

You Research Like a Girl: Gendered Research Agendas and Their Implications

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ABSTRACT

Political science, like many disciplines, has a “leaky-pipeline” problem. Women are more likely to leave the profession than men. Those who stay are promoted at lower rates. Recent work has pointed toward a likely culprit: women are less likely to submit work to journals. Why? One answer is that women do not believe their work will be published. This article asks whether women systematically study different topics than men and whether these topics may be less likely to appear in top political science journals. To answer this question, we analyzed the content of dissertation abstracts. We found evidence that some topics are indeed gendered. We also found differences in the representation of “women’s” and “men’s” topics in the pages of the top journals. This suggests that research agendas may indeed be gendered and that variation in research topic might be to blame for the submission gap.

In a 2018 symposium organized by Brown and Samuels (2018), the editors of five political science journals found no evidence of systematic gender bias in the editorial or review process. However, they did find evidence of a notable submission gap: the pool of possible articles at all of the journals was heavily dominated by men. This matters for the leaky pipeline and for the status of women in the field in general. If women publish less than men (Teale and Thelen 2017), it will be more difficult for them to succeed in the discipline. Moreover, work that is published by women is cited less often than work published by men (Dion, Sumner, and Mitchell 2018; Mitchell, Lange, and Brus 2013). Thus, the contours of the problem become even more evident.

Several theories have emerged to explain the submission gap, including risk aversion (Djupe, Smith, and Sokhey 2018) and a “perception gap” (Brown et al. 2018). This article proposes a different and perhaps compatible answer: research topics may be gendered, and topics disproportionately studied by women may be perceived as “niche” and unsuitable for generalist and higher-ranked journals.

To determine whether there are indeed gendered research topics, we used a structural topic model (STM) (Roberts, Stewart, and Tingley 2014) on a new and comprehensive dataset of dissertation abstracts. To telegraph our findings, we found evidence of topics that are systematically gendered. Furthermore, we found

that there is topic bias in the top journals in the field, and that the topics associated with women are those that are less likely to appear—even though the proportions of articles written about those topics mirror the proportions we found in the dissertations. The remainder of this article briefly reviews the existing literature on research segregation in academia. We then describe our data, method, and findings. We conclude with a discussion of how these findings may affect the pipeline.

GENDERED RESEARCH AGENDAS

Relative to its proportion of the discipline, women’s work is less likely to be published. Women also are more likely to be represented in journals that publish more comparative work, followed by international relations (IR) journals, and finally generalist and American journals (Breuning and Sanders 2007). This publication gap may be explained in part by a dearth of submissions by women (Brown and Samuels 2018; König and Ropers 2018; Nedal and Nexon 2018; Peterson 2018; Tudor and Yashar 2018). In other words, if women do not submit their work to journals, the journals cannot publish their work. What leads to this submission gap? Brown et al. (2018) explored the idea of the “perception gap,” or the feeling that certain outlets are less hospitable to women’s work. The perception gap, they argued, can contribute to the submission gap (Brown and Samuels 2018) and ultimately explain the publication gap documented by Teale and Thelen (2017). We argue that the cause of these gaps may originate even earlier in a scholar’s career with the choice of research agenda, which can shape where (or even if) a researcher chooses to submit her work.

Much is known about how research productivity and citations differ by gender; however, we know less about how research

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agendas, or topics of study, vary between men and women. This is particularly notable because there are good reasons to think that research topic has a profound effect on career outcome. Research topic plays a crucial role in determining a scholar's likelihood of getting a job, publication outlets, necessity of fieldwork or language training, pool of coauthors, availability of conferences, and

to produce a dissertation, we avoided the biases associated with publication and section memberships. Although dissertations typically are written with the goal of eventual publication, they seldom are directly published and thus are the scholarly product that is least affected by publication pressures. Moreover, dissertations are solo-authored and thus not contaminated by a

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so forth. This is a key determinant of all of those building blocks of the career outcome; if there are research topics that are systematically gendered, it may alter the career trajectories of women relative to men.

Gender segregation by topic has been studied most extensively in the STEM fields. Not only is the choice of the scientific-technical field gendered; gender differences also persist even within gender-atypical fields (Buccheri, Gürber, and Brühwiler 2011). Preliminary research into gendered research patterns in political science indicates that women are more likely to use qualitative methods (Breuning and Sanders 2007)¹ and different theoretical approaches (Maliniak et al. 2008) than men. Women are more likely to write articles about gender and racial issues—topics that are less likely to appear in top-ranked journals (Mathews and Andersen 2001; Young 1995).

