Improving Women's Advancement in Political Science: What We Know About What Works

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ABSTRACT   Women earn approximately half of all bachelor's degrees in political science but they comprise only 22% of full professors. Scholars have offered various likely explanations and proposed many interventions to improve women's advancement. This article reviews existing research regarding the effectiveness of these interventions. We find that many of the proposed interventions have yet to be fully evaluated. Furthermore, some of the policies that have been evaluated turn out to be ineffective. Women's mentoring and networking workshops are the most promising of the fully tested interventions. The potential for failure underscores the need for additional evaluation of any proposed intervention before widespread implementation.

Although men and women earn bachelor's degrees in political science at approximately equal rates, only 40% of PhDs in political science are awarded to women, and only 35% of assistant professors and 22% of full professors are women (Nelson 2017). Women are less likely to publish in top journals or to be cited or promoted (Hesli, Lee, and Mitchell 2012; Mitchell and Hesli 2013; Teele and Thelen 2017). Dozens of solutions have been proposed to mitigate the gender gap (e.g., APSA Workshop on the Advancement of Women 2005; Monroe et al. 2014). For example, the report of the APSA Committee on the Status of Women in the Profession (2016) provided more than 70 recommendations that address the full gamut of potential barriers and suggest a wide variety of policy ideas. For example, the report advocates for the creation of diversity postdoc positions, expanding childcare programs, and language standards for tenure documents or review letters, among many others. However, the 2016 task force report cited only one published research article demonstrating the effectiveness of a recommended intervention (i.e., a study of mentoring by Blau et al. 2010) (APSA Committee on the Status of Women in the Profession 2016). Although much important work has documented barriers to women's advancement and proposed solutions have proliferated, there has been comparatively little systematic analysis of the effect of interventions.

We extend this work by reviewing research that evaluates the effectiveness of interventions. We discuss all published systematic evaluations of interventions in political science and related fields and present four findings. First, little research exists on this question. The majority of proposed recommendations have never been tested. This implies the need to prioritize such research in the future. Second, there is good evidence for the utility of women's mentoring programs. Third, we find suggestive evidence in favor of changes in hiring practices, resilience training, department service dashboards, and student evaluations. However, our fourth finding is that many other interventions yield negligible, null, or even negative effects on women's advancement. Given the failure of several widely promoted programs, we conclude that political scientists should prioritize systematic evaluation before interventions are broadly implemented.

SCOPE AND METHOD OF REVIEW

We systematically searched for research that evaluates interventions to improve women's advancement in political science and related fields. This included any study that implemented a specific program or change intended to improve women's outcomes in academic political science and evaluated its effect. We included as our "evidence" only those studies published in journals or books since 2008 that evaluated the effectiveness of an intervention designed to improve outcomes for graduate students and faculty (we omitted studies of undergraduate recruitment or retention). Within those parameters, we intended for this review to be as

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exhaustive as possible and not biased by researcher priorities. We supplemented the evidence with references to research that does not meet the criteria but provides useful information (theoretical or contextual), clearly noting when we did so.

Evaluation is defined as comparing the intervention group to a group that did not receive it.[1] Ideally, this would involve random

their own supporters. It also points to the importance of including relevant behavioral measures in evaluations.

In a more successful approach, Bekki et al. (2013) reported the positive impact of online resilience training (i.e., CareerWISE). Compared with the delayed-access control group, female STEM graduate students who were randomly assigned to spend at least

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assignment, which allows for a causal attribution of observed differences to the tested intervention. However, due to the low incidence of randomization in this area and because randomization is not always feasible, we included any study that used an untreated comparison group, explicitly noting the presence or absence of randomization. (More information about study identification is in the online appendix.)

