SHORT ARTICLE

The Gender Readings Gap in Political Science Graduate Training

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What influences gender representation in assigned readings during graduate training? Whereas recent studies have identified gender gaps in citations and publications, less is known about the readings used to train future political scientists. Introducing a unique data set of 88,673 citations from 905 PhD syllabi and reading lists, we find that only 19% of assigned readings have female first authors. Scholarship by female scholars is underrepresented in all subfields, relative to several benchmarks. Both supply- and demand-side factors affect gender representation. First, representation of female-authored readings varies by the size of the pool of female scholars, over time and across subfields. Second, instructor gender and department composition affect demand for female-authored scholarship. As departments hire more female faculty, instructors of both genders become more likely to assign female-authored work. This article contributes an original data set to the study of graduate training and advances understanding of gender diversity in political science.

Growing evidence documents gender gaps in political science publications and citations (Djupe, Smith, and Sokhey 2019; Maliniak, Powers, and Walter 2013; Mathews and Andersen 2001; Mitchell, Lange, and Brus 2013; Zigerell 2015). Only recently have studies considered one potential early source of disparities: graduate training. Assigned readings signal to students who the field's top scholars are and what the principal debates are. Doctoral students who are assigned few female-authored readings may become less likely to cite women in their own scholarship and teaching, thus affecting women's hiring and promotion. An absence of same-gender scholarly role models could also hurt female graduate student retention (Alper and Gibbons 1993; Gilbert 1985; Mershon and Walsh 2016, 1). As a result, women's underrepresentation in assigned readings may inadvertently contribute to women's underrepresentation in the discipline more broadly. Including women's scholarship may also have wider implications for academic inquiry since exposure to diverse voices can prompt students to ask new and different research questions.

In this article, we assess the level and determinants of female scholars' representation in assigned readings in political science. Recent studies find that female-authored readings are significantly less represented than male-authored readings in at least two subfields (international relations [IR] and American politics; Colgan 2017; Diament, Howat, and Lacombe 2018; Phull, Giflikli, and Meibauer 2019). We ask: How does context affect gender representation in graduate students' assigned readings—that is, the proportion of readings authored by women?

Analyzing our new data set GRADS (the GRaduate Assignments DataSet), with 88,673 readings from 840 syllabi and

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Data and supporting materials necessary to reproduce the numerical results in the article are available in the *JOP* Dataverse (https://dataverse.harvard.edu/dataverse/jop). An online appendix with supplementary material is available at https://dx.doi.org/10.1086/704784.

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65 reading lists, we find that 18.7% of readings' first authors (and 19.1% of all authors) are female. This percentage is lower than several benchmark measures of women scholars' presence in the field. Both supply- and demand-side factors influence the extent to which instructors assign female-authored work. On the supply side, gender representation varies across time and subfields. On the demand side, gender representation is lower in top-ranked departments and those with few female faculty. Our article advances research on diversity in political science and introduces a new data set for assessing trends in graduate training.

THEORETICAL FRAMEWORK AND HYPOTHESES

How do faculty select readings for syllabi and reading lists? We argue that context—by which we mean the multifaceted professional circumstances in which instructors and authors are embedded—affects both supply of and demand for female-authored scholarship. Out of the universe of potentially assignable scholarly articles, books, and other documents (supply), instructors must determine what to assign (demand). The supply of female-authored work varies (*a*) by subfield and (*b*) over time. Meanwhile, demand varies as a result of (*c*) gender norms and (*d*) networks.

We assume that gender norms affect student and faculty behavior and that academic institutions (e.g., departments) become gendered (Lorber 1994, 111; Rivera 2017). Incorrect implicit biases hold that women are less competent than men (Eagly 1994; Leeds 2013) and worse at math than men (Bell and Burkley 2014; Morrow-Jones and Box-Steffensmeier 2014). By age six, children begin to associate brilliance with being male (Bian, Leslie, and Cimpian 2017). Lifelong implicit biases in turn can shape implicit norms in academic institutions.

On the supply side, we hypothesize subfield and temporal variation.[1] Over the past half century, changing gender norms have led departments gradually to hire more female faculty. Nonetheless, the proportion of women entering different subfields varies due both to distinctive, gendered interests and to gendered self-stereotyping in math-heavy subfields.

H1. The proportion of female-authored assigned readings in PhD-level syllabi and reading lists increases as a function of publication year.

H2. PhD-level syllabi and reading lists in subfields with greater (lower) presence of female scholars will have higher (lower) representation of female authors in assigned readings.

On the demand side, we expect that both instructor traits and the characteristics of academic institutions (e.g., gender composition, rank) affect gender norms and networks. First, we expect female instructors to assign more female-authored work than male instructors—a consequence of same-gender networks. Second, we expect department-level variation. Women's presence in organizations leads to significant organizational changes (Post and Byron 2015); networks and norms will shift as departments hire more women. Interpersonal relations (e.g., hallway chats) raise awareness of women's research and underrepresentation in the discipline. We expect that the prestige of a department's PhD program may also matter. Higher rank can exacerbate implicit biases about men's superior competence (Knobloch-Westerwick 2013; Moss-Racusin 2012). Instructors in top-ranked programs are also disproportionately male, leading to exclusively male research networks that can limit women's access (Massen et al. 2017).