The consequences of these disparities are potentially severe, and the disparities tend to only exacerbate and reinforce one another. Broadly speaking, if research topics favored by women are implicitly valued less than more men's topics, this can influence the perception gap, the submission gap, and the publication gap. Even when women's research is published, if it is siloed into "pink ghettos"—that is, particular specialized outlets deemed more suitable for feminine² research topics—the work will reach smaller audiences than "men's" work. This leads to lower citation counts, an increasingly relied-on metric for promotion and tenure. This further disadvantages women as they attempt to move through the ranks of the profession, making it so crucial to know if and how research is segregated by gender.

RESEARCH DESIGN AND DATA

Women are not equally distributed across the subfields. That said, the classifications of subfields also obscure a substantial amount of potential heterogeneity in research interests as a result of aggregation and the choice of categories. Existing research on gender segregation by research field is based largely on studies of conference participation and publications in IR and comparative politics (e.g., Breuning and Lu 2010; Maliniak et al. 2008). This provides an incomplete picture of the discipline as a whole. In other words, we have little information about the topics favored by women and where women's and men's research interests are more (less) likely to overlap.

For a more nuanced understanding of gender gaps in research topics, we collected data on political science dissertations. By using dissertations as the unit of analysis, we avoided several problems and confounding factors present in existing studies of women's research interests. Because every graduate is required

coauthor's preferences, resulting in a purer, less-noisy reflection of the author's research interests.³

Our data from the ProQuest Central database consisted of every English-language dissertation that lists as its first subject "political science," "politics," or "government" from 2000 to 2013; 2,055 dissertations fit these criteria. For each dissertation, we knew the author's name and the dissertation title, abstract, and year. We used authors' first (given) names to probabilistically predict their gender (Sumner 2018).⁵ In our sample, there were 659 dissertations (36.4%) that we identified as woman-authored, 973 that were man-authored (53.8%), and 176 (9.7%) for which we were unable to predict the author's gender. By omitting these 176 observations, 1,808 dissertations remained in our sample.⁶ From that sample, and to control for school effects (i.e., a probable confounder between topic and gender), we omitted those from schools with fewer than three filed dissertations. Finally, we removed two dissertations that were filed without abstracts. Our ultimate sample size was 1,543.

METHODOLOGY AND FINDINGS

Dissertation abstracts provided a finely grained sense of what scholars study at the beginning of their career and how they describe their research. STM analyzed the content of the abstracts: identifying which words were often used together (i.e., topics), how frequently those topics appeared in each dissertation (i.e., prevalence), and which author characteristics⁷ covaried with topic prevalence (Roberts, Stewart, and Tingley 2014). STM allows topics to be generated by the data rather than be defined beforehand, producing two quantities of interest: (1) a group of topics identified by groupings of words, and (2) associations between those topics and author characteristics.⁸

More formally, in this model, each dissertation abstract is a mixture of topics. For example, a dissertation abstract may be about game theory and European politics. Each topic consists of different words: game theory, for instance, is likely to use the words "equilibrium," "model," and so forth. The first step in estimating this model was determining the number of topics most likely to exist in the data. Although there were a few sources we could rely on to determine how many topics were likely to exist—for instance, we could determine that the number of topics is equal to the number of APSA sections—we decided instead to take a data-driven approach.

After identifying 61 topics, we could analyze which topics emerged and how they covaried with gender. Topics were identified by the lists of words that occurred within them. We used the FREX (i.e., FREquent and EXclusive) measure favored by Roberts,

Stewart, and Tingley (2014). We then assigned the topics more intuitive labels based on our interpretation of the words as well as an examination of abstracts with high proportions of each topic. The topic labels (see appendix C) are not important and are debatable, but they are useful as shorthand, and we use them as such for the remainder of this article.

prevalence in an abstract and the independent variables were whether the author was a woman, the author's school, and the year. Each dot is the coefficient estimate on the "woman" dummy. Topics with coefficients to the right of the dashed line are more likely to appear in woman-authored dissertations; dots to the left are less likely to appear in woman-authored dissertations (or are