We found only three studies that tested interventions in political science and evaluated their effect relative to a comparison group: Barnes and Beaulieu (2017); Peterson et al. (2019); and Unkovic, Sen, and Quinn (2016). Because there are so few, we expanded the scope of research to include other disciplines, giving more weight to social science fields and cross-disciplinary and university-wide interventions. When we used evidence beyond political science and related social sciences, we focused on interventions that address aspects of women's psychology, publishing, and university structure that we expected to function similarly across disciplines. A comprehensive and cross-disciplinary discussion of the sources of academic gender gaps is beyond the scope of this review. However, for each intervention, we briefly explain why we think it addresses a particular gendered process that poses a barrier to women's advancement in political science—regardless of the field in which the intervention was tested. To the extent that interventions tested in other disciplines are intended to mitigate similar underlying barriers, that evidence can be informative in political science. (A more complete discussion of cross-disciplinary relevance is in the online appendix.)

Encouragement and Resilience

One well-documented explanation for the gender gap in women's performance in academia and beyond is that women are more likely than men to lack confidence in their abilities (Karpowitz and Mendelberg 2014, ch. 2). Accordingly, some interventions aim to improve women's outcomes by increasing the confidence and resilience of women in academia.

Unkovic, Sen, and Quinn (2016) sent an email invitation to apply for the annual summer meetings of the Society for Political Methodology (PolMeth) to a randomly selected half of graduate students attending top-50 political science programs. The invitations increased applications from men by 2 percentage points and from women by 3 percentage points. However, invited women who applied were *less* likely to be accepted than both women in the control group and men in the treatment group, primarily because they were less likely to submit the required faculty reference letters. Although the encouragement design increased applications, the null effect on acceptances highlights the pitfalls of interventions that rely on women to overcome barriers to securing

5 hours on the website reported substantially higher levels of problem-solving knowledge and moderately higher resilience and coping efficacy. However, there were null effects on four additional outcomes. In addition, outcomes were self-reported and measured within two weeks of accessing the training site; therefore, the longevity and behavioral impacts are unknown as well as the applicability beyond STEM.

Descriptive Representation among Decision Makers

Increasing the number of women in academic decision-making positions has been widely recommended on the assumption that they will exhibit less gender bias. However, the evidence suggests otherwise. In a randomized experiment, Moss-Racusin et al. (2012) asked 127 science faculty to evaluate resumés of identical applicants for a laboratory-manager position with randomly varied male and female names. Both male and female faculty rated the male as more competent and hirable, offering him a higher starting wage and more mentoring.

In Spain and Italy, randomly composed committees conducted nationwide reviews of candidates for academic promotion (in all academic fields). Women candidates fared no better—and worse in some situations—with additional women on the committee (Bagues, Sylos-Labini, and Zinovyeva 2017). A caveat is that the female percentage was low in the majority of committees (i.e., less than 40%). Research finds that women make a difference only if they are given power—for example, when they are a majority or have a veto (Karpowitz and Mendelberg 2014). It stands to reason, then, that a small increase in women's representation on committees will fail.

Consistent with the evidence of biased evaluations of women, some scholars have speculated that women's lower representation in top disciplinary journals is related to gendered biases in the peer-review process (Teele and Thelen 2017). However, the evidence on the use of double-blind review as a mechanism to narrow the publication gap is mixed. One study in ecology found that women's proportion of publications increased by 7.9% after the journal changed from single- to double-blind review, with no observed change in a comparable single-blind journal (Budden et al. 2008; Roberts and Verhoef 2016). However, more recent observational analysis found no difference between single- and double-blind journals, including in those same journals (Cox and Mongomerie 2019). In political science, the gender gap in authorship in journals is less a result of biased editorial processes (Brown and Samuels 2018) than of gender gaps in the submission pool (Brown et al. 2020). This provides further evidence that changes to the gender composition or process of reviews are unlikely to improve women's advancement in publication and promotion.

Hiring Process

One leak in the political science pipeline that is common across many disciplines is the loss of women in the transition from graduate school to their first tenure-track job (APSA Committee on the Status of Women in the Profession 2016). Changes to the hiring process may increase the number of women interviewed, offered jobs, and hired. However, these changes may fail to retain women over the long term.

