The Political Methodologist

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Notes From the Editors

Today, we are proud to present a series of articles in *The Political Methodologist* focused on gender diversity in political methodology. This series is guest edited by Megan Shannon, an assistant professor of Political Science at the University of Colorado, Boulder and the 2013 host of the Visions in Methodology (VIM) conference for women in political methodology. Our guest authors represent a wide cross-section of perspectives in the methods community and examine a variety of topics concerning women in methodology. All the articles are presented in this special print edition of *The Political Methodologist*.

I believe that this discussion comes at an opportune moment in the history of the Society and in political science generally. Overall, women made up 26% of tenure-track faculty in political science in 2006 (Table 1 in Sedowski and Brintnall 2007, 1). The field of political methodology has particularly struggled to increase women's representation in its ranks: only 20% of paper authors at the 2006 PolMeth conference were women, and the average over the last 15 years is closer to about 15% (Figure 2 in Mitchell 2013). Despite efforts to improve women's participation in the subfield, there has been but a slight upward trend in women's participation at PolMeth since data were first collected in the mid-1980s.

The continuing under-representation of women in methodology is, in part, a product of larger problems that transcend the subfield. For example, women represented 28% of science and engineering tenured/tenure-track (TT) faculty in the United States in 2006, including the social sciences (Table 5 in Burrelli 2008, 5). But there are reasons to believe that political science is particularly susceptible to these problems, including consistently lower citation rates and greater service burdens for women scholars (Mcmurtrie 2013; see also Maliniak, Powers, and Walter 2013; Mitchell and Hesli 2013). Additionally, other methodologically and substantively allied fields have achieved much greater gen-

der parity than political science. In the 2006 data, 46.2% of psychology TT faculty were women; across all social sciences (excluding psychology), 33.9% of TT faculty in 2006 were women (Table 5 in Burrelli 2008, 5).

It is difficult to believe that political science faces unique barriers to women's participation that are not faced by psychology and the social sciences more generally. Presuming this to be true, I think that we can do better to increase gender parity in the discipline and in the Society. I hope that this special issue of *The Political Methodologist* is the beginning of a conversation that leads to increased participation of women and improves the Society as a whole.

Justin Esarey, on behalf of The Editors

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Barriers to Women's Participation in Political Methodology: Graduate School and Beyond

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Why aren't more women participating in the Political Methodology society? Statistics on attendance at the summer meetings reveal that from 1984 to 2010, about 25% of participants were women. While this proportion is not notably different from comparable political science subfield meetings, it is the lowest in the group, as 27% of Peace Science Society, 26% of International Political Economy Society, and 35% of State Politics and Policy attendees were women (Dion and Mitchell 2012).

Assuming that attendance at the summer meetings indicates an appreciation for and identification with the community of methodologists, the question deepens: why don't more women identify with the subfield of political methodology?[1] This essay addresses the question by discussing the social and structural obstacles to women participating in

the subfield of political methodology. While many obstacles emerge early in childhood, I emphasize how these obstacles influence graduate students in particular. I identify cultural and societal factors, argumentative and competitive norms, and lack of mentoring as three particular categories of barriers. The hope is that faculty, graduate students, and members of the political methodology society will recognize such obstacles when they emerge and take action.

Cultural and Societal Factors

For women, obstacles to developing an interest in political methodology arise early in their intellectual development, particularly because of differences in how genders are socialized to study math. Standardized tests indicate that boys and girls have similar math abilities in elementary school (Hyde et al. 2008), yet boys and girls are more likely to associate math with boys than girls. Boys are also more likely than girls to associate themselves with math (Cvencek, Meltzoff, and Greenwald 2011). By the time they become teenagers, student performance in math diverges along gender lines. Men outperform women on standardized tests given in high school and college, particularly among students scoring in the top five percent (Ellison and Swan-

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[1]This essay focuses on women's participation, as data on minority attendance at the meetings is not currently available. However, an outside observer can quickly conclude that it is not a racially diverse society. While this essay addresses women's participation, the barriers addressed here may also apply to minorities. Additionally, minorities face socioeconomic barriers to pursuing the education and training that would further encourage the study of political methodology. For example, according to the Office of Civil Rights at the U.S. Department of Education, only 29% of high-minority high schools offer calculus, compared to 55% of schools with the lowest black and Hispanic enrollment. The Political Methodology society needs to further explore obstacles to minority participation.

son 2010; Xie and Shauman 2003). The gender distinction persists into adulthood. A survey by the non-profit organization Change the Equation reports that 37% of women say that they are not good at math, significantly different from the 21% of men who say they are not good at math.[2] Women therefore are more likely than men to arrive at college and graduate school with a strong notion that they cannot do math, which produces a belief they also cannot do statistics.

Women's beliefs about their ineptitude for math are bolstered by a general "imposter syndrome" that appears to limit women more than men. Women tend to underestimate their intellectual and professional abilities, even when they outperform men (Sandberg 2013, 29-30). Consider a finding from political science research, which shows that among individuals with similar experience and credentials, women are less likely than men to consider themselves qualified to run for office (Fox and Lawless 2005). The impostor syndrome may limit women from pursuing political methodology, including women talented in statistics, because they are not confident in their ability to do so.

Once women develop beliefs that they do not have the skills needed to study, teach, or innovate in the field of political methodology, their beliefs are often reinforced through social interaction with male and female peers. If both men and women associate math abilities with men rather than women, then socialization inside and outside the classroom strengthens those beliefs. As a personal example, in my fourth year of graduate school, my cohort was asked to list our subfields of specialization on CVs we were developing. I listed methodology as one of my subfields. When we discussed the CVs in seminar, a male classmate remarked, "Meg, I'm surprised you consider yourself a methodologist." No one made the same remark about any of the men in the class, and the professor did not respond to the comment.[3]

Competitive and Argumentative Norms in the Classroom and at the PolMeth Meeting

Women may be less motivated than men to study political methodology because of norms in the classroom and graduate seminars. While studies are not universal in their conclusions, most indicate that teachers pay more attention to boys than girls, and that boys have a stronger presence in the classroom (Sandberg 2013). Men are more likely to speak up, ask questions, and engage in argument. Frequent vocal participation can give the impression that men are more competent or have a better understanding of the material. That participation may be rewarded by faculty asking the more vocal students to coauthor papers. Faculty may also be more likely to encourage these students to present at conferences, including the political methodology meeting.