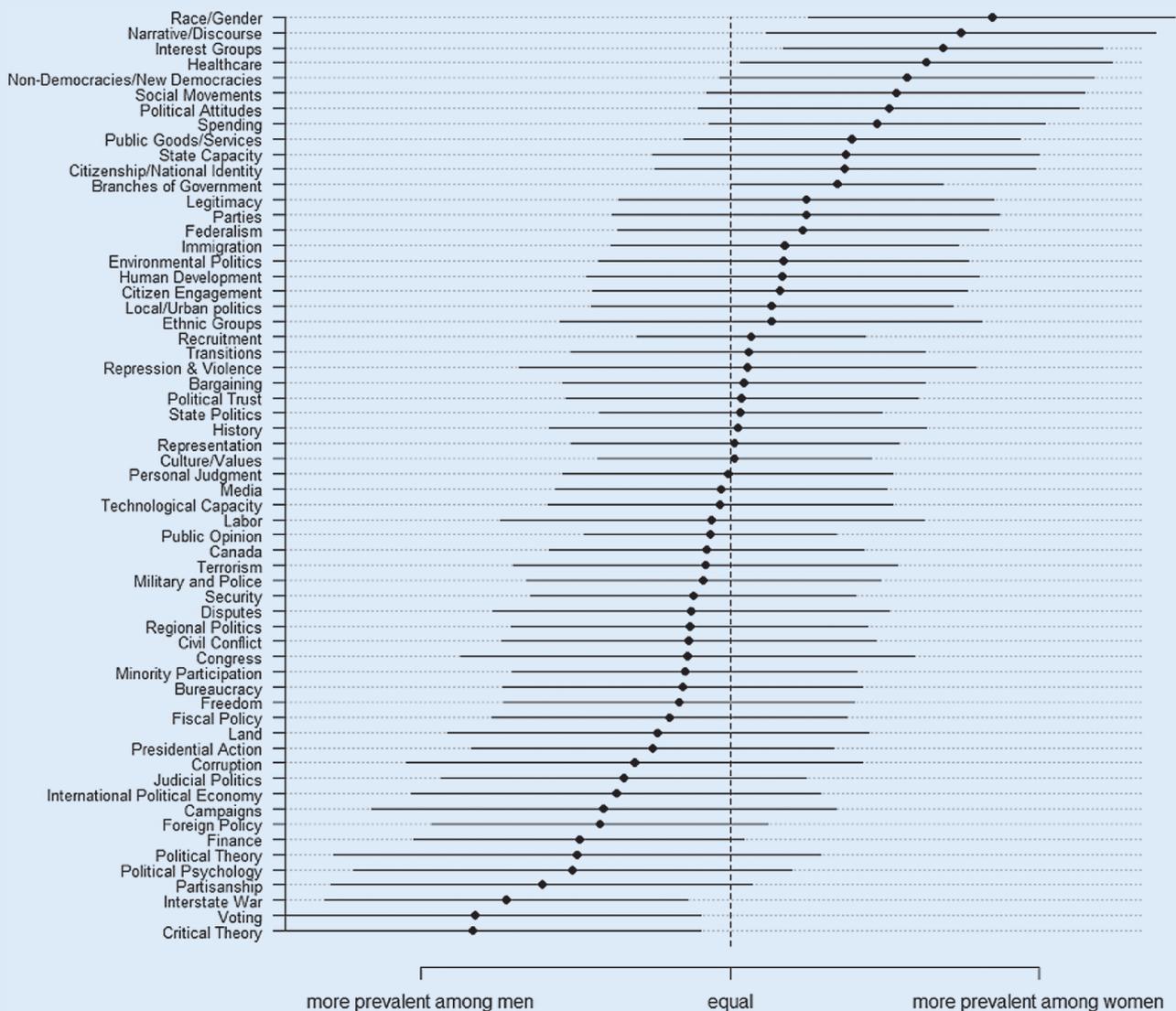
That said, most topics "trend" gendered even if they were not statistically significant; few appeared gender neutral; and many of the "big" topics in political science—voting, campaigns, Congress, and interstate war—were distinctly dominated by men or trended that way.

We found that women are more likely to choose some topics than men, less likely to choose others, and equally likely to choose the remainder. Figure 1 presents the results of a series of linear regressions in which the dependent variable was topic

more likely to be written about by men). The solid lines are 95% confidence intervals.

We found that there are topics systematically associated with women and fewer systematically associated with men. Topics

Figure 1
Prevalence of Topics by Gender



disproportionately written about by women include race, health-care, narrative and discourse, and branches of government. These were the only topics statistically significant at a 95% confidence level. Many more were borderline significant, including non-democracies and new democracies ($p=0.09$), social movements ($p=0.10$), and interest groups ($p=0.10$). By contrast, only four topics had a negative coefficient and were statistically significant at the 90% level: critical theory, voting, interstate war, and partisanship. That said, most topics “trend” gendered even if they were not statistically significant; few appeared gender neutral; and many of the “big” topics in political science—voting, campaigns, Congress, and interstate war—were distinctly dominated by men or trended that way.