When the University of California–Irvine (UC–I) implemented university-wide "equity advisers" (i.e., senior faculty assigned to monitor gender equity throughout the hiring process), the female proportion of faculty increased by 2 points more than the growth rate at other UC campuses. However, women subsequently left the university at a higher rate than other campuses (Stepan-Norris and Kerrissey 2015). Equity advisers may be insufficient to improve retention.[2]

Montana State University's science departments randomly assigned a diversity program to half of 23 faculty searches. Women composed 40% of short-listed and interviewed candidates in treated searches, compared to 20% in control searches in the same year. Treated searches made six times more offers to women (Smith et al. 2015). A voluntary hiring program at the University of Wisconsin–Madison also demonstrated positive correlations between program participation and women's hiring of similar magnitude (Sheridan et al. 2010). Thus, hiring interventions show some promise albeit with two important caveats. First, the numbers of faculty searches are small, implying the need for additional rigorous evaluation and replication. Second, retention is rarely measured but, when it is, evidence suggests a null effect.

Gender-Neutral Clock-Stopping

Gender-neutral tenure clock-stopping (GNCS) policies stop the tenure clock, typically for one year, for male and female faculty members when they have a child. These policies attempt to mitigate the "chronological time crunch" wherein childrearing overlaps with high job demands (APSA Committee on the Status of Women in the Profession 2016).

Antecol, Bedard, and Stearns (2018) tracked the tenure and publication outcomes for every newly hired assistant professor at a top-50 economics department from 1980 to 2005 and correlated them with the year that the department adopted a GNCS policy. Contrary to expectations, women hired after-versus-before GNCS policy adoption were 22 percentage points *less* likely to achieve

with women's outcomes included university "Status of Women" reports, official spousal hiring policies, on-site childcare, and flexible scheduling.

Teaching and Service Expectations

Women may face gender bias in student evaluations (Mitchell and Martin 2018) and heavier service loads (Pyke 2011). Two studies reported successful interventions against these barriers.

In four large introductory biology or political science courses—two sections each, with one male and one female instructor—Peterson et al. (2019) randomly assigned some students *within each class* to receive either a short statement in the evaluation instructions about the potential for bias or no statement. Women instructors received higher teaching evaluations (i.e., 0.3 to 0.5 point on a 5-point scale) from students in the treatment condition than in the control condition, with no effect on evaluations of male instructors. Social desirability could explain the results—and the effects may decay if students tune out similar alerts in other courses—but the results were promising enough to justify additional testing.

O'Meara et al. (2018) addressed the problem of unequal service. Thirty STEM departments were match-randomized to a four-part intervention: (1) a workshop on implicit bias, (2) a "dashboard" to collect and share transparent information about faculty service assignments, (3) a "Department Equity Action Plan" based on the dashboard information, and (4) an optional professional-development webinar series. Faculty in treated (versus untreated) departments reported a more equitable workload and were more likely to state that they were comfortable self-advocating. The treatment improved outcomes for men but more so for women. Although they lack behavioral or long-term assessment, the findings invite additional tests.

Diversity Training

Diversity training represents a low-cost means to change exclusionary practices by providing information about bias. Unfortunately, the evidence does not support this goal (Moss-Racusin et al. 2014; Paluck and Green 2009). Any positive effects of mandatory training last only a few days, and it often triggers resistance (Dobbin and Kalev 2016). Randomized trials found only small effects and on only a few self-reported attitudinal measures (e.g., Carnes et al. 2015; Pietri et al. 2018; Zawadzki et al. 2014).

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tenure at the hiring institution and there was no change in top-five journal publication rates. For men, GNCS policy adoption increased top-five publications and raised tenure rates by 19 percentage points. That is, GNCS backfired for women but helped men, thereby exacerbating the gender gap.

Similarly, using survey data, Feeney, Bernal, and Bowman (2014) found that GNCS has no relationship with STEM faculty women's self-reported journal publications. More generally, they found that relatively generous family-leave policies have only a weak positive correlation with women's publication rates. Other interventions in this study with no observed positive correlation

Moreover, diversity training may backfire for female scientists. Those who were randomized to receive training (versus no training) had a lower sense of belonging in the sciences, a more negative affect, and greater social-identity threat levels (Pietri et al. 2018). These effects were counteracted by presenting a role model or optimistic messaging; overall, however, diversity training does not work well enough to justify implementation or even much further testing.