Methodology graduate seminars may discourage women if they foster competitive environments. Not only do women favor competitive situations at lower rates than men (Niederle and Vesterlund 2007), their performance is hindered in competitive situations. Some suggest that the gender gap in math performance is the product of competitive classroom environments (Niederle and Vesterlund 2010). Research has shown that men outperform women on entrance exams to a top French business school, but that women outperform men in less competitive high school finishing exams (Ors, Palomino, and Peyrache 2013). A natural experiment at Stanford law school revealed that when grading became less competitive, the gender gap in performance disappeared (Ho and Kelman n.d.). Competitive graduate seminars may include those with competitive grading systems (a limited number of As), competition for vocal participation, competition for the instructor's or TA's attention, or those within a graduate program that is competitive on the whole.

Norms of behavior within the PolMeth meetings may discourage women if the discourse is argumentative and competitive. I once served as a discussant at PolMeth, and several male attendees told me I was too nice, whereas no female attendees made the same observation. I also noticed that two male audience members who were silent during the author's presentation whispered to each other throughout much of my discussion. They seemed to be vigorously debating the paper that had just been presented, but their behavior made me feel insecure and disrespected.

As a remedy, one might suggest that women embrace competitive and argumentative norms of behavior and discourse. Yet this may not be this best solution if vocal women are not lauded the same way as men. A recent exchange of blog posts and articles in the New York Times questions the paucity of women in the field of philosophy, arguing that the gender gap occurs because philosophy is an argumentative and verbally combative field. Women who debate aggressively are labeled "shrews," while women who withhold debate are considered less competent (Schuessler 2013).

Lack of Mentoring

Women may lack the mentoring needed to participate as political methodologists. A troubling conclusion from a recent National Academy of Sciences paper is that male and female faculty are less likely to mentor women than men (Moss-Racusin et al. 2012). In the experiment ($N = 127$), science faculty were given materials of an undergraduate

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[2] http://goo.gl/W5KmbX (June 2, 2014).

[3] It is possible the classmate was referencing the fact that very few individuals, male or female, consider themselves methodologists. This is unlikely, as I also did not call myself a methodologist – international relations was listed as my first field, and methods as a field of specialization among several fields.

applying for a lab position. The materials were identical, except half were submitted under a male name (John) and half under a female name (Jennifer). The male student was evaluated more favorably on a number of dimensions, but in particular, faculty offered less career mentoring to the female student than the male student. And it wasn't just male faculty who were biased – female faculty were also biased toward the male student. Some might suggest that mentoring emerges organically – that mentors will eventually recognize the talents of women and provide appropriate nurturing (Sandberg 2013). But as the PNAS study suggests, talented women may be overlooked, and mentors may be more likely to seek out men.

Political methodology as a subfield necessitates mentoring. We do not have data on what motivates attendance, but based on conversations I've had at the five summer meetings I've attended, graduate students first attend the meeting because a faculty member encouraged them to do so. Political Methodology is a tight society with strong leadership and social networks, and it provides a number of opportunities for continued education and training. Realizing those opportunities requires guidance from faculty already tied into the society. It is possible that women are attending the meetings at lower rates because they are receiving less mentoring or are not receiving the type of mentoring that would tie them into the PolMeth network.

Not Their Cup of Tea?

One might argue that women do not participate in the political methodology society because they prefer not to. After all, research shows that men are slightly more likely than women to describe their work as positivist, and women are twice as likely as men to describe their work as post-positivist (Breuning, Bredehoft, and Walton 2005; Maliniak, Powers, and Walter 2013).[4] And some subfields in political science seem to draw genders at different rates. In international relations for example, men are more likely to study security, U.S. foreign policy, and methods. Women are more likely to study human rights, international law, and the environment (Maliniak, Powers, and Walter 2013; Maliniak et al. 2008). Could it be that women and minorities just don't like political methodology?

Even if this is this case, it is nearly impossible to determine whether such preferences are hard-wired, socially manipulated, or both. Let's say that more men have the

methods gene than women. Epigenetics research indicates that genes interact with the environment, including the social environment, to produce behavior. We therefore have a responsibility to consider how our actions have produced a subfield and methodology society with low participation from women and minorities. While institutions, norms, and culture can produce biased outcomes, they can also ensure equitable outcomes.[5] Including more minorities and women is good for the intellectual vitality, rigor, and overall influence of the political methodology society.

What Can Faculty Do?

Most importantly, we must engage in a good deal of self-reflection. None of us, male or female, are beyond reproach. We all suffer from implicit biases. We must carefully assess our how own behavior, our department's behavior, and the institutions to which we belong produce gendered norms and outcomes.[6]

First, we become aware of our department and institution's culture. Are we fostering a chilly climate? Are female and minority graduate students equally encouraged to attend ICPSR, and is monetary assistance given equitably?

Second, we become aware of the Political Methodology society's culture. We should consider an independent, external review of the summer meeting, to get a sense of how social norms, behavior, and discourse might inhibit participation by women.

Third, we assess our classroom environments. Do we ensure equal participation? Is the environment competitive? We also need to observe the social dynamic among the students. Pay attention to gendered or biased comments before, during, and after class discussion, and shut them down. We might also consider interactive teaching, rather than lecture-based teaching, as physics instructors have found that gender gaps in performance narrow when interactive instruction is used (Lorenzo, Crouch, and Mazur 2006).

Fourth, we take stock of what we're doing outside the classroom. We may need to pay particular attention to talented female students who are holding themselves back. If they are undergraduates, we encourage them to take math, statistics, and economics courses. We suggest they think about graduate school. And we encourage them to pursue a research-intensive project, either under our supervision or through a formal program.[7] Similarly, we should

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[4]However, Maliniak et al. (2008) report that men were only slightly more likely than women to report employing quantitative methods, and women were only slightly more likely than men to report employing qualitative methods.

[5]As just one example, countries with greater gender equality do not exhibit the same gender gap in math performance that countries with gender inequality do (Guiso et al. 2008).

[6]For an excellent discussion of how social behavior has contributed to the under-valuing of women's work in international relations, see Kadera (2013).

[7]As examples, PolMeth is developing an undergraduate research program called AEROPUPS. Florida State University has a Research Intensive Bachelor's Certificate program in the political science department, as well as a similar program through the College of Social Science and Public Policy. The University of North Texas has an undergraduate research program in civil conflict management and peace science.

be aware that statements discouraging students from pursuing research and graduate school, while not necessarily gendered, may have a stronger effect on women.

