Gender and Agenda Diversity: Cognitive Differences in Representatives' Information Processing

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A growing body of research examines the role of information processing on decision-making in a variety of organizational settings such as authoritarian and democratic governments, subnational organizations, and market systems. Although an increasing number of scholars point to the importance of cognitive capacities of individuals in explaining macro-phenomena, scant attention has been devoted to how individual human beings process incoming information. Utilizing original datasets of parliamentary speeches and the biographies of 1,100 members of parliament (MPs) who served in the Grand National Assembly of Turkey between 2002 and 2011, I explore female–male differences in MPs' issue attention in the parliament. Drawing together the literatures on political agenda setting, gender studies, and cognitive psychology, I argue that women's higher potential for empathic response to societal issues (i.e., lower cognitive threshold of urgency for social problems) leads them to speak about a wider range of issues facing society and find strong support for this hypothesis. The conclusion considers potential implications of these findings.

KEY WORDS: gender, information processing, cognitive psychology, policy agendas, agenda diversity

越来越多的研究考察了信息处理在各种组织环境（如威权政治和民主政府，地方组织和市场体系）中的决策作用。虽然越来越多的学者指出个体认知能力在解释宏观现象中的重要性，但很少有人关注个体是如何处理他们所接收的信息的。本文通过使用在2002年至2011年期间土耳其大国民议会中任职的1100名议员（MPs）的议会演说和传记的原始数据集，探讨了议会议员关注的议题中所体现出的性别差异。综合了关于政治议程设置、性别研究和认知心理学方面的文献，本文认为女性有更大潜能对社会问题做出共情反应（即对社会问题所谓紧迫性的认知门槛更低），这使得她们会谈论范围更广泛的社会问题，且本文为这一假设找到了强有力的支撑。结论部分本文认真考虑了这些发现所带来的潜在影响。

A growing number of scholars adopt behavioral models of individual choice in the political process, emphasizing the importance of cognitive capacities of individuals in issue attention (Jones, 2001, 2017 ; Jones & Baumgartner, 2005; Jones & Thomas, 2017; Workman, Jones, & Jochim, 2009). This line of research posits that the rational-analytic framework of decision making overstates the role rational calculus plays in human choice and proposes an alternative framework that views

individuals, along with the institutions they create, as *boundedly rational* actors with limited information-processing capacity (Jones, 2001).

One of the major consequences of humans' (and institutions') *disproportionate information processing* is that under- and over-reactions to policy issues often dominate the political process (Jones, 2001; Jones & Baumgartner, 2005). According to the proponents of behavioral models of issue attention, the two great sources of these under- and over-reactions to incoming information about societal issues are institutional settings and cognitive capacities (Baumgartner et al., 2009; Jones et al., 2009; Jones, Sulkin, & Larsen, 2003). Although we know a great deal about the institutional factors, however, the role that cognitive capacities play in human choice is relatively underexplored (Brouard, 2013; Shaffer, 2017; Thomas, 2017). The present study seeks to fill this gap by analyzing female–male differences in information processing in legislative institutions.

The questions that motivate this study are twofold: Do female MPs process information about societal problems differently than their male counterparts? Do they speak about a wider range of issues in parliament? Drawing together the literatures on issue attention, gender studies, and cognitive psychology, I argue that female members of parliament (MPs) should speak about a wider range of issues than their male counterparts. The literature on sex differences in cognitive styles persuasively shows that women are more sensitive to the problems facing others (Baron-Cohen, 2002, 2010), and they process information and social cues more comprehensively (Meyers-Levy, 1989). One of the implications of these differing cognitive styles for the processing of information about the external environment (such as societal problems) concerns the range of issues that men and women choose to attend to. Given that complex systems such as societies face numerous problems simultaneously (Jones, 2001), those who have lower sensitivity threshold for problems facing their society should be more likely to "detect" those problems brought by various information streams. That is, among the representatives who are exposed to similar streams of incoming information (e.g., news stories, constituency demands), women should prioritize a larger number of issues due to well-known sex differences documented by various subfields of psychology. I test this assertion and document empirical evidence supporting it.