Mentorship and Networking Opportunities

Mentoring and networking programs stand out for demonstrated substantial positive effects on important outcomes. The American

Economic Association hosts annual two-day mentoring workshops for women (i.e., CeMENT). Blau et al. (2010) evaluated the CVs of women who applied and were randomly admitted or not. Five years later, attendees were 23 to 27 points more likely to have a federal grant or a top-tier publication and they had 2.4 more publications.

In political science, Barnes and Beaulieu (2017) reported a positive correlation between attending Visions in Methodology (VIM)—a recurring political methodology workshop for women—and various career outcomes. They surveyed workshop participants and a nonrandom comparison group of women and men from the same departments who had never attended. Women who attended VIM reported substantially more mentorship and peer support within and beyond their institution than comparison men or women; 0.3 and 0.7 more articles submitted than comparison men and women; 0.5 more invited talks than comparison men but not women; and more submissions to top-three journals than comparison women but no difference with men. Other women's workshops in political science include Journeys in World Politics, New Research on Gender in Political Psychology (Bos and Schneider 2012), APSA's Women of Color workshop, and International Studies Association's Pay It Forward. Combined with the randomized evaluation of the CeMENT workshops, observational evidence from these conferences suggests that mentoring and networking can be effective and should be the focus of further evaluation.

Force on Women's Advancement in the Profession 2019). Furthermore, recent case studies (without a comparison group) show potential for building on these mechanisms using virtual peer-mentoring and networking opportunities, such as writing groups (Cassese and Holman 2018) and Women Also Know Stuff (Beaulieu et al. 2017).

CONCLUSIONS

In our review of interventions in political science and related fields, we found that many practices and programs have not been evaluated, and those that have been often turn out to be ineffective or even backfire. The many small, null, or negative effects underscore the need to evaluate interventions before they are recommended for implementation. Efforts should shift from compiling long lists of potential solutions to increasingly rigorous tests of those most likely to be implemented widely and to work effectively. Especially needed are studies that (1) conduct close comparisons with a matched and preferably randomized control group; (2) measure effects over the long term; (3) include the most important outcomes (i.e., publications, tenure, retention, and satisfaction with one's workplace); (4) do not rely exclusively on self-reports; and (5) assess outcomes in both absolute terms and relative to men. As political scientists, we should apply the methodological rigor of our discipline to the important question of how to increase women's advancement within the field.

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Workshops—and mentoring programs generally—are a bundle of treatments. Many possible mechanisms could explain the positive results. Future research should replicate CeMENT's design, including randomized assignment, long-term follow-up, and measures of important outcomes (e.g., publications and tenure). It also should identify the mechanisms so that subsequent efforts can efficiently implement only the effective elements. Potential mechanisms include developing a peer network (Barnes and Beaulieu 2017), perhaps particularly composed of female peer mentors (Bostwick and Weinberg 2018; Dennehy and Dasgupta 2017); receiving quality mentorship from senior faculty (Blau et al. 2010; Curtin, Malley, and Stewart 2016); receiving useful feedback on work in progress (Barnes and Beaulieu 2017); building confidence and providing encouragement (Curtin, Malley, and Stewart 2016; Karpowitz and Mendelberg 2014); developing psychological resilience (Bekki et al. 2013); receiving information about professionalization (APSA Committee on the Status of Women in the Profession 2016; Curtin, Malley, and Stewart 2016); having female role models (Carrell, Page, and West 2010); and receiving support and empowerment from all-women environments (Karpowitz and Mendelberg 2018).

Such efforts in political science are underway. In 2018, APSA sponsored a women's networking and mentoring workshop in Washington, DC, featuring random assignment of applicants to attend or not. This will allow long-term causal evaluation of mentoring effects in political science (APSA Presidential Task

That said, research provides some evidence for specific interventions. The most promising are mentoring and networking workshops for women. Other specific interventions show tentative evidence and therefore are worth further evaluation, including interventions in hiring practices, departmental service, teaching evaluations, and resilience training.