For graduate students, we need to be aware that females and minorities may not knock on our doors to ask about participating in research projects. We can be more proactive in including them in our research. We should also require all students in our methods classes to sign up for PolMeth's listserv. And finally, we should carefully assess how we choose whom to mentor, and ask if our mentoring proclivities are biased. Faculty can volunteer to serve as a mentor through the Visions in Methodology (VIM) mentoring program.

And finally, we must refuse to participate in a gendered, racist, or ethnocentric culture. We call out colleagues who persistently make gendered comments at the lunch table. We gently notify students (and staff, and administrators) when they refer to male faculty as Dr. or Professor while referring to female faculty as Miss. We think about if we are more likely to interrupt a female or minority colleague, and we hold back a bit, as slowing down thinking has been shown to reduce implicit bias (Saul 2012). We are unbiased in whom we choose to mentor, unless the student is racist or sexist. We subtly model behavior through our own language, referring to leaders and politicians as "she" as often as "he." We recognize our positions of power, and we use our power to embrace and foster diversity.

What Can Graduate Students Do?

First, graduate students should also engage in self-reflection. Ask: what beliefs do I hold about gender and math and statistics ability? Are my beliefs holding me back? Am I holding my classmates back?

Second, graduate students should ask lots of questions, in and out of seminar. In seminar, small questions can lead to big ideas and research projects, but only if they are asked. Both men and women suffer from insecurity and the imposter syndrome, and everyone fears speaking up. Recognizing the fear when it arises may help students overcome it. Out of seminar, talk to faculty who use methods and who participate in the society. Knock on doors. Ask them how they developed an interest in methods and what advice they have for pursuing methods as a field.

Finally, grad students should get involved in the political methodology society. Apply to attend a summer meeting. Sign up for the political methodology listserv. Attend a regional meeting like the St. Louis Area Methods Meeting (SLAMM!). Explore the Empirical Implications of Theoretical Models (EITM) workshops, and ICPSR summer classes. Women can also attend a Visions in Methodology Conference. Female faculty and graduate students can also sign up for a mentor through VIM.

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An Effort to Increase Women's Participation: The Visions in Methodology Initiative

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Over the last year, several high-profile popular press articles and books by both academics and business executives have addressed the experiences of professional women, offering analysis and advice related to career advancement and work-life balance (Sandberg 2013; Slaughter 2012; Kantor 2013). Meanwhile, women have not fully closed the gender gap in academia in the U.S. or Canada, despite gains in the proportion of women pursuing university and advanced degrees (Baker 2012). About 40% of Canadian and 32% of American political scientists are women (CPSA Diversity Task Force 2012, 6; Breuning and Sanders 2007, 348). Meanwhile, the role of women in American political science was the subject of both a roundtable at the American Political Science Association (APSA) 2013 Annual Meeting (McMurtrie 2013; Economist 2013) and virtual symposium hosted by *The Monkey Cage* at *The Washington Post* (Voeten 2013).

While female academics have made progress and constitute a larger proportion of faculty in the humanities and social sciences, they continue to be particularly underrepresented in math-intensive fields (Ceci and Williams 2010, 275; in Canada, see Acker, Webber, and Smyth 2012, 746). Further, the concentration of women tends to be higher in lower ranks, lower status institutions or in contingent or part-time positions (Halse 2011, 567-8; Baker 2010, 324; in Canada, see Acker, Webber, and Smyth 2012, 746; Doucet, Smith, and Durand 2012, 54; in political science or inter-

national relations, see APSA 2005; Henehan and Sarkees 2009, 432-3; Hesli, Lee, and Mitchell 2012; Bates, Jenkins, and Pflaeger 2012, 141-4; Maliniak et al. 2008). During the same period during which women have expanded their representation in the social sciences, research in sociology, economics, political science, public administration and international relations has become increasingly quantitative (Hunter and Leahey 2008, 299; Hudson 1996, 154-7; Corley and Sabharwal 2010, 639-40; Breuning and Sanders 2007, 349-50; Kadera 2013, 464-5). The quantitative turn in American and Canadian political science dates back to the rise of behavioralism in the 1950s and 1960s (Dahl 1961; Easton 1969). Political methodology, as a distinct field of political science, can be traced back to the initial publication of *Political Methodology* (precursor to *Political Analysis*) by the Society for Political Methodology, or PolMeth (Beck 2000, 651). However, methodology differs from other fields in political science because it is more likely to be a researcher's second, rather than primary field, which tends to be a substantive area (e.g., American politics, international relations, etc.). Even those critical of the emphasis on research design and methods in political science admit that methods has become a highly prestigious field which increasingly "censors ... the discipline, criticizing past research and setting standards for others" (Mead 2010, 454).

At the same time, in political science, women are less likely to use quantitative methods (Breuning and Sanders 2007, 349-50). In 2004, the Political Methodology Organized Section of the APSA had only 20% women, compared to 32 percent in the APSA overall (Breuning and Sanders 2007, 348). Since 1984, PolMeth has hosted annual summer conferences, and over the last decade, only about 10-20% of all paper authors or co-authors have been women (Dion and Mitchell 2012). Nor have many women achieved high visibility status within the political methodology community.

For example, no women made the list of the top 20 most cited political methodologists (Masuoka, Grofman, and Feld 2007, 140), and PolMeth has only one woman fellow, out of 29 total.

Since 2008, the Visions in Methodology (VIM) program, supported by an NSF grant to PolMeth, has developed a range of activities designed to provide networking and career development opportunities for women developing and applying advanced statistical and experimental methods in political science. The centerpiece of the VIM program are workshops that adopt the format of similar workshops organized by the American Economic Association (CeMENT, see Blau et al. 2010) and Journeys in World Politics (Kadera 2013, 472[1]). VIM workshops are small events (30-40 participants) that bring together women of all academic ranks who use quantitative methods in political science to present their research and discuss career issues. The workshops include research presentations, opportunities for mentoring, discussion of career development, and networking with peers and more senior female researchers.

Such mentoring is particularly important for women and underrepresented minorities who are less likely to find suitable mentors on their own campuses (Bennion 2004, 111), and women frequently express a desire for more access to mentors and advice (Baker 2009, 41). In economics, a mentoring experiment similar to the VIM workshops had positive impacts on publications and research funding (Blau et al. 2010, 350-1). In 2014, The 2014 VIM workshop was held at McMaster University on May 20-22, 2014, with support from the National Science Foundation (SES#1120976, administered by the Society for Political Methodology at the University of Michigan), and the Social Sciences and Humanities Research Council (SSHRC), among others. Michelle Dion (McMaster) and Laura Stephenson (University of Western Ontario) co-hosted the meeting.