The rest of the article proceeds as follows. I first provide a brief overview of the literatures on political agenda setting and sex-related cognitive differences, and then derive theoretical expectations from the existing research. Next, I test the hypothesis proposed in this study that female MPs should speak about a wider range of issues during the period they serve in the parliament and present my empirical findings. The final section concludes with implications for future research.

Information Processing, Issue Engagement and Parliamentary Behavior

Since the introduction of attention-based models in public policy research (Jones, 1999, 2001; Jones & Baumgartner, 2005), scholars of policy processes have extensively focused on the consequences of information-processing patterns at the aggregate level (e.g., budgetary changes). Scholars adopting the punctuated equilibrium

framework sought to explore, for instance, the extent to which organizations allocate attention proportionally (Baumgartner et al., 2017; Breunig & Koski, 2006; Epp, 2015; Epp & Baumgartner, 2017; Jones & Baumgartner, 2005; Jones et al., 2003, 2009; Robinson, 2004). Only recently a handful of studies started to explore the determinants and consequences of information-processing patterns at the individual level. As Shaffer (2017) puts it, this is not trivial, "since many of the existing explanations for aggregate-level policymaking patterns are based on individual-level cognitive phenomena, providing evidence for the presence of these effects is a critical analytic step" (p. 89).

Human activity can be best described as nonrandom given human beings' limited cognitive capacity. Humans deal with a large number of issues simultaneously, which results in under- and over-attention to particular issues (Jones & Baumgartner, 2005). In Barabasi's (2005) words, "the bursty nature of human behavior is a consequence of a decision-based queuing process: when individuals execute tasks based on some perceived priority, the timing of the tasks will be heavy tailed, with most tasks being rapidly executed, whereas a few experience very long waiting times" (p. 208). The compelling question then becomes whether there is variation among human beings in their attention allocation patterns, and if so, what are the consequences of it. If there are systematic female–male differences in individuals' cognitive threshold of urgency for societal problems, then these differences should have observable implications for political behavior.

Cognitive Styles and Agenda Diversity

The argument that women differ from men in various aspects of issue attention has been supported by numerous empirical studies in political science (see Swers, 2001, for a review). This body of research showed that male and female deputies have distinct policy priorities (Jones, 1997; Schwindt-Bayer, 2006; Swers, 1998; Thomas, 1991); they tend to be more liberal on various issues (Hill, 1983; Reingold, 2000; Welch, 1985) and show more concern over war casualties (Bendyna, Finucane, Kirby, O'Donnell, & Wilcox, 1996). We also know that women are more likely to attend to what Bäck, Debus, and Müller (2014) call "soft" issues—issues that are traditionally known to be in the domain of women, while men focus more on "hard" issues such as macroeconomics, finance, and energy. However, quite surprisingly, the question as to what extent these differing policy priorities affect the overall agenda capacity of individuals has received no academic attention in political science research. Although this question has not yet been theorized, an exploratory study based on public opinion surveys by Peter and De Vreese (2003) utilized respondents' gender as a control variable and found that women had broader nominal and thematic agenda diversity in three European countries. While the authors did not suggest a potential explanation as to why these differences were observed, they suggested that research on political agenda setting should go beyond the standard predictors of issue attention and take into account various other cognitive measures.

The present study draws upon previous scholarship in various subfields of psychology to argue that women differ from men in agenda diversity. Specifically, I argue that women's advantage in sensing changes in the environment and lower cognitive threshold of urgency for societal issues should result in sex differences in agenda diversity. Stated differently, women should prioritize a larger number of issues than their male counterparts. Indeed, differences concerning various psychophysiological characteristics, from hearing to skin and emotional sensitivity between sexes (almost all favoring women), and concerning superior empathizing and concern for the distress of others have been demonstrated by the extant research (Baron-Cohen, 2002, 2010; Brand & Millot, 2001). However, we know little about the potential implications of these differences. Perhaps more importantly, despite the mass of literature on cognitive differences between sexes, studies analyzing issue attention at the individual level in political science research have yet to distinguish between the cognitive styles of men and women.

