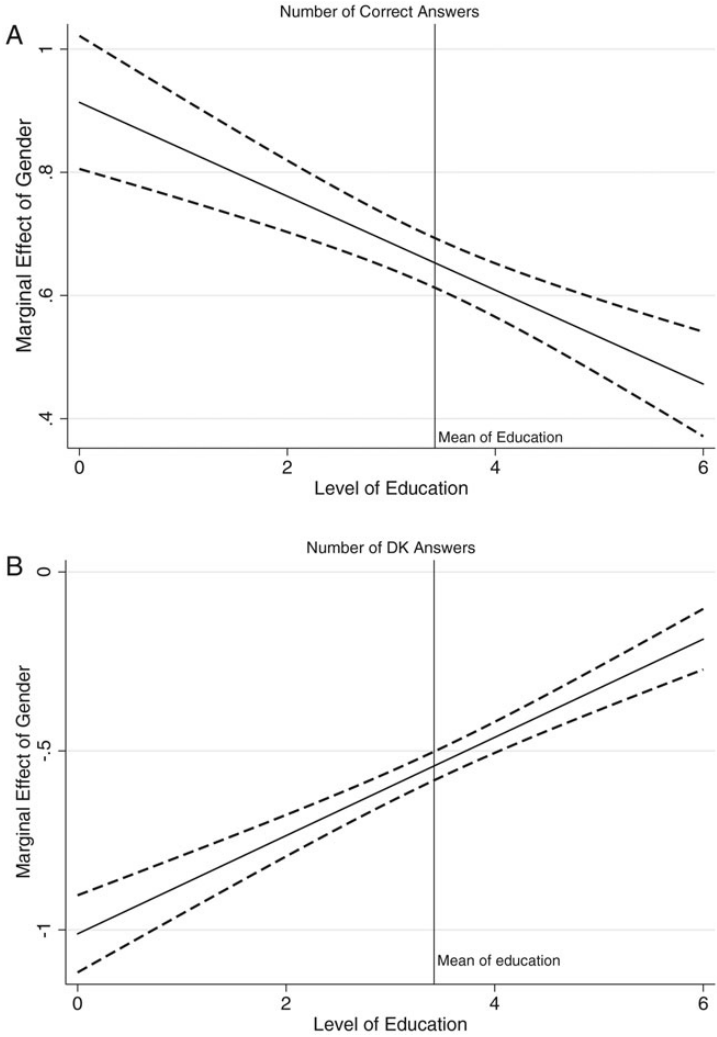

Figure 1. The marginal effect of gender conditioned on education. *Source*: My elaboration on EES (2009), European Parliament Election Study 2009, Voter Study, Advance Release, July 2010. Calculations made on the basis of table 5 (Equation 3 Both for Correct and DK).

that the magnitude of the gender gap in the number of DK answers decreases to a great extent as citizens' level of education increases. Moreover, whereas among low educated people men tend to provide around one DK answer less than women (-1.15^{*}) among highly educated people the gender differences in the number of DK answers are very slight (-0.25^{*}).

In summary, the results of Equation (3) in table 5 shows that contrary to the findings of previous studies in the United States (see for instance Dow 2009), in Europe resources distinctively affect what men and women appear to know and DK about politics. Moreover, for any given level of education, women appear to learn and retain more factual political knowledge than men, therefore receiving larger returns on political knowledge from education than their male counterparts. Unfortunately I do not have sufficient information to explore more in depth the reasons that might explain why education appears to be more transformative for women than for men. I would need to control for the sector of education (that is, humanities, sciences, etc.) of the respondent, and there is no such information in the survey used here).[13]

These differences however decrease to a great extent within the group of highly educated citizens, and particularly in contrast with the most poorly educated. The implication of these findings is that about half of the gender knowledge (or ignorance) gap between men and women can be reduced by increasing the general level of education of the citizenry in Europe. Or put it another way, if all citizens were to be highly educated, the gender gap in knowledge (or ignorance) might be reduced by half of its current size.