For the 2014 VIM meeting at McMaster, we combined targeted invitations for senior (Associate or Professor ranks) scholars, who served as discussants at the meeting, with open calls for participation for junior (graduate student, non-tenure track Ph.D.s, and Assistant rank) scholars, who presented their research, served as discussants, and participated in discussions throughout the workshop. The 2014 Workshop began with a participant dinner Tuesday evening, followed by a discussion of work-life balance and career development and the presentation of oral biographies from this year's two featured senior scholars: Professors Elisabeth Gidengil (McGill) and Saundra Schneider (Michigan State). The program on Wednesday and Thursday combined research presentations with facilitated discussions related to career advancement. The extended commentary and discussion with peers and more senior colleagues is a core feature of the meetings, during which participants often share advice and information about methodological innovations or

applications from different fields of political science or cognate disciplines.

As at previous VIM meetings, each day of the workshop, there were two or three discussions during an extended coffee-break, lunch, or hour-long session, during which senior participants facilitated a focused discussion on particular career issues, for which a suggested reading list is circulated in advance. In 2014, these discussions covered the following topics: work-life balance (Mayer and Tikka 2008, 370-2; Baker 2012); networking means and ends (Abramo, D'Angelo, and Murgia 2013, 812-3; Bartol and Zhang 2007; Lewis, Ross, and Holden 2012, 705-6); collaboration (Corley and Sabharwal 2010, 639-40; McDermott and Hatemi 2010); meaningful service (Acker and Feuerverger 1996, 403-4; Mitchell and Hesli 2013); specialization and its impact (Leahey 2007, 548-9; Leahey, Crockett, and Hunter 2008, 1295-6, 1298); and implicit gender-bias (Dion 2008; Madera, Hebl, and Martin 2009). There was also a discussion facilitated by two junior scholars to identify the mentoring needs of junior scholars and enumerate a list of actionable priorities for the future development of the VIM program and that doctoral advisers/supervisors and departments might develop.

In addition to the workshops, VIM sponsors a number of activities to provide opportunities for scholarly progress, networking, and professional mentoring in research and teaching in order to support women in the political methodology community. For example, with the support of the Society's NSF funding and in coordination with PolMeth's Diversity Committee, VIM has hosted networking events, such as dinners or lunches, at both the Summer Meeting of PolMeth and Annual Meeting of the APSA, where junior women have the opportunity to informally meet and discuss research peers and senior members of the methods community. VIM also offers a mentor-matching service, through which junior women can request to be matched with a senior methodologist as a resource to be a sounding board or to provide feedback on research or career issues. Megan Shannon is the mentoring program contact.

VIM also maintains a web presence that hosts all previous conference programs and papers presented at conferences since 2012. The site also provides publicly available information and links to professional opportunities (funding, related organizations) and a bibliography of research articles and books related to gender and career-development. It provides a comprehensive list of participants of VIM conferences, with links to each participant's personal or departmental web site. This increases the visibility of these women within the political methodology community. VIM also has a moderated email list that has grown from a listserv started by Caroline Tolbert at the University of Iowa. Anyone can request to join the list, and messages can be sent by anyone (including non-members) to dis-

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[1]See also http://www.saramitchell.org/journeys.html.

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The goals of VIM are to support female scholars in the specialized field of political methodology. This initiative, based on the proven strategies used in similar programs in economics and international relations, brings together women at the forefront of political methodology to discuss methodological innovations that cut across all empirical fields of political science. In addition, the program explicitly addresses the challenges faced by women in academia and provides a forum for mentoring and discussion of strategies that maximize professional success. All this occurs in an inclusive, supportive environment that incorporates women of all ranks and backgrounds in political science.

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An Assessment of the Visions in Methodology Initiative: Directions for Increasing Women's Participation

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The *Visions in Methodology* (VIM) conferences developed through the work of the Society for Political Methodology's Diversity Committee, founded in 2005. With the support of an NSF grant, five VIM conferences have been held and a sixth is scheduled to take place in Spring 2014. The broad goals of VIM are to facilitate networking and mentorship, and to support women in political methodology. This article provides a preliminary assessment of the impact of the VIM program. Based on an internet survey, fielded in January 2014, we are able to report on some general characteristics of VIM participants, as well as provide comparison to individuals who have not attended VIM.

In a survey of political science professors in the U.S., Sedowski and Britnall (2007) found that 26% of political science faculty were women. And while women comprise a minority within the discipline as a whole, particularly at more advanced ranks, Methodology stands out as the sub-field specialization with largest gap between men and women who identify it as one of their fields.[1] Sedowski and Britnall report a gap of 4% between the proportion of men and women identifying as methodologists – which does not seem terribly large until one considers that by the authors' indicators only about 10% of men identify methodology as an area of specialization, which means that nearly twice as many men identify as methodologists, compared to women.

VIM was created to provide "opportunities for scholarly progress, networking, and professional mentoring in research and teaching in order to support women in the political methodology community."[2] Networking, mentorship, and career productivity and advancement stand out among the goals for the VIM conferences. A typical VIM conference includes research presentations by selected participants (typically 45 minutes long), followed by discussant

and audience feedback. Interspersed throughout these research presentations are professional development sessions that focus (broadly) on succeeding in academia. Finally, a critical component of VIM is its opportunities for networking and interaction with senior and junior scholar attendees.

Research in economics has hypothesized that its gender gap is likely due to 1) a lack of access to "research networks" that facilitate co-authorship and publication (McDowell, Singell, and Slater 2006) and 2) a lack of role models and relationships between junior and senior faculty (Blau, Ferber and, Winkler 2010). Blau et al. (2010) found that participants randomly assigned to participate in a small conference that matched junior female economists with senior mentors – such as VIM does for political scientists – were significantly more productive in terms of grants and publications when evaluated five years after their participation, compared to women not selected to participate in the program. In sum, this research suggests that these types of programs have succeeded in enhancing the productivity of female scholars in economics.

To investigate the extent to which VIM has had similar success, we fielded an online survey that went to all previous VIM participants and to political scientists (male and female) who have not attended VIM, but were affiliated with the same institutions as VIM participants. This survey will not allow us to draw *causal* conclusions about the impact of VIM. Participation in VIM is not a random process – participants self-selected into the applicant pool, and subsequently, were selected to participate based on the quality of their proposal. As a result, it is difficult to determine whether post-VIM career outcomes are due to the VIM program, or due to VIM participants having particular characteristics which made them more likely to apply and be accepted to VIM in the first place. Thus, without making causal conclusions, we highlight and discuss some interesting differences between those individuals who have participated in VIM and those who have not.