Studies in cognitive neuroscience show that male–female differences in information processing should not be simply attributed to social environment and that neurobiological factors help us better understand the sex differences in cognitive styles (see Savic, Garcia-Falgueras, & Swaab, 2010, for a review). Analyzing the political knowledge gap between men and women, Hannagan, Littvay, and Popa (2014, p. 107) report that "the variation among women is being driven by additive genetic effects as opposed to environmental sources." One of the broader conclusions the authors reached is that additive genetic effects may help us better understand why women differ from men in processing social and political information. In fact, a large body of research in cognitive sciences has documented that there are considerable sex differences in the way human beings process incoming information surrounding them (e.g., Block, Hancock, & Zakay, 2000; Halpern, 1997, 2013; Halpern & LaMay, 2000; Herlitz, Nilsson, & Bäckman, 1997; Maccoby & Jacklin, 1974), though it is commonly accepted that there is no reliable evidence suggesting one sex is smarter than the other (Dykiert, Gale, & Deary, 2009; Halpern, 2013; Hyde, 2005). Specifically, studies indicate that women perform better than men on episodic memory tasks (Block et al., 2000; Herlitz et al., 1997), verbal fluency and social sensitivity (Baron-Cohen, Knickmeyer, & Belmonte, 2005), while being outperformed by males in spatial cognition and computational fluency (Halpern, 2013). In one of the largest functional brain imaging studies to date, Amen and collaborators (2017) found that the prefrontal cortex, the part of the brain that is associated with such traits as self-awareness, appropriate concern, empathy, and collaboration, is significantly more active in women compared to men. Indeed, this body of research finds that females' advantage in empathy and general social interest appears to be consistent even in infants and children (Christov-Moore et al., 2014) and that women outperform men in most emotion recognition tasks (Donges, Kersting, & Suslow, 2012; Thompson & Voyer, 2014).

Baron-Cohen (2002, 2010) argues that two major differences between men and women are the extent to which they "empathize" and "systemize." According to this, Baron-Cohen argues, women are more likely to show concern for fairness, respond

emphatically to the distress of others, and value reciprocal relationships. In Bayliss, di Pellegrino, and Tipper's (2005, p. 632) words, this line of research "suggests that the male information-processing system is less well adapted to understanding the mental states of others than is the female brain." Following Baron-Cohen and collaborators' works, Bayliss et al. (2005) find that females indeed have a clear advantage at orienting attention to changing social cues. Furthermore, such differences have been documented by studies that involve subjects as young as one-year-old (Baron-Cohen, 2002; Happé, 1995) and that involve twin pairs (Zahn-Waxler, Robinson, & Emde, 1992). Interestingly, studies also showed that while empathic response to external stimuli in men is influenced by the perceived fairness of others, this response in women was found to be independent of perceptions of fairness (Singer et al., 2006), which may help explain sex differences in concern for societal issues.

In a recent study, political scientist Stuart Soroka and collaborators (Soroka, Gidengil, Fournier, & Nir, 2016) use physiological measures to examine whether women differ from men in responding to television news content. Their results suggest that women are more attentive than men to negative news content, as evidenced by the decreasing heart rate when the subjects were exposed to negative news. An extensive meta-analysis of neuroimaging studies has revealed that there is a growing consensus on sex differences in brain activation during emotion processing: women respond more strongly to negative emotional stimuli than men (Stevens & Hamann, 2012). Additionally, women perceive higher risks than men from crime, violence, poverty, stress, and environmental and health-related hazards (Barke, Jenkins-Smith, & Slovic, 1997; Flynn, Slovic, & Mertz, 1994; Gwartney-Gibbs & Lach, 1991; Slovic, James, Mertz, & Mullican, 1993). Following Meyers-Levy's (1989) selectivity hypothesis, one strand of research in consumer psychology examined sex-related difference in attention and found that females adopt a more comprehensive approach to information processing (Darley & Smith, 1995; McGivern et al., 1997). McGivern and collaborators summarized the central argument developed by this line of research as follows:

> Males tend to employ various heuristic devices to organize and filter information as it is processed. These serve as scaffolding for more detailed processing and are often characterized by their personal or self-related salience. In contrast, females process information more comprehensively. Their information processing is likely to include a balance between information pertinent to the self and to others. Thus, females rely less than males on heuristic devices that organize information in a self-oriented hierarchical processing style. (p. 324)