H3. Female instructors will assign more female-authored readings than male instructors will.

H4. Political science departments with fewer (more) female faculty will have lower (higher) representation of female authors in assigned readings.

H5. Departments with top 10 PhD programs will have lower representation of female authors.

SELECTION OF A BENCHMARK

Determining whether a given level of gender representation is high or low presents a theoretical and empirical problem for scholarship on gender diversity. Although some might find a 50-50 representation normatively desirable, it is not a practical benchmark. Teele and Thelen (2017, 435) note that the pool of female-authored research is "a moving target"; women have rising access to academic careers, but the pipeline is still leaking. Teele and Thelen adopt three potential benchmarks: (1) the female share of PhDs granted (38% in 2016, from the National Science Foundation survey of new doctorates), (2) the female share of American Political Science Association (APSA) members (31%), and (3) the female share of tenure-track faculty at the 20 largest PhD-granting departments (as a proxy for research-active scholars) (27%). Their own research suggests an additional benchmark: (4) the share of publications with female first authors in 10 top journals between 2000 and 2015 (26.7%; 21.5% in the top three).[2]

1. Time could also affect demand as changing norms shape faculty behavior (see the online appendix).

2. Another benchmark could be the female percentage of submissions (Brown and Samuels 2018).

Allowing the benchmark to vary by subfield is important since the supply of assignable work varies by subfield. In figure 1, we display Teele and Thelen's first, subfield-invariant benchmark, but we also develop subfield-specific variants of the second, third, and fourth benchmarks. We use benchmark (2) gender-specific membership data, by subfield, from APSA's website (https://www.apsanet.org/RESOURCES/Data-on-the-Profession/Dashboard/Membership; accessed October 19, 2016) and (3) data on female proportions of instructors in each subfield from our own data (approximating the faculty at PhD-granting institutions). We derive benchmark (4) data on female first-authored publications by subfield from our own reanalysis of Teele and Thelen's (2017) data.

EMPIRICAL ANALYSIS

We employed multiple modes of data collection to create GRADS: a data set of optional and required readings from 840 syllabi and 65 reading lists. We collected documents through our own and others' web searches; a September 2016 survey of APSA member faculty, a summer 2016 survey of graduate program directors by the APSA Research and Development Division, and the efforts of PhD student project affiliates at 27 of the top 50 PhD programs in the fall of 2016. Duplicates and earlier versions were excluded. Research assistants extracted and parsed citations using manual and machine coding (see the online appendix).

As a multilevel data set, GRADS includes 137,305 (nonunique) authors, 88,673 (nonunique) readings, 606 (unique) instructors, and 95 US-based political science departments. To code author gender (male/female), we created a list of known scholars whose genders would be miscoded or uncodable using automated methods.[3] We coded remaining given names using lists from US and UK censuses and social media data. We also coded subfield, syllabus/reading list year, instructor gender, and department rank and composition (see the online appendix).

Our primary unit of analysis is the syllabus/reading list. Our dependent variables—proportion of readings with (*a*) female first authors, (*b*) only female authors, and (*c*) mixed-gender authors—run from 0 to 1 and are modeled with fractional logistic regression. Though women tend to appear in later places in author order, the first and second variables yield quite similar results.[4] In a few analyses at the citation level, we weight observations to count syllabi equally.

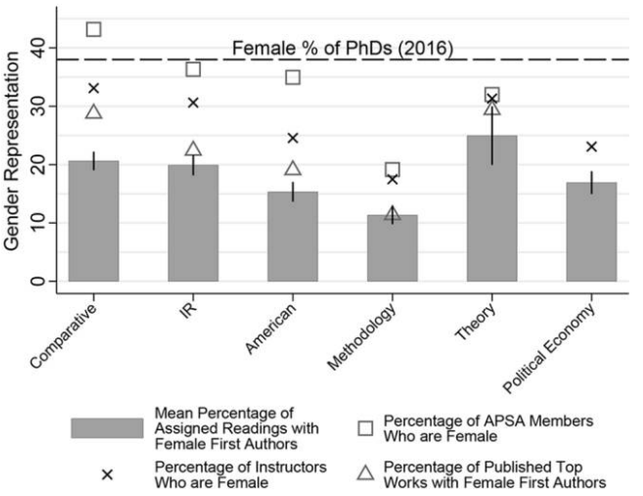

Figure 1. Percentage of assigned readings with female first authors, by subfield. Source: GRADS. Whiskers represent 95% confidence intervals.

We find that female-authored readings are underrepresented. Figure 1 depicts the average percentage of female first-authored readings in major subfields. In most subfields, the percentage is lower than all four benchmarks: the female proportions of earned doctorates, of instructors in our sample, of APSA members, and of first authors who are female in top journals. Methodology has the lowest gender representation (>10%) and theory has the highest representation (>30%). Overall, 18.7% of first authors (19.1% of all authors) are female.