The Survey and Characteristics of the Sample

The survey for this project was designed to collect information from individuals who had participated in VIM. The focus was on both their experiences with VIM and various aspects of their professional development. We also collected comparable professional development information from a group of individuals who had not attended VIM. The sample for the survey was constructed by first identifying everyone who had presented a research paper at any of the VIM

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[1]The eight sub-field specializations included by the authors are: American, Comparative, IR, Methods, Public Administration, Public Law, Public Policy, Theory.

[2]http://visionsinmethodology.org

[3]In this process two individuals who served as discussants were included in place of two individuals who presented research – the inclusion of the two discussants did not change our sample of institutions in any way, and the institution for one of missed presenters was included in the sample, but the other was not. These errors were completely random and we have no reason to think that they affected the results of our survey.

conferences (66 in all), and their institutional affiliation at the time of attendance.[3] Given that most (though not all) VIM participants are in early stages of their career (or at least were at these early stages during the time they participated in VIM), we then formed a control group by identifying every assistant professor, associate professor, and Ph.D. student currently on the job market from every institution that VIM participants were affiliated with at the time of their attendance. Excluding VIM participants, the survey was successfully sent to 874 individuals.[4] We received responses from 45 individuals who participated in VIM, and from 288 individuals in the non-VIM group (35.3% of those successfully contacted).

Although our sample undoubtedly over-represents political scientists at Ph.D.-granting institutions, the gender distribution of our non-VIM participants from our sample compares favorably with other surveys of the discipline. Table 1 compares the proportion of female political scientists at different ranks from a 2007 APSA survey of gender in the profession and a 2012 NSF survey of Ph.D.s conferred. Our survey has a slightly higher proportion of women at the associate rank, and a slightly lower proportion of female Ph.D. students, but still suggests largely similar rates.

Table 1: Comparison of Our Sample to APSA, NSF Studies

	APSA Result	NSF 2012	Our Survey
Assistant	36% female	-	39% female
Associate	28% female	-	35.36% female
Ph.D. Students	-	41.7% female	37.84% female

Even more importantly, we were also able collect publicly available information about those individuals who were selected to be part of our sample but did not complete the study.[5] Specifically, we gathered the following information using available vitas for everyone in our sample: individual's current rank, rank of current institution, rank of Ph.D. granting institution, and number of years to obtain Ph.D.[6] Using these data, we evaluate whether there were any systematic patterns to which of the contacted non-VIM participants actually took the survey. In a model predicting survey participation that includes all of these factors and gender, none of these characteristics play a significant predictive role in determining participation in the survey (Table 2).[7]

Table 2: Factors Predicting Survey Participation (non-VIM participants)

	Coefficient (S.E.)
Gender	0.177 (0.177)
Rank of current institution	-0.0005 (0.001)
Rank of Ph.D. institution	-0.0001 (0.002)
Ph.D. candidate	-0.765 (0.706)
Assistant professor	-0.446 (0.695)
Associate professor	-0.600 (0.696)
Time since Ph.D.	-0.0005 (0.0006)
Constant	-0.142 (0.705)

Model is a logit, 1 if participated in study.

Who attends VIM and What do they Experience?

Over eighty percent of women who have attended VIM are currently employed in tenure-track jobs. Most completed their Ph.D.s within the past five years, with many having completed within the past two years. The modal VIM respondent reports receiving her Ph.D. from a "Top 25" institution. Currently, 47.2% of VIM participants who hold tenure-track jobs report that they are employed at "top-ranked research institutions," while 52.8% report being employed at "lower ranked research institutions."

When asked how they decided to apply to VIM, 76% report being encouraged to apply by another person. Fewer than 5 percent of those encouraged indicated that such encouragement came from their advisor; most were encouraged by someone they describe as an "other mentor" (58%) or a peer (38%).

Those who attend VIM largely report positive experiences. Table 3 shows participants' perceptions of the utility of VIM. Sixty-seven percent of VIM participants describe the experience as "useful" or "very useful" (on a six-point scale from very useless to very useful). Among those who found the conference to be useful, over eighty percent identified networking opportunities as the aspect of the conference they found to be particularly useful and 64% identified opportunities to network with other junior scholars as "extremely useful." VIM participants found networking with junior scholars somewhat more useful than networking with senior scholars (a 13-percentage point difference). Indeed, 22.2% of those who found the conference useful also reported that, if they could change something about the conference,

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[4]An additional 58 were included in the sample, but could not be reached by email.

[5]The survey was fielded with a mailer feature in Qualtrics, which allows us to identify those individuals who took the survey and those who did not. Results were anonymized so that we cannot attach any particular results to a given participant.

[6]Rank information based on the most recent rankings from U.S. News and World Report, which covers the top 86 political science doctoral programs in the country.

[7]This model excludes VIM participants, as they were targeted separately, with an additional email. When VIM participants are included, gender is a significant predictive factor in participation. This is to be expected, as all VIM participants are women. These results are also robust to a model that just uses information available on departmental websites, even for individuals who do not have available vitas on the web.

they would add more opportunities to network with peers.

Turning to professional development sessions, 74% of those who found the conference useful mentioned finding professional development sessions particularly useful. Specifically, participants found sessions on career development and career road-blocks to be particularly useful (44.7% report that these sessions were "extremely useful"). Fewer participants (21.05%) reported that sessions on work life balance were useful were "extremely useful."

With respect to research presentations, 48.7% found the discussant comments they received to be "extremely useful" and 43.2% found comments from other VIM participants to also be "extremely useful." Additionally, 33.3% report that if they could change something about VIM, they would add more research feedback.

While we do not wish to speculate about why individuals were somewhat less enthusiastic about the professional development sessions, there are several clues to the reason behind this result in our survey. Specifically, in our study we gave individuals the chance to answer an open-ended question that simply invited them to share any information they wish about their VIM experience. For reasons of anonymity we do not share these open-ended responses verbatim; instead we discuss them broadly.

The open-ended responses suggest that some participants believed that professional development sessions tended by be dominated by just a few VIM attendees, who did not give others a chance to speak and used the sessions to vent frustrations with their own departments. Others reported these sessions were sometimes needlessly discouraging. Open-ended responses also indicated that these sessions were too unstructured and required more moderation. Additionally, participants had hoped for more concrete professional advice (e.g., grant writing, teaching, etc).