Although the causal mechanism behind female–male differences in attention is still open to debate, two implications flow from the argument that females are comprehensive information processors who rely heavily on social cues when forming opinions (Darley & Smith, 1995, p. 43): Females may encode more information than males and/or elaborate available cues more extensively. Additionally, it has been

argued that males selectively use highly available cues that are salient in a given context (Meyers-Levy & Maheswaran, 1991; Meyers-Levy & Sternthal, 1991). This may help explain why male representatives speak significantly more about "hard issues" such as macroeconomics and finance (see Bäck et al., 2014), which tend to be salient issues that arguably produce highly available cues.

The argument proposed by Meyers-Levy and collaborators ties in nicely with other lines of research in various subfields of psychology. Based on two experiments, Fagley and Miller (1990) show that women differ from men in their sensitivity to the framing of social issues such as cancer treatment, civil defense, and dropout prevention. The authors point to the concept of "field dependence" as a major factor that causes such differences in sensitivity. Observing the cognitive styles of males and females, Witkin, Moore, Goodenough, and Cox (1977) showed that females tend to be more "field dependent"; that is, they rely heavily on the surrounding environment and the social context in processing societal information. In contrast, the authors argued, males tend to depart more from the social context and associated cues. Drawing on this empirical evidence, Fagley and Miller (1990) argue that "field-dependent persons may be more susceptible to framing, which suggests that women may be more susceptible to framing to the extent that they are more field dependent" (p. 506). It is of importance to note, however, that framing does not necessarily involve persuasion or manipulation; it can simply "activate existing beliefs and cognitions, rather than adding something new to the individuals' beliefs about the issue" (Nelson, Oxley, & Clawson, 1997, p. 236). With higher potential for empathic response to societal issues, women may rely more heavily on external cues and issue frames when prioritizing societal problems. Thus, I argue that in an information-rich world with abundant information channels (Baumgartner & Jones, 2015; Jones, 2001), women should be, *ceteris paribus*, influenced more by incoming societal cues and accordingly attend to a larger number of issues. Put differently, a larger number of societal issues should exceed females' cognitive threshold of urgency, which results in higher levels of agenda diversity.

Hypothesis: Female MPs should attend to a wider range of issues than their male counterparts.

The Turkish Case

Turkey has been an electoral democracy since the introduction of multiparty elections in 1950, though the democratic process has been interrupted several times by brief military interventions. A large number of women have served as representatives in the Grand National Assembly of Turkey (GNAT) since the introduction of universal suffrage in 1935. Since then, Turkey has lagged behind Western democracies in terms of the representation of women in the parliament. During the period I cover in this study (2002–11), women representation in the parliament was 7 percent. Although this rate increased to 15 percent in the consecutive legislative terms between 2011 and 2017, data from these terms were not made completely available by the GNAT archives.

Turkey arguably constitutes a "least likely case" of finding female–male differences in agenda diversity for at least two reasons. First, as detailed interviews with representatives in Turkey show, female representatives are reluctant to differentiate themselves from their male counterparts in policy priorities and parliamentary activities, as the Turkish parliamentary culture discourages gender-based differentiation in policy agendas (Ayata & Tütüncü's, 2008). As one of the interviewees stated in Ayata and Tütüncü's (2008, p. 465) study, "in order for women MPs to be successful in Turkish parliamentary culture, they have to be quarrelsome like men MPs." Indeed, a recent study exploring the underrepresentation of girls and women in science, technology, engineering, and mathematics (STEM) fields paradoxically found that countries with high levels of gender equality such as Finland have the largest educational gender inequalities, indicating that increasing societal pressures lead girls and women to resemble their male counterparts in their educational and occupational choices (Stoet & Geary, 2018). Second, studies show that party selectorates in Turkey reward MPs who signal issue expertise and focus on a narrower range of issues with a better rank in party list (Yildirim, Kocapınar, & Ecevit, 2017). Therefore, agenda diversity at the individual level should be discouraged for all MPs in general and for female MPs in particular, given the highly competitive nature of the Turkish parliament for women.