What about the effect of age? The results of Equation (3), table 5 suggest that the gender gap in the number of correct answers increases with age. This might clearly be a cohort effect. Many generations of Europeans were socialized under non-democratic political systems that explicitly excluded women from the public sphere. Additionally, and despite the type of political system, many generations were socialized during the 1950s and 1960s, a long period characterized by very low rates of female participation in the labor market, as well as a clear division of labor at home (with women being in charge of the domestic domain). As a consequence, there is a larger gender gap for older cohorts in comparison to their younger counterparts. The first graph in figure 2 shows that the gender differences in the number of correct answers increase to a great extent with age. More specifically, the gender gap in knowledge varies from 0.39* for the youngest to 1.12* for the oldest citizens. The same is confirmed regarding political ignorance. The gender differences in the number of DK answers increase enormously with age. The second graph in figure 2 shows that whereas among old citizens men tend to provide around one DK answer less than women (− 0.99*), among young citizens the gender differences in the number of DK answers are very slight (− 0.25*).

Conclusions

This article analyses the extent to which there are significant gender differences in political knowledge in a rarely studied area: Europe. The results show that part of the gender differences can be put down to methodology. That is, men provide higher levels of correct answers, and lower levels of DK

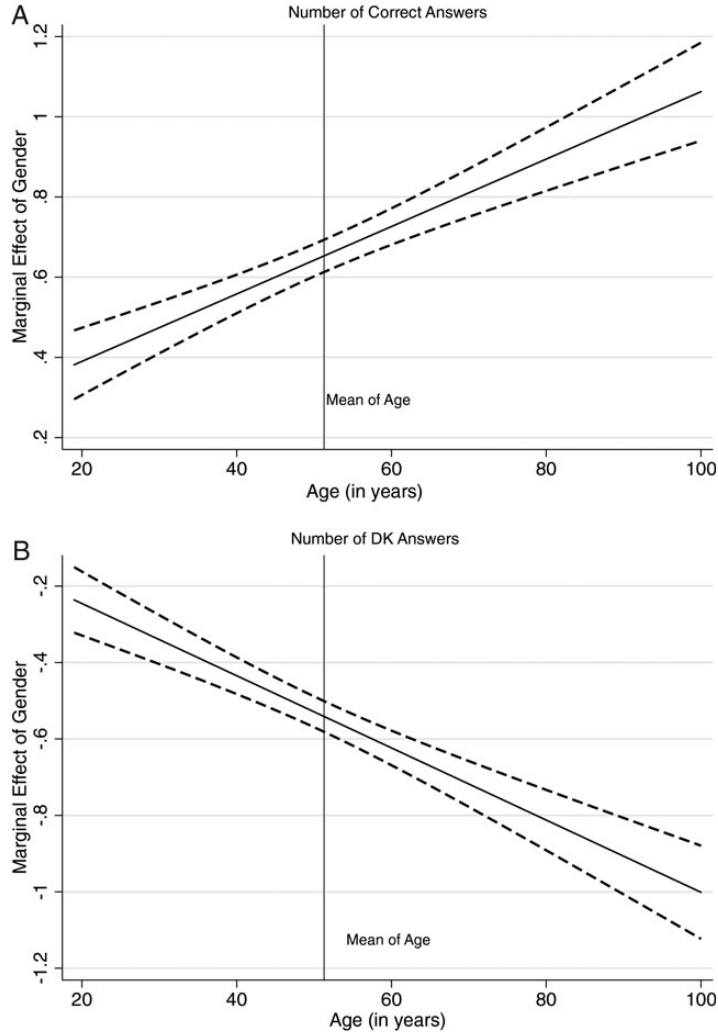

Figure 2. The marginal effect of gender conditioned on Age. *Source*: My elaboration on EES (2009), European Parliament Election Study 2009, Voter Study, Advance Release, July 2010. Calculations made on the basis of table 5 (Equation 3 both for Correct and DK).

answers; whereas gender differences in providing incorrect answers are not relevant.

These differences, however, appear to depend on the specific topics covered by the political knowledge items in the survey. From the seven items considered here (that predominantly refer to the rules governing both European and national political institutions) only one refers to the name of a prominent politician—the minister of education—that in many countries is a post that is

occupied by a woman. In addition, education is considered to be a political issue that is especially relevant for women, in comparison to other more abstract topics (Stolle and Gidegil 2010). Education is precisely the topic where the differences in the percentage of correct, incorrect, and DK responses between men and women are not significantly different from 0 in the majority of the countries analyzed here. This can be considered to be preliminary evidence in favor of the hypothesis that part of the gender gap is a function of what is defined as knowledge (Dolan 2011). Unfortunately, with the kind of data employed here we are unable to systematically confirm this hypothesis. We can only re-state here that two recent studies show that women are more likely to know about specific policy areas that directly affect their daily lives, such as health care, political rights, and the functioning of social services, etc. (Dolan 2011; Stolle and Gidengil 2010).