We also found evidence that APSR, AJPS, and JOP all publish articles about women-dominated topics at lower rates than they do either man-dominated or gender-neutral topics. At first glance, this may appear to be evidence of bias, but we found that these topic ratios mirror those in the dissertations.

Topic Prevalence in Major Political Science Journals

With an idea of which topics are woman-dominated, man-dominated, or gender neutral, we could analyze whether those we previously found to be gendered appear more or less often in the top political science journals. In other words: Are topics most favored by women less likely to appear in top journals? If this were true, it could provide an explanation for the leaky pipeline. That is, if women pursue topics that—for whatever reason⁹—are less likely to be published in major journals than topics pursued by men, they may fare less well in tenure and promotion and therefore be less likely to be promoted or more likely to leave the discipline.¹⁰ If “appearing in the top three journals” is also a heuristic for being valued by the field as a whole, this could indicate that topics written about more often by women may be less valued by hiring committees, suggesting another pathway by which women may leave the discipline.

To test this, we gathered abstracts from *American Political Science Review* (APSR), *American Journal of Political Science* (AJPS), and *Journal of Politics* (JOP) for the years 2000–2018.¹¹ We chose these journals because they are generally recognized as the top journals in the field, publication in which has the greatest impact on a scholar’s career. They also are generalist journals and, as such, should be the most open to accepting a broad range of research topics. For each abstract in the journal sample, we estimated what proportion of the abstract was made up by each topic we found in the dissertations. We then assessed the top three topics for each article along with how prevalent that topic was within the abstract.

We found that the most common primary topics for articles in these three journals during this period were voting (9.4% of all articles included this topic), political psychology (6.1%), and partisanship (5.2%). This ordering was the same when we limited the sample to articles published in AJPS and JOP. APSR “broke the mold” somewhat, with the top three primary topics being voting (8.7%), political theory (7.6%), and critical theory (6.7%).

We found that topics favored by women tend to appear at low rates in these journals, whereas topics favored by men appear at fairly high rates. Moreover, in AJPS, the seven women-gendered

topics were the primary subject of 8.3% of articles, whereas the four topics associated with men were the primary subject of 20.2% of articles. For APSR, the percentages were, respectively, 8.1% and 20.1% and for JOP, 5.6% and 19.2%. For secondary topics, the percentages were slightly more favorable but still favoring men (i.e., 7.8% women and 15.9% men in the pooled sample). Nevertheless, this is roughly proportionate to the primary topics in our dissertation sample: 8% of dissertation abstracts were women-gendered topics, 21.1% were topics favored by men, and 71% were gender-neutral topics. This means that although topics favored by women appear at lower rates than other topics in the top three journals, it is the same lower rate at which they appear in dissertations.

DISCUSSION

Recently, more interest has been given to the leaky pipeline—the idea that there are fewer women at each successive stage of the professional academic-career ladder. Existing research found that women are less likely to be cited than men and also that women publish at a lower rate. A recent symposium of journal editors found no evidence of bias in the editorial process but revealed evidence of a “submission gap”—that is, women submitting to journals at a lower rate than men. Brown et al. (2018) proposed that this may be due to a perception gap about the likelihood of publishing in journals. Where does this perception gap originate?

We tested the idea that research topics are gendered. If this were true, it may be that women self-select out of submitting to top journals because they believe their topics are not a good “fit.” We found that several topics—including race and gender, health care, and interest groups—are written about by women more often than by men, and fewer topics, including voting and interstate war, are more often pursued by men. We believe this is evidence that there are gendered research topics; however, the majority of topics that we uncovered were effectively gender neutral, although some may trend one way or the other.

There are various reasons why the topics may be gendered. The aim of our study was to establish that the topics *are* gendered in order to enable future research on why. This section discusses a few potential explanations. First, some topics are more closely related to men’s or women’s lived experiences, social roles, and interests.¹² This is likely to be why gender, for instance, is a topic studied more often by women. Second, research topics likely are shaped by the interests and input of a student’s mentor. If women tend to flock to (or from) certain mentors (or vice versa), the mentor’s interests will be disproportionately represented in dissertations and eventual publications. Conversely, if a person does not mentor many women, we would not expect as many women to study that topic. Third, it seems distinctly possible that topic selection changes as a result of trends in journals. If journals become more open to traditionally feminine topics, this may “legitimize” them and render them gender neutral.