It is important to note, however, that the open-ended responses further reinforce the importance of networking to this program. A number of participants wrote that the chance to network with other junior scholars at VIM was extraordinarily positive and important to their careers. On balance, then, most VIM participants report a positive experience with the conference and highlight elements that are consistent with the goals of VIM, but how do they compare to other individuals who participated in our survey? We will highlight several differences between VIM participants and our non-VIM participants: perceptions of linked fate, experiences with networking and mentorship, and article submission patterns. These differences are notable, and in some cases obtain conventional levels of statistical significance, but we caution readers that it is not our intent to argue these differences are necessarily caused by VIM participation.

Table 3: Usefulness of VIM: Participant Perceptions

	Extremely helpful	Somewhat useful	Slightly useful	Not very useful
Career development sessions	44.74%	47.37%	5.26%	2.63%
Balancing family/career	21.05%	31.58%	28.95%	18.42%
Discussions of career road blocks	44.74%	34.21%	18.42%	2.63%
Personal experiences	34.21%	42.11%	18.42%	5.26%
Senior scholars discussions of careers	36.84%	42.11%	10.53%	10.53%

(a) Perceptions of VIM: Professional Development

	Extremely helpful	Somewhat useful	Slightly useful	Not very useful
Meeting/ interacting with senior scholars	51.28%	33.33%	10.26%	5.13%
Meeting/ interacting with junior scholars	64.10%	28.21%	7.69%	0%
Career discussions with senior scholars	53.85%	25.64%	12.82%	7.69%
Career discussions with junior scholars	41.03%	41.03%	15.83%	2.56%
Social events	51.28%	28.21%	15.38%	5.13%

(b) Perceptions of VIM: Networking

	Extremely helpful	Somewhat useful	Slightly useful	Not very useful
Presentations themselves	39.47%	47.37%	10.53%	2.63%
Discussant comments	48.65%	37.84%	13.51%	0%
Personal experiences	43.24%	37.84%	18.92%	0%

(c) Perceptions of VIM: Quality of Research Presentations and Feedback

Demographic Comparisons

We begin by comparing the basic "demographic" career characteristics of our VIM and non-VIM participants. For ease of discussion, we refer to those individuals who did not participate in VIM as the "control group," though again it is not our intent to suggest that this is a causal or controlled comparison.

The modal male participant in our survey completed his Ph.D. in the past two years, the modal female participant (who did not attend VIM) completed her Ph.D. in the past 5-8 years. Thus, the men in our control group are at the same point in career as VIM attendees, or earlier, while the women in our control group are somewhat further along in their career. The modal participant from the control group reports earning his or her Ph.D. from a "Top 10" institution. In the control group, women report current employment at a "top ranked" research institution, while men report employment mostly at a mix of "top ranked" and "lower ranked" research institutions. Individuals in our control group tend to have received Ph.D.s from somewhat better-ranked institutions, and are currently somewhat more likely to work at better-ranked institutions than our VIM participants – though none of these differences are substantively large.

Fittingly, our VIM participants were somewhat more likely than control group women to report that the term "methodologist" describes them very well. Among VIM participants, 27.9% report that the term methodologists describes them "very well," while only 12.4% of our control group women report that this term describes them "very well." In contrast, 18.4% of control group men report that "methodologist" is a term that describes them "very well" – perhaps reflective of overall discipline differences.

VIM participants also had slightly broader definitions of what constitutes a methodologist than either control group men or women. We presented our participants with a list of statements that could describe someone who is a methodologist. These statements included "develops new method-

ological techniques," "applies advanced quantitative methods to substantive questions," "focuses mostly on quantitative methodology," "publishes work specifically focused on methodological issues," and "studies questions of measurement and operationalization." A participant could select anywhere from none of these statements to all five. On average, VIM participants selected significantly more statements than control group women, though behaved similarly to control group men.

Perceptions of Linked Fate

A key component of VIM is its emphasis on gender, and so we compared perceptions of "linked fate" among both our VIM and control group women. Linked fate considers the extent to which individual members of a group believe that their future is tied to the future of other group members (Dawson 1994). Here we adapted a linked fate measure often used in research on race and politics and asked all women who took the survey how much they believed their own success was tied to the success of other women in the profession.

Thirty-eight percent of VIM attendees reported that the success of other women had "a lot" to do with their own success, compared to 22% of women who had not attended VIM. This 16-percentage point gap in perceptions of linked fate does not reach statistical significance, which is likely the function of the low number of VIM participants. On another gender measure, however, both VIM participants and control group women behaved in a similar manner. In both groups, 43% of participants reported that their gender identity was at least "somewhat important" to them.

Mentorship and Networking

We next consider the way our participants describe their mentorship network (Table 4). Although statistical significance may be an imperfect baseline in this case, we do present this information. Bold values indicate those differences that reach statistical significance. Reported p-values provide an additional letter marker to indicate if they are reflecting comparisons to control group women or men (represented with w or m).

Overall, Table 4 suggests that VIM participants generally perceive a good deal of support from peers and have relationships with mentors at higher (though not consistently significant) rates than control group women and men. VIM participants are significantly more likely to have a mentor outside their own department than either control group men or women.

Table 4: Networking and Mentorship

	Support from scholars at own rank – % a lot	% with mentor	% with non-advisor mentor	% with mentor outside own department
Control group women	31.84%	90.70%	79.07%	61.62%
Control group men	34.78%	84.29%	**66.43%** (w:p=0.0417)	61.43%
VIM	46.51%	**97.67%**	**83.72%**	**79.07%**
(w:p)	0.0940	0.1448	0.5324	0.0467
(m:p)	0.1148	0.0463	0.0172	0.0372

Another indication of networking is how often individuals are invited to give research talks at other institutions. We present the average number of invited talks (excluding job talks) individuals gave over the last year and over the entire course of their careers in Table 5. The results show that VIM participants give invited talks at a higher rate (both annually, and over the course of their career) compared to both control group men and women, though the difference is only statistically significant compared to men. In general, women give more invited talks than men in our survey, but the difference between control group women and men is not statistically significant. These differences are not a function of differences in career stages and hold when we compare only faculty at the same ranks.