These results are in line with recent studies on political participation, demonstrating that women appear to participate differently than men. Moreover, women participate to a greater extent than men in less visible and less formal types of political actions. Therefore, women present a greater propensity to participate in what has been called non-institutionalized or private types of political activism such as signing petitions, political consumerism (both boycotting and buying for political, ethical, or environmental reasons), and raising funds for a social or political activity (Coffé and Bolzendahl 2010; Stolle and Hooghe 2011). The evidence, however, also shows that voting patterns and participation in other types of institutionalized actions (such as protesting, contacting politicians, or being a member of political parties) have equalized between males and females in many European countries (Stolle and Hooghe 2011). In this study, we conclude that the gender gap in conventional political knowledge is still alive. What we do not yet know is whether this gap decreases or even vanishes when we broaden our conceptualization of citizens' political knowledge. What emerges clearly in the present study (and what constitutes its main contribution to our understanding of citizens' level of political knowledge) is that political competence has multiple dimensions.

In summary, we need to better establish the scale of the gender knowledge gap by further testing the hypothesis that gender relevant knowledge items (such as women candidates, women officeholders, government services and benefits, or local politics) will diminish or even eliminate the apparent gender gap in knowledge (Dolan 2011; Shaker 2012). Of course, this does not mean abandoning the conventional ways of measuring political knowledge, but rather it emphasizes the need to develop more balanced measures of political knowledge that contain both conventional and new items that could cover a more diverse set of policy areas; and not only key institutions and the identification of male political actors.

This study also demonstrates that even after controlling varying access to resources and opportunities of men and women, their knowledge differences remain significant. Two main factors, however, appear to distinctively affect

what men and women know or DK about politics: education and age. Moreover, the gender gap in knowledge is much higher (about two-thirds) among the oldest generations than among their youngest counterparts. These results are in line with the recurrent speculation in the literature that the gender gap in political interest and knowledge will disappear over time due to changes in socialization and accompanying generational replacement (Bennett and Bennett 1989; Inglehart and Norris 2003). These findings provide optimism and suggest that the gender gap in conventional political knowledge might be gradually reduced (and perhaps) eliminated for future generations. Further research, however, is also needed to establish adolescents' knowledge about politics and to analyze the extent to which this optimism is grounded in solid evidence.

Finally, the results additionally show that half of the gender gap about what citizens know and/or DK about politics is due to the differential effect of education on knowledge for men and women and across countries. Moreover, among low educated citizens, the gender gap is about twice as large as among their highly educated counterparts. These latter findings have important policy implications. Over the last fifty years the gender gap in educational attainment has substantially narrowed in Europe. Despite these major changes women are still underrepresented in political affairs, and show lower levels of conventional political knowledge. According to the results presented in this article, a substantial increase in the general level of education might contribute to reduce the gender gap in politics to about half its actual size. Or, to put it more succinctly: if all European citizens were highly educated, the gender gap in knowledge would be reduced by half in Europe.

Of course, these conclusions are subject to several constraints. Most notably, the focus of this study has been on individual level factors that seek to explain the gender gap in knowledge across European countries, but the contextual factors at country level have been ignored. The extent to which gender differences on knowledge are further conditioned by contextual factors at country level, however, needs to be the subject of future research.

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Notes

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1. Stolle and Gidengil (2010) studied the Canadian case; whereas, Frazer and Macdonald (2003) studied the British case.

2. Unfortunately, I am not able to empirically demonstrate the causal mechanism that could explain a differential effect of education on knowledge for men and women since I do not have information on the data used regarding the sector of education (that is, humanities, and sciences etc.) of the respondent. What I can test, however, is the extent to which the positive effect of respondent's level of education on their knowledge is of a different magnitude for males and females.

3. Delli Carpini and Keeter show that women are equally able to provide correct answers to questions related to local politics, health-care, government's actions on abortion policy, and women's representation in the U.S. Supreme Court (Delli Carpini and Keeter 1996, Chapter 4). See also Verba et al. (1997), 1055–56.

4. The 2009 EES data were collected during the period immediately after the 2009 European Parliament elections (between June 4 and 7, 2009). The intended sample size was 1,000 successful interviews within each of the 27 EU member states. Data collection was undertaken by CATI phone interview. In nine countries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia) representative phone sampling was not feasible. In these countries, 70 percent of interviews were carried out face-to-face, while the remaining 30 percent were completed by phone. Additional details of the EES can be found in van Egmond et al. (2010) and ESS (2009).