SUPPLEMENTARY MATERIALS

To view supplementary material for this article, please visit http://dx.doi.org/10.1017/S1049096520000402. ■

NOTES

1. In most cases, the research we describe includes interventions that are field tested directly on the population of interest: graduate students and faculty members. In a few studies, interventions are tested on a stand-in sample of undergraduates or the general population, which means they provide weaker evidence of the intervention's impact on women's academic-career advancement. The unit of observation for all studies is specified in appendix table A3. In addition, we mention a few studies in political science lacking a comparison group; however, when doing so, we clearly note that they are outside the scope of our definition of "evidence."

2. UC–I's intervention was implemented through the National Science Foundation ADVANCE grant program. Bilimoria and Liang (2012) conducted an evaluation of the first two waves of ADVANCE programs and found no evidence that they increased women STEM faculty hires or improved institutional climate evaluations within ADVANCE departments, relative to trends in non-ADVANCE departments. Department of Education data (2001–2016) show that the presence of a chief diversity officer on a campus likewise fails to increase racial- and ethnic-minority hires (Bradley et al. 2018).

REFERENCES

American Political Science Association Committee on the Status of Women in the Profession. 2016. *Pipeline to Tenure: Institutional Practices for Hiring, Mentoring, and Advancing Women in Academia*. Washington, DC: American Political Science Association. Available at http://web.apsanet.org/cswp/wp-content/uploads/sites/4/2016/01/FINAL-Pipeline-Report-May2016.pdf.

American Political Science Association Presidential Task Force on Women's Advancement in the Profession. 2019. *Final Report on Presidential Task Force on Women's Advancement in the Profession*. Washington, DC: American Political Science Association.

American Political Science Association Workshop on the Advancement of Women. 2005. *Women's Advancement in Political Science: A Report of the APSA Workshop on the Advancement of Women in Academic Political Science in the United States*. Washington, DC: American Political Science Association. Available at http://files.eric.ed.gov/fulltext/ED495970.pdf.

Antecol, Heather, Kelly Bedard, and Jenna Stearns. 2018. "Equal but Inequitable: Who Benefits from Gender-Neutral Tenure Clock-Stopping Policies?" *American Economic Review* 108 (9): 2420–41.

Bagues, Manuel, Mauro Sylos-Labini, and Natalia Zinovyeva. 2017. "Does the Gender Composition of Scientific Committees Matter?" *American Economic Review* 107 (4): 1207–38.

Barnes, Tiffany D., and Emily Beaulieu. 2017. "Engaging Women: Addressing the Gender Gap in Women's Networking and Productivity." *PS: Political Science & Politics* 50 (2): 461–66.

Beaulieu, Emily, Amber E. Boydstun, Nadia E. Brown, Kim Yi Dionne, Andrea Gillespie, Samara Klar, Yanna Krupnikov, Melissa R. Michelson, Kathleen Searles, and Christina Wolbrecht. 2017. "Women Also Know Stuff: Meta-Level Mentoring to Battle Gender Bias in Political Science." *PS: Political Science & Politics* 50 (3): 779–83.

Bekki, Jennifer M., Mary Lee Smith, Bianca L. Bernstein, and Caroline Harrison. 2013. "Effects of an Online Personal Resilience Training Program for Women in STEM Doctoral Programs." *Journal of Women and Minorities in Science and Engineering* 19 (1): 17–35.

Bilimoria, Diana, and Xiangfen Liang. 2012. *Gender Equity in Science and Engineering: Advancing Change in Higher Education*. New York: Routledge.

Blau, Francine D., Janet M. Currie, Rachel T. A. Croson, and Donna K. Ginther. 2010. "Can Mentoring Help Female Assistant Professors? Interim Results from a Randomized Trial." *American Economic Review* 100 (2): 348–52.

Bos, Angela L., and Monica C. Schneider. 2012. "Mentoring to Fix the Leaky Pipeline." *PS: Political Science & Politics* 45 (2): 223–31.