Parliamentary speeches provide a unique opportunity to observe policy priorities for several reasons (Baumann, Debus, & Klingelhöfer, 2017; Laver, Benoit, & Garry, 2003; Proksch & Slapin, 2010; Slapin & Proksch, 2010). First, parliamentary statements are low-cost and discipline-free initiatives. MPs have the liberty to take the floor without obtaining the permission of the party leadership and address any issue of their choosing. Secondly, as Bäck and Debus (2016, p. 16) put it, parliamentary speeches, compared with other activities, are less prone to selection bias because "although controversial issues may give rise to more speeches, even the most uncontroversial ones will attract some attention from MPs." That is, parliamentary speeches have much more variation in terms of issues covered than other types of parliamentary activities and this allows for a fine-grained analysis of parliamentary agenda diversity.

Data and Methods

I utilize original datasets of the biographies of 1,100 MPs and over 18,000 statements made by these MPs during the period of 2002–11.[1] I extracted the statements from the website of the Grand National Assembly of Turkey (GNAT). Two coders participated in the coding process after receiving intense training until the intercoder reliability reached 90 percent.[2] Within the framework of the Comparative Agendas Project (CAP), speeches were content-coded based on the CAP's codebook.[3] The content-coded speeches were then collapsed by MPs to match with MPs' biographical information and political characteristics.

Shannon's H (entropy) is utilized as the dependent variable to measure issue diversity, which is the sum of probabilities of the different possible issue categories

Table 1. Descriptive Statistics

Variables	N	Mean	Std. Dev.	Min	Max
Opposition	1,040	0.362	0.48	0	1
Female	1,040	0.0692	0.254	0	1
22nd term	1,040	0.502	0.500	0	1
Age	1,040	49.58	8.609	30	85
Total speech	1,040	20.54	29.48	0	359
Speech (log)	1,036	2.346	1.185	0	5.883
Electoral safety	1,003	2.209	2.632	0	15
Localness	1,040	0.646	0.478	0	1
Shannon's entropy	1,040	1.705	0.612	0.47	3
H-H Index (normalized)	1,040	0.619	0.226	0	1
Education	1,040	2.908	0.322	1	3
District magnitude	1,040	10.74	8.474	2	31

for each MP. This is a non-normalized diversity index that ranges from 0 to 2.50, with larger numbers indicating higher issue diversity.[4] Scholars of political agenda setting increasingly use Shannon's entropy to measure agenda diversity (e.g., Alexandrova, Carammia & Timmermans, 2012; Jones & Baumgartner, 2005; McCombs & Zhu, 1995), which is arguably superior to other diversity measures (Boydstun, Bevan, & Thomas, 2014).

Previous scholarship has shown that electoral motivations and role orientations affect MPs' engagement in parliamentary activities (Carey & Shugart, 1995; Ciftci & Yildirim, 2017); therefore, it is important to control for various political and sociodemographic factors. Political variables utilized in the empirical analyses include electoral safety, opposition status, and district magnitude, whereas sociodemographic variables are gender, age, localness (born in constituency), and education. I calculated the electoral safety by subtracting the MP's position on the party list from the number of seats won by the MP's party in that electoral province. In other words, this variable measures the MP's distance to the last available seat in his or her electoral province, where electoral safety becomes larger as the distance grows. Opposition status indicates whether the MP is a member of an opposition party and district magnitude measures the number of parliamentary seats allocated to each electoral province. Localness indicates whether the MP was born in his or her regional constituency. In addition, I control for the legislative term and total number of speeches made by each MP. Summary statistics are reported in Table 1.

Results

To the extent that my theory is correct, I would expect the female parliamentarians to attend to a wider range of policy issues in the parliament. Results based on ordinary least squares (OLS) models testing this hypothesis are reported in Table 2. The baseline model includes the variables female, speech volume, and electoral safety, and shows that female MPs speak about a wider range of issues, as indicated by the positive coefficient of the sex variable. The R-squared obtained from the baseline model indicates that these three variables do a good job of explaining the variation