5. The exact wording of the question is: "Now some questions about the European Union and your nation. For these questions, I am going to read out some statements. For each one, could you please tell me whether you believe they are true or false? If you don't know, just say so and we will skip to the next one: (i) Switzerland is a member of the EU: True/False; (ii) The European Union has 25 member states: True/False; (iii) every country in the EU elects the same number of representatives to the European Parliament. True/False; (iv) every six months, a different Member State becomes president of the Council of the European Union. True/False; (v) the [Specific Minister] is [Correct name]. True/False; (vi) Individuals must be 25 or older to stand as candidates in [COUNTRY] elections. True/False; (vii) there are [150% of real number] members of the [COUNTRY Parliament]. True/False.

6. According to the theory of the role model, the presence of high-level female politicians (such as ministers, senators, etc.) transforms beliefs about the appropriateness of politics for women and thus increases interest, engagement, and knowledge about politics among women, especially the youngest generation of women. For instance, Burns et al. (2001) find for the U.S. case that women in states with female Senate candidates or incumbents show greater political knowledge.

7. In contrast, eight countries present slight but still significant differences in the percentage of correct answers provided by men and women. Of these eight

countries only two (Germany and Romania) had a woman as minister of education.

8. It is important to clarify that these percentages change across countries and Item 5 appears to be the easiest one only in some countries. However, the differences in the percentage of correct responses between Item 5, 1, and 7 are always very small across countries. In sum, Item 5 does not appear as the most easy question to respond to across countries. More details about this evidence are available on request from the author.

9. Even though it is unfortunate that there are no measures of knowledge about local politics in this survey it is important to recall that these measures are difficult to include in cross national surveys since their comparability across countries is extremely complicated.

10. For instance, a total of eleven countries (from the twenty-seven analyzed here) had a woman as the minister of education in June 2009 (Kunst und Kultur in Austria; Miroslava Kopicová in the Czech Republic; Annette Schavan in Germany; Henna Virkkunen in Finland; Mariastella Gelmini in Italy; Mady Delvaux-Stehres in Luxemburg; Tatjana Koķe in Latvia; Dolores Cristina in Malta; Katarzyna Hall in Poland; Maria de Lurdes Rodrigues in Portugal; Ecaterina Andronescu in Romania).

11. For space reasons I limit the role of the media in the research design of this study to a control, since the focus of this article is to explain the gender gap in knowledge. In addition, previous tests showed that there are no significant differences in exposure to both television and newspapers' news between men and women.

12. The reduction in the size of the gender gap after controlling for the main independent variables (resources and motivation) is slight if we compare the size of the gender coefficient in Equation (1) of table 5 (that is, 0.77 and 0.66 for the number of correct and DK answers, respectively) with the size of the gender coefficient in Equation (2) of table 5 (0.65 and 0.54, respectively).

13. Another possibility could be to control for the percentage of men with degrees in humanities with respect to women at the country level. As explained in the main text, for space reasons I leave for future research the analysis of the contextual factors that contribute to further explain gender differences on knowledge.

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Appendix

Table A1. Descriptive statistics of the variables (pooled sample of the 27 countries)

Variable	*n*	Mean	Standard Deviation	Min	Max
Number of correct answers	27069	3.90	1.87	0	7
Number of incorrect answers	27,069	1.58	1.34	0	7
Number of DK answers	27,069	1.48	1.80	0	7
General exposure to Media	26,893	0.85	0.26	0	1
Exposure to television news	27,069	0.41	0.29	0	1
Percentage of correct answers Item 1	27,069	0.64	0.47	0	1
Percentage of correct answers Item 2	27,069	0.36	0.48	0	1
Percentage of correct answers Item 3	27,069	0.63	0.48	0	1
Percentage of correct answers Item 4	27,069	0.57	0.49	0	1
Percentage of correct answers Item 5	27,069	0.73	0.44	0	1
Percentage of correct answers Item 6	27,069	0.41	0.49	0	1
Percentage of correct answers Item 7	27,069	0.74	0.49	0	1
Exposure to newspapers' news	27,069	0.28	0.22	0	1
Level of education	26,206	0.57	0.23	0	1
Male	27,068	0.44	0.49	0	1
Age	26,763	51.29	16.91	19	100
Political interest	26,978	0.53	0.49	0	1
Subjective standard of living	26,567	0.51	0.20	0	1
Position in the labor market	27,069	1.95	0.96	1	3

Source: My elaboration on EES (2009), European Parliament Election Study 2009, Voter Study, Advance Release, July 2010.