Bostwick, Valerie, and Bruce Weinberg. 2018. "'Nevertheless, She Persisted'? Gender Peer Effects in Doctoral Stem Programs." *NBER Working Paper No. 25028*. Available at DOI:10.3386/w25028.

Bradley, Steven W., James R. Garven, Wilson W. Law, and James E. West. 2018. "The Impact of Chief Diversity Officers on Diverse Faculty Hiring." *NBER Working Paper No. 24969*. Available at DOI:10.3386/w24969.

Brown, Nadia E., Yusaku Horiuchi, Mala Htun, and David Samuels. 2020. "Gender Gaps in Perceptions of Political Science Journals." *PS: Political Science & Politics* 53 (1): 114–21.

Brown, Nadia E., and David Samuels. 2018. "Introduction to Gender in the Journals, Continued: Evidence from Five Political Science Journals." *PS: Political Science & Politics* 51 (4): 847–48.

Budden, Amber E., Tom Tregenza, Lonnie W. Aarssen, Julia Koricheva, Roosa Leimu, and Christopher J. Lortie. 2008. "Double-Blind Review Favours Increased Representation of Female Authors." *Trends in Ecology & Evolution* 23 (1): 4–6.

Carnes, Molly, Patricia G. Devine, Linda Baier Manwell, Angela Byars-Winston, Eve Fine, Cecilia E. Ford, Patrick Forscher, Carol Isaac, Anna Kaatz, Wairimu Magua, Mari Palta, and Jennifer Sheridan. 2015. "Effect of an Intervention to Break the Gender Bias Habit for Faculty at One Institution: A Cluster Randomized, Controlled Trial." *Academic Medicine* 90 (2): 221–30.

Carrell, Scott E., Marianne E. Page, and James E. West. 2010. "Sex and Science: How Professor Gender Perpetuates the Gender Gap." *Quarterly Journal of Economics* 125 (3): 1101–144.

Cassese, Erin C., and Mirya R. Holman. 2018. "Writing Groups as Models for Peer Mentorship among Female Faculty in Political Science." *PS: Political Science & Politics* 51 (2): 401–405.

Cox, Amelia R., and Robert Montgomerie. 2019. "The Cases for and Against Double-Blind Reviews." *PeerJ* 7:e6702. Available at https://doi.org/10.7717/peerj.

Curtin, Nicola, Janet Malley, and Abigail J. Stewart. 2016. "Mentoring the Next Generation of Faculty: Supporting Career Aspirations among Doctoral Students." *Research in Higher Education* 57 (6): 714–38.

Dennehy, Tara C., and Nilanjana Dasgupta. 2017. "Female Peer Mentors Early in College Increase Women's Positive Academic Experiences and Retention in Engineering." *Proceedings of the National Academy of Sciences* 114 (23): 5964–69.

Dobbin, Frank, and Alexandra Kalev. 2016. "Why Diversity Programs Fail and What Works Better." *Harvard Business Review* (July–August):52–60.

Feeney, Mary K., Margarita Bernal, and Lauren Bowman. 2014. "Enabling Work? Family-Friendly Policies and Academic Productivity for Men and Women Scientists." *Science and Public Policy* 41 (6): 750–64.

Hesli, Vicki L., Jae Monk Lee, and Sara McLaughlin Mitchell. 2012. "Predicting Rank Attainment in Political Science: What Else Besides Publications Affects Promotion?" *PS: Political Science & Politics* 45 (3): 475–92.

Karpowitz, Christopher F., and Tali Mendelberg. 2014. *The Silent Sex: Gender, Deliberation, and Institutions*. Princeton, NJ: Princeton University Press.

Karpowitz, Christopher F., and Tali Mendelberg. 2018. "Do Enclaves Remediate Social Inequality?" *Journal of Politics* 80 (4): 1134–49.

Mitchell, Sara McLaughlin, and Vicki L. Hesli. 2013. "Women Don't Ask? Women Don't Say No? Bargaining and Service in the Political Science Profession." *PS: Political Science & Politics* 46 (2): 355–69.

Mitchell, Kristina M. W., and Jonathan Martin. 2018. "Gender Bias in Student Evaluations." *PS: Political Science & Politics* 51 (3): 648–52.