We also found evidence that *APSR*, *AJPS*, and *JOP* all publish articles about women-dominated topics at lower rates than they do either man-dominated or gender-neutral topics. At first glance, this may appear to be evidence of bias, but we found that these topic ratios mirror those in the dissertations. In other words, fewer papers are published about “woman’s” topics but fewer dissertations are as well.

What we cannot ascertain is how much endogeneity might be a concern in these data. Dissertations are constantly being written and articles are constantly being published, and it seems reasonable to expect that the causal arrow may run in the opposite direction: perceived interest in certain topics may increase or decrease their prevalence in dissertations. Although we controlled for time in our models, we cannot explicitly model these temporal processes. That is, we cannot rule out that the low rate of “women’s” topics in dissertations is not driven by the lack of coverage of those topics in the top journals. We leave this task to future research. Furthermore, even if the rate of “women’s” topics in the journals does mirror the rate in dissertations, this nevertheless suggests that journals may gain a reputation for not publishing “women’s” topics, which may dissuade women from submitting.

If the submission gap is due to the perception gap, it is important to conceive of the latter as it relates to journals’ acceptance of women as well as journals’ acceptance of feminine research topics. That is, it is not simply a case of particular journals being perceived as less welcoming to women authors. In some cases, women study different topics than men, and there may be a perception that journals are less likely to publish studies on those topics. Given that the publication pressures of the tenure-track can create incentives to submit to journals with a high perceived probability of acceptance, this perception may lead risk-averse women to refrain from submitting their work to those journals.

It also is important to note that even when men and women study the same topic, they may approach it differently. In other words, women and men may both study civil conflict, but most of the work on rape during civil war likely is conducted by women. If the man’s work is seen as broad and thus worthy of a top generalist journal, the woman’s work may be relegated to the “pink ghetto” of a subfield journal due to its “feminine” approach.

Remedying the perception that journals may not publish certain topics is an issue of normative concern. Our evidence suggests that there is a role for editors and reviewers in changing these perceptions. However, many plausible interventions (e.g., sponsoring special issues) may come with unintended negative consequences and reinforce gendered topic segregation. Elaborating on and testing these interventions is beyond the scope of this article. For this reason, we choose to issue no prescriptions; instead, we hope to encourage discussion and research about potential remedies as well as their consequences.

If women are underrepresented in journals due to topical bias, this can have profound effects on the pipeline. Awareness that certain work is less likely to appear in the top journals also may affect scholars earlier in their career, with certain women choosing to not specialize in these “less-favored” areas in the first place. This, in turn, affects not only careers but also the creation of knowledge in general. If implicit biases dissuade scholars from exploring gendered topics, we ultimately will know less about

them than we would if these biases did not exist. In this way, the gendering of research agendas affects us all.

SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit <https://doi.org/10.1017/S1049096519000945>

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NOTES

1. See also Brown et al. (2018).
2. We remind readers that we define “feminine” and “masculine” research topics from a different perspective. Whereas many may view feminine topics as those most closely related to women’s lived experience, we view them as those that are gendered by virtue of those writing most about them. In other words, topics not traditionally viewed as “women’s issues” may become feminized if they are more likely to be written about by women than men.
3. We acknowledge the role that advisers—and, to a lesser extent, other committee members—play in shaping dissertations. However, a dissertation is the product that a scholar produces that is *least* affected by outside influences.
4. They were 99.8% political science.
5. Although gender and sex often correlate, they are not the same (Bittner and Goodyear-Grant 2017). Gender is a social construct, whereas sex is a biological concept. We expected that given names, in many cases, would provide insight into an author’s gender, whereas we were unable to determine an author’s sex from dissertation metadata. Yet, it is important to acknowledge that gender is multifaceted and fluid, and we cannot use names to perfectly predict gender nor can we fully identify an author’s gender presentation based on a name.
6. Online appendix B explains why we may be unable to predict author gender. The results did not differ substantially with the inclusion of hand-coded observations. We used the automated coding only in our analysis so as not to mix data with different sampling strategies.
7. In addition to gender, we controlled for time and school, both of which we expected to be confounding variables in the regressions.
8. Consistent with the advice in Roberts, Stewart, and Tingley (2014), we used spectral initialization for the initial estimation and global uncertainty when estimating the differences.
9. There are many reasons why this could be true, including but not limited to women being less likely to submit, editorial considerations, and reviewer tastes.
10. Publishing books is an alternative path to career success. See Samuels and Teele (2018) for an analysis of the gender gap in books.
11. We ended journal data collection in 2018 to allow adequate time for dissertations defended in 2013 to appear in print.
12. We thank an anonymous reviewer for calling our attention to this point.

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