The gap between the proportion of research-active scholars who are female and gender representation in readings is in part due to the stickiness of syllabi; instructors assigning "the classics" ultimately have access to a smaller pool of female-authored research. In the online appendix, we show that publication year is strongly related to gender representation. Only 4% of assigned works published before 1901 are female-authored, while over 25% of those published in 2012 or later are female-authored. However, underrepresentation of female-authored work is not simply a function of time. The subfield of theory is instructive: though it has the highest proportion of female-authored scholarship, it also has the highest concentration of classics.

In multivariate analysis, we find support for hypothesis 1: publication year significantly predicts gender representation (online appendix). In support of hypothesis 2, women's representation is significantly higher in subfields with more female scholars (online appendix). Still, IR and theory instructors assign more work by women than predicted. In IR, senior female scholars have created forums for mentoring female junior scholars (e.g., Journeys in World Politics, Women in Conflict Studies [WICS], Pay It Forward, Women's Caucus

3. We concur with Maliniak et al.'s rationale for coding gender identity as a binary (2013, 1).

4. See the online appendix for further discussion. Women constitute 18.7% of first authors, 19.6% of second, 19.3% of third, 21.1% of fourth, 22.7% of fifth, and 25.7% of sixth authors.

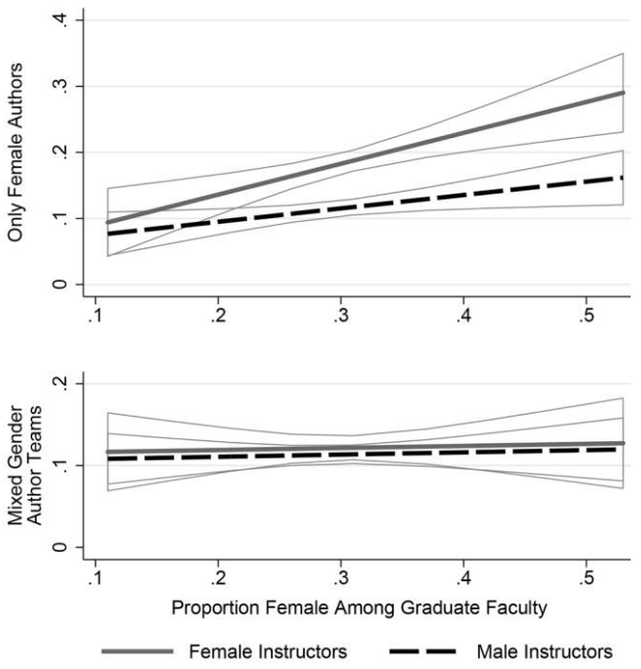

Figure 2. Gender representation in assigned readings, by department gender composition. Source: GRADS. Predictions and 95% confidence intervals from fractional logistic regression.

for International Studies [WCIS]), likely shifting norms. High representation in the subfield of theory may result from the early prominence of feminist theory.

Demand-side factors also matter. In support of hypotheses 3 and 4, instructor gender and a department's proportion of women affect syllabi. When only 10% of instructors are female, faculty assign fewer readings by women—just 10%.[5] In evenly gender-balanced departments, about 30% of readings have female first authors. Figure 2 shows that department composition shapes both men's and women's behavior, yet female instructors are more responsive, perhaps due to the role of same-gender networks. However, neither instructor gender nor department composition affects the rate of assigning readings authored by mixed-gender teams.

We find mixed support for hypothesis 5. In bivariate analysis, departments with top-ranked PhD programs assign significantly fewer female-authored readings (online appendix). However, program rank and department gender composition are correlated ($r = .30$); top 10 programs have fewer female faculty. Importantly, controlling for department gender composition, the effect of program rank disappears. In multivariate models, the strongest determinants of assigning female-authored readings are subfield and department gender composition. The online appendix presents multivariate results and separate models for male and female instructors.[6]

CONCLUSION

This study advances scholarship on gender diversity by presenting evidence of a gender readings gap in graduate training in political science. Female-authored work is underrepresented relative to several benchmarks. We introduce what is to our knowledge the first comprehensive data set of PhD-level assigned readings across a discipline. Rates of assigning women's work vary significantly across subfields even after controlling for subfield gender composition. Context—particularly departments' gender composition—matters significantly. As departments hire more female faculty, faculty more frequently assign female-authored readings. Additionally, scholars can use our data set to address related questions (e.g., on ethnic minorities' representation, the impact of the readings gap on the citation gap, the influence of faculty networks on citations) and to diversify syllabi or publications, if they seek to do so (e.g., Beaulieu et al. 2017; Sumner 2018).

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5. Bivariate predictions from a multilevel linear model (department is a contextual variable).

6. Female first author readings range from 13.2% in the *American Political Science Review*, to 21.2% in the *Journal of Politics*, to 35.3% in the *Annual Review of Political Science*.

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