Monroe, Kristen Renwick, Jenny Choi, Emily Howell, Chloe Lampros-Monroe, Crystal Trejo, and Valentina Perez. 2014. "Gender Equality in the Ivory Tower, and How Best to Achieve It." *PS: Political Science & Politics* 47 (2): 418–26.

Moss-Racusin, Corinne A., John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman. 2012. "Science Faculty's Subtle Gender Biases Favor Male Students." *Proceedings of the National Academy of Sciences* 109 (41): 16474–79.

Moss-Racusin, Corinne A., Jojanneke van der Toorn, John F. Dovidio, Victoria L. Brescoll, Mark J. Graham, and Jo Handelsman. 2014. "Scientific Diversity Interventions." *Science* 343:615–16.

Nelson, Donna J. 2017. "Diversity of Science and Engineering Faculty at Research Universities." In *Diversity in the Scientific Community Volume 1: Quantifying Diversity and Formulating Success*, ed. Donna J. Nelson and H. N. Cheng. Washington, DC: American Chemical Society.

O'Meara, KerryAnn, Audrey Jaeger, Joya Misra, Courtney Lennartz, and Alexandra Kuvaeva. 2018. "Undoing Disparities in Faculty Workloads: A Randomized Trial Experiment." *PLOS ONE* 13 (12): e0207316.

Paluck, Elizabeth Levy, and Donald P. Green. 2009. "Prejudice Reduction: What Works? A Review and Assessment of Research and Practice." *Annual Review of Psychology* 60:339–67.

Peterson, David A. M., Lori A. Biederman, David Andersen, Tessa M. Ditonto, and Kevin Roe. 2019. "Mitigating Gender Bias in Student Evaluations of Teaching." *PLOS ONE* 14 (5): e0216241.

Pietri, Evava S., Erin P. Hennes, John F. Dovidio, Victoria L. Brescoll, April H. Bailey, Corinne A. Moss-Racusin, and Jo Handelsman. 2018. "Addressing Unintended Consequences of Gender Diversity Interventions on Women's Sense of Belonging in STEM." *Sex Roles* 80 (9–10): 527–47.

Pyke, Karen. 2011. "Service and Gender Inequity among Faculty." *PS: Political Science & Politics* 44 (1): 85–87.

Roberts, Seán G., and Tessa Verhoef. 2016. "Double-Blind Reviewing at EvoLang 11 Reveals Gender Bias." *Journal of Language Evolution* 1 (2): 163–67.

Sheridan, Jennifer T., Eve Fine, Christine Maidi Pribbenow, Jo Handelsman, and Molly Carnes. 2010. "Searching for Excellence and Diversity: Increasing the Hiring of Women Faculty at One Academic Medical Center." *Academic Medicine* 85 (6): 999–1007.

Smith, Jessi L., Ian M. Handley, Alexander V. Zale, Sara Rushing, and Martha A. Potvin. 2015. "Now Hiring! Empirically Testing a Three-Step Intervention to Increase Faculty Gender Diversity in STEM." *BioScience* 65 (11): 1084–87.

Stepan-Norris, Judith, and Jasmine Kerrissey. 2015. "Enhancing Gender Equity in Academia: Lessons from the ADVANCE Program." *Sociological Perspectives* 59 (2): 225–45.

Teele, Dawn Langan, and Kathleen Thelen. 2017. "Gender in the Journals: Publication Patterns in Political Science." *PS: Political Science & Politics* 50 (2): 433–47.

Unkovic, Cait, Maya Sen, and Kevin M. Quinn. 2016. "Does Encouragement Matter in Improving Gender Imbalances in Technical Fields? Evidence from a Randomized Controlled Trial." *PLOS ONE* 11 (4): 1–15.

Zawadzki, Matthew J., Stephanie A. Shields, Cinnamon L. Danube, and Janet K. Swim. 2014. "Reducing the Endorsement of Sexism Using Experiential Learning: The Workshop Activity for Gender Equity Simulation (WAGES)." *Psychology of Women Quarterly* 38 (1): 75–92.