Table 2. The Effect of Sex on Agenda Diversity

	Model 1	Model 2	Model 3	Model 4	Model 5
Female	0.111**	0.120**	0.141***	0.145***	0.111**
	(0.0531)	(0.0516)	(0.0547)	(0.0549)	(0.0526)
Speech	0.368***	0.349***	0.353***	0.370***	0.351***
	(0.0120)	(0.0136)	(0.0139)	(0.0121)	(0.0136)
Electoral safety	−0.0271***	−0.0101*	−0.0152***	−0.0213***	−0.00948*
	(0.00484)	(0.00576)	(0.00584)	(0.00564)	(0.00571)
Localness			0.0346	0.0365	0.0333
			(0.0284)	(0.0283)	(0.0279)
Education			−0.0200	−0.0326	−0.0501
			(0.0366)	(0.0372)	(0.0355)
Age			0.000398	0.00150	−0.00153
			(0.00139)	(0.00138)	(0.00138)
District magnitude		−0.00576***	−0.00430**	−0.00288	−0.00456**
		(0.00175)	(0.00200)	(0.00196)	(0.00193)
Opposition		0.0988***	0.0903***		0.102***
		(0.0295)	(0.0307)		(0.0298)
22nd term		−0.171***			−0.179***
		(0.0231)			(0.0238)
Constant	0.514***	0.636***	0.553***	0.522***	0.820***
	(0.0336)	(0.0357)	(0.128)	(0.130)	(0.130)
Observations	946	946	946	946	946
R-squared	0.545	0.577	0.553	0.549	0.579

Robust standard errors in parentheses.
***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

in the dependent variable. These results hold even after controlling for sociodemographic and political characteristics of the representatives. The variable female carries a positive sign and is statistically significant at $p < 0.05$ and $p < 0.01$ levels in all five models. Model 5 indicates that switching from male to female increases entropy score by more than 11 percent. Additionally, Models 1 through 5 show that gender, compared with other variables except the speech and term variables, does a much better job of explaining the variation in the dependent variable.

Electorally safe MPs prefer to focus on a narrower range of issues. One potential reason behind this is that an electorally safe place in the party list may free MPs from electoral pressures in terms of issue attention. Models 2, 3, and 5 report that opposition MPs prefer to speak about a wider range of issues and that MPs from larger districts focus on a narrower range of issues. The finding that district magnitude is negatively associated with agenda diversity may come as a surprise, as more populated constituencies are arguably more heterogeneous and therefore more likely to produce a wide range of constituency issues. A possible explanation for this finding might appeal to the constituency differences in economic development, with smaller constituencies being less developed and thus requiring attention in a larger number of policy issues. Finally, models 2 and 5 show that issue diversity was lower in the 22nd legislative term, as indicated by the term variable. All in all, these results lend strong support to the hypothesis that female parliamentarians, compared with their male counterparts, attend to a wider range of issues.

Additional Analyses

Given that female representatives constitute only 7 percent of all MPs in my data-set, I undertake additional analyses using different samples and dependent variables. First, I used the propensity score matching method to match a similar number of female representatives to their male counterparts based on their political and so-ciodemographic characteristics (i.e., the "nearest neighbor matches"). This allowed me to compare 63 female and 54 male representatives with very similar character-istics. Results based on the propensity matching method support my original find-ings. Second, I have replicated my models using two alternative dependent variables. Although Shannon's entropy index has been widely used by political scientists (e.g., Alexandrova et al., 2012; Jones & Baumgartner, 2005; Jennings, Bevan, & John, 2011; Jennings, Bevan, Timmerman, et al., 2011), there are other diversity measures used by scholars from other disciplines. Most recently, Boydstun et al. (2014) explored individual strengths and weaknesses of two commonly used diversity measures, Shannon's entropy and Herfindahl–Hirschman (H–H) Index, and concluded that the former is more sensitive to high and low values. For this reason, I replicated the empirical models reported in Table 2 using the normalized H–H index and found supporting evidence for my hypothesis.[5] Additionally, I have created an ordinal dependent variable by dividing the normalized H-H by two equal cut-points and estimated simulated probabilities for "low," "medium," and "high" diversity out-comes for male and female representatives. According to this, switching from male to female, while holding other variables constant at their means or modes, leads to substantively and significantly meaningful changes in the probability of having low (–53 percent), medium (–12 percent), and high-diversity scores (+57 percent).[6]

Finally, I have collected additional parliamentary speeches (over 4,000) from a new legislative term (1999–2002) to undertake additional analyses. I have included all female representatives (28) and randomly selected (195) male representatives from this period. As a result, with the addition of 223 representatives, my new sam-ple consists of 1,323 MPs. These new male and female representatives are balanced on electoral safety, entropy score and speeches; descriptive statistics are reported in Tables S1 to S4 in the Online Appendix. I replicated my baseline model with this new sample and found strong support for my hypothesis. Results are reported in Table S5a and S5b.