Table 5: Invited Talks

	VIM	Control group women	Control group men
Mean # of invited talks per year (not job talks)	**1.57** (w:p=0.4883) (m:p=0.0320)	1.37 (m:p=0.1524)	1.09
Mean # of invited talks over course of career	**3.37** (w:p=0.5087) (m:p=0.0557)	3.13 (m:p=0.1849)	2.78

Article Submissions

One way to gauge productivity is article submission. Table 6 presents average number of article submissions per year for our survey participants.[8] Here we see that men submit

more articles on average than women – though the difference is only statistically significant when graduate students are included in the analysis; the difference does not reach statistical significance we limit comparisons to only faculty. As one may expect, faculty have higher article submission rates. Among faculty we also see difference in rates of submission between VIM participants and the control group – with VIM participants having slightly higher rates of submission. While the difference between submission rates for VIM women and control group men is not significant, the difference between VIM women and control group women is significant, regardless whether we consider all participants or only faculty.

The variance around these means is reasonable and we have no reason to suspect that any of these averages are being driven by a small number of outliers. Furthermore, these patterns remain once we adjust for individuals who spent the bulk of their time working on a book.

Table 6: Average Article Submission by Year

	All people	**Only faculty**
Control group women	1.353	1.580
Control group men	**1.77** (w:p=0.001)	1.960 (w:p=0.2519)
VIM	**2.17** (m:p=0.1407) (w:p=0.0027)	**2.23** (m:p=0.3413) (w:p=0.0452)

Another consideration for productivity and career advancement is the journal outlets individuals target when they submit article manuscripts. Table 7 shows a breakdown of proportions of individuals who report sending to various types of journals, based on categories that were presented in the survey. Because individuals could select more than one category of journal, percentages will not sum to 100. We see that there is a slightly higher tendency among VIM participants to submit to higher-level outlets, than among control group women in particular. Indeed, across all of our groups, control group women are least likely to submit to one of the top three journals.

As a final step, we considered the steps individuals take prior to submitting a journal article. We asked participants whether they circulate manuscripts either within their departments or to readers outside the department (excluding conference panelists) prior to submitting the manuscript to a journal. We find that our control group men and women are somewhat *more* likely than VIM participants to circulate manuscripts within their own departments prior to journal

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[8]For VIM participants the average is calculated by asking how many submissions since VIM, and then dividing by years since VIM; for control group women and men the average is calculated based on asking how many submissions in past 3 years, and then dividing by 3.

submission. In contrast, VIM participants were somewhat more likely to circulate manuscripts to people *outside* their own departments than both control group men and women. The modal reason for not circulating manuscripts (across all groups) is the concern that circulation burdens colleagues with extra work.

Table 7: Targeted Journals

	VIM	VIM faculty	Control group women	Control group women, faculty	Control group men	Control group men, faculty
APSR/ AJPS/ JOP	88.10%	94.12%	66.67%	74.19%	77.04%	84.16%
Top subfield	76.19%	73.53%	90.48%	95.16%	89.63%	93.07%
2nd-tier general	34.88%	35.29%	41.67%	51.16%	51.11%	55.45%
2nd-tier subfield	37.21%	38.24%	30.95%	30.65%	51.11%	54.46%
Other	13.95%	14.71%	15.48%	17.74%	23.70%	24.75%

Discussion and Limitations

Our results point to some differences between VIM participants and peers who did not participate in VIM. There are essentially three ways we might interpret these differences. One, VIM makes a difference: women who go to VIM gain opportunities to expand their networks and subsequently increase the quantity and quality of their productivity. A second possibility, however, is VIM participation is simply a proxy for another set of characteristics that differentiates VIM participants from the control group. Our survey results show, for example, that the majority of the women who come to VIM were typically encouraged by another person to apply. This may hint that the women who attend already have some type of a support network. As a result, the fact that they apply to VIM might just be an indication of a general level of ambition that explains their differential productivity. The third possibility is that VIM has some effect, but that effect is difficult to quantify given the selection issues identified in the second possibility.

Conclusions

The goal of VIM has been to create a network for female methodologists (often interpreted broadly). Our results suggest that it is indeed the network component that VIM par-

ticipants have found most valuable. In particular, VIM participants are most enthusiastic about having a chance to interact with their peers.

Although participants are generally positive about their VIM experiences, they are least enthusiastic about the professional development sessions – something which is also an important part of VIM. While our participants felt career discussions were useful, relatively few viewed sessions on work-life balance to be as useful as other parts of VIM.

In sum, then, while the results of our survey point to the overall positive impact of VIM, they also point to several ways in which the VIM program may be improved. First, our survey suggests that VIM attendees may have different needs and interests. As a result, it may be helpful to implement a pre-VIM survey to help guide discussion in professional development sessions. Such a survey may have the added benefit of serving as an initial measure of participant characteristics, which may help untangle the causal effect of VIM.

Second, based on responses to this survey, VIM may want to implement changes to the professional development sessions. Specifically, the open-ended responses indicate a need for more structured sessions on career development, where all participants feel equally welcome to speak.

Third, our results show that most of those who participated in VIM did so after a mentor or colleague encouraged them to do so. This suggests that these are individuals who already have at least some network connections. In the future, VIM may try to broaden recruitment to reach individuals who may not necessarily have a mentor or colleague to inform them of opportunities – these types of people may be particularly likely to benefit from VIM. One possibility may be to randomly select VIM participants. This may again have the added benefit of determining the causal impact of the program.

In this study we have been able to identify differences between women who have attended VIM and peers, and have offered several suggestions for ways the program might be improved, which might allow for clearer causal inference of the impact of VIM in the future. Even if the causal effect of VIM remains unclear, or even if it becomes apparent that VIM is a forum for already ambitious and productive female methodologists; in a discipline and subfield where women are under-represented, we submit that such a modest function deserves continued support.

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Implicit Bias and Why It Matters to the Field of Political Methodology

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What is Implicit Bias?

The human brain is amazing. It handles over 11 million pieces of information every moment (Staats 2013) and we are only consciously aware of about 40 of those pieces of information. The brain is processing all of the others without our conscious knowledge and it makes decisions about what is important for us to notice, what we can ignore, how things can be put together, what they mean and how we should react. Being trained scientists does not change the fact that our brains are doing a lot of work of which we are unaware.

This ability is enormously helpful to survival and to efficiently handling all of the information we need to deal with. For example, most of us can stand in front of a class and lecture without being conscious of which muscles are working, how our balance is keeping us upright, what is going on in the hallway outside the room (assuming we are focused on what we are saying), and so on. We are consciously focused on how to get information across and whether the students appear to be grasping the material – our brain is taking care of everything else.

A telling example was played out recently on a television show called "What Would You Do?" In this show three young actors were sent into a park separately to "steal" a bicycle. One actor was a young white man, one a young black man and one a young white woman. The young white man worked for quite a while, including using various tools, to break the lock on the bicycle he was "stealing" and was seen by many people before someone finally stopped him. The young black man hardly had a chance to start working on the lock when he had gathered a crowd who all insisted that he stop. The young white woman was working on breaking the lock when a man stopped and offered to help her!