Discussions

A growing body of research examines the role of information processing on de-cision making under various political conditions. Although an increasing number of scholars point to the importance of cognitive capacities of individuals in explain-ing macrophenomena, scant attention has been devoted to how individual human beings process incoming information (Jones, 2017; Shaffer, 2017; Thomas, 2017). The present study aims to fill this gap by analyzing female–male differences in infor-mation processing in a parliamentary setting. Drawing on empirical findings in

cognitive science research, I argue that female representatives should speak about a wider range of issues in the parliament due to lower cognitive threshold of urgency for policy problems. Results based on multivariate regressions indicate that female representatives do indeed speak about a wider range of issues in the parliament, a finding that is robust to alternative model specifications and robustness tests.

These results have important implications for various lines of research in political science and public policy. In a recent study, Baumgartner and Jones (2015) argue that entropic information—information from the greatest diversity of perspectives—in organizations such as legislatures fosters problem discovery: "as social problems are complex, a wider range of information provides a better context for decision making than a narrowly focused discussion" (Baumgartner & Jones, 2015, p. 47). If female representatives do indeed focus on a wider range of policy issues, then increasing women representatives in legislatures may result in more effective parliamentary debates. More generally, women's attention to a wider range of societal issues may result in growing agenda diversity in legislatures, party manifestos, and election campaigns as women participate more in the political life. Greene and O'Brien (2016), for instance, found that increasing women representatives in legislatures leads to a larger scope of issues represented on party manifestos. A systematic comparison of legislative agenda diversity in similar countries with varying levels of women representatives may prove useful in advancing our understanding of whether agenda diversity at the individual level translates into legislative agenda diversity.

These findings have implications for gender studies as well. Previous scholarship found that women differ significantly from men in policy priorities (Schwindt-Bayer, 2006; Swers, 1998, 2001). Based on the findings reported in the present study, one might speculate that women do not simply care more about some issues (e.g., "soft issues"; see Bäck et al., 2014), but instead have a higher issue-carrying capacity that allows them to pay attention to various types of issues (e.g., "soft" and other issues) simultaneously. Research on gender differences in policy priorities has utilized individual policy issues as dependent variables and failed to address potential female–male differences in issue-carrying capacity. Gender differences in policy priorities can be explained in part by systematic male–female differences in individuals' issue-carrying capacity. A full answer to this must await further study.

All in all, although the findings reported here are provocative they are clearly not definitive. More work needs to be done in exploring how women differ from men in information processing and whether such micro-differences translate into macro-outcomes. It is also important to note that the research design utilized in this study does not allow us to distinguish between biological and social factors that shape female–male differences in political behavior. Experimental research designs in particular may prove useful in exploring causal mechanisms behind gender and/or sex differences in information processing.

Tevfik Murat Yildirim has recently completed his PhD in political science at the University of Missouri. His research broadly focuses on decision making and issue prioritization among voters and elites.

Notes

1. The analysis includes MPs who made at least two speeches in one legislative term. The electoral safety scores of those who are not affiliated with a political party (i.e., independents) are coded as "missing," as these MPs do not have a rank in the party list.

2. The intercoder reliability between two coders was over 93 percent, which was calculated based on a small sample of speeches.

3. The CAP codebook is available at https://www.comparativeagendas.net/pages/master-codebook

4. A hypothetical distribution of legislative speeches and diversity scores associated with these speeches are reported in Table S6 in the Online Appendix.

5. Results are reported in the Online Appendix.

6. The simulated probabilities were obtained from ordered logistic regressions, where independent variables were held at their means or modes.

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