These kinds of reactions are often based on attitudes that we are not aware of and that we may not want. They go by different names in the literature: schemas (Nosek, Banaji, and Greenwald 2002; Fiske, Cuddy, Glick, and Xu 2002), unconscious attitudes (Staats 2013), implicit bias (Staats 2013), implicit attitudes (Petty, Fazio and Brinol 2009), and blind spot (Banaji and Greenwald 2013), for example. Some authors argue that there are subtle differences between these phrases (see for example, Equality Challenge Unit, 2013) but for the purposes of this article we will use them interchangeably.

These unconscious attitudes are part of being human. We may not all have exactly the same ones, though people raised in the same culture with similar experiences are likely to share many of them. No one is entirely free of biases. Most importantly, we may not be aware of our biases, or blind spots, and they affect our behaviors in ways we may not be aware of and ways we might be very unhappy about.

Assessing Implicit Bias

In an outstanding literature review on the topic, the Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University, argues that implicit bias has certain key attributes (Staats 2013). First, it is unconscious. Second, it causes one's judgment to move away from neutral toward a positive or negative assessment of something or someone. Third, it can come into play without any intention on the part of the person holding the bias. Finally, implicit biases are "robust and pervasive" (Staats 2013, 7).

In our experience working with university audiences on this topic, the most difficult aspect of the idea seems to be for people to understand that each of us has these blind spots whether we want to have them or not. Most audiences grasp the idea and understand that people have unconscious attitudes that affect their behaviors and may cause them to behave in ways that run counter to the values of equity that we espouse. People can often also accept the intellectual idea that they have biases themselves. When we discuss ways to counteract those biases, however, it becomes clear that most people do not actually believe their behavior is influenced by attitudes of which they are unaware and some become quite angry at the idea. It takes a significant amount of self-awareness and open-mindedness to accept

that one is biased and to work on de-biasing.

One of the major research teams working in this area is Project Implicit at Harvard University. This team has developed and tested an assessment that allows individuals to understand their own biases – and awareness is the first step to being able to counteract these unconscious attitudes. The Implicit Association Test (IAT) offers the opportunity to quickly and privately discover something about one's own biases and how they compare with others. For example, the assessment on the degree to which one associates specific genders with science or with liberal arts indicates that 72% of those who have taken the assessment have at least a slight automatic association of male with science and female with liberal arts (26% have a strong association and 28% a moderate association). Only 10% of those taking the assessment have the opposite association – at least a slight association of female with science and male with liberal arts. We should note that the IAT is not the only assessment available and though it has been criticized in the literature (Mitchell and Tetlock 2006), it is the most common method of assessment (Blair et al. 2013).

Implicit Bias and Gender Equity in the Academy

Most universities, their leaders and their faculty members espouse the ideal of gender equity. Likewise, this has been an important goal for the Political Methodology Section. We have seen change in the proportions of female faculty and administrators in the United States. However, those changes have been slow and not always consistent over time or across different parts of the campus. For example, the Ohio State University has seen a continuous increase in the proportion female in the faculty ranks (over at least the last 13 years) to the point where the tenure track faculty is now 32% female, still a distressingly low number. However the colleges in the Science, Technology, Mathematics and Medicine cluster (STEMM) only have a proportion of 23% female. Even within that cluster, the colleges range from 17% female faculty in the College of Engineering and 18% in Math and Natural Sciences to 90% in the College of Nursing in 2011. The OSU Political Science Department has 29% women. This is close to the discipline average of 32%; the Political Methodology Section has about 20% women (Breuning and Sanders 2007, 348). For the Political Methodology Conference, 10-20% of paper authors or coauthors have been women (Dion and Mitchell 2012).

Universities have often worked very hard to create policies that support women and men equally in their academic careers (e.g. Philipsen and Bostic 2010) and to recruit gender diversity for the faculty (e.g. NSF's ADVANCE program). OSU's Political Science Department has had a strong reputation and culture in mentoring, especially for women. Much of that credit goes to the chairs (Paul Beck, Kathleen McGraw, Herb Weisberg, and Rick Herrmann). There is universal agreement that the Founders of Political Methodology are also exemplars in mentoring. The support of Brian Humes, NSF Program Director, as well as the support of the founders and leaders of Political Methodology led to the Visions In Methodology (VIM) Conferences.

In spite of these policies and the good intentions of most of those involved, we find ourselves asking with Virginia Valian "Why So Slow?" (1999) when looking at the level women involved in the subfield, field, and academia in general. One part of the answer may be implicit bias, so it is important to be aware of it. These biases affect everything from the pre-collegiate pipeline to treatment of graduate students, to hiring decisions and promotion and tenure. In spite of good intentions the implicit biases of those involved (both men and women) create barriers for women. There is a great deal of literature on this topic and significant work on practical applications as well. We cannot review even a portion of it in this article. A good review of the literature is in Equality Challenge Unit's Unconscious Bias and Higher Education (2013), a publication from the U.K. We will focus on a few articles of particular importance.

We know that everyone is subject to unconscious bias and that those biases can cause us to act in ways that are counter to our explicit values. Biases may particularly appear when we are under time pressure (Bertrand, Chugh and Mullainathan 2005), when we are stressed (Reskin 2005; Payne 2006), and when significant ambiguity is present (Payne 2006). Time pressure, stress and ambiguity are facts of academic life and thus we often find ourselves in the kinds of situations in which unconscious biases are most likely to appear.

Moss-Racusin, Dovidio, Brescoll, Graham, and Handelsman (2012) use a randomized, double-blind study to examine bias in science faculty members assessing a student's application for a position as laboratory manager. The application materials were identical except for male or female names. Both male and female faculty members rated the male student more competent and more hirable and also were willing to offer a higher salary and more mentoring to the male student. This result supported earlier work by Steinpreis, Anders, and Ritzke (1999) looking at hiring an assistant professor. Again, both male and female professors rated the male applicant superior (two to one) over the identically qualified female applicant.

In discussing these results with faculty audiences we all ask ourselves: how this could happen? Would the results have been the same had we been involved in the study? Our conclusion is that they probably would be the same and we can imagine scenarios that might lead to this result. One sees the name at the top of the CV and a frame of reference or context is established that one is not even aware of. Then, for example, if one sees a coauthored article on the CV the frame of reference for the male applicant might lead

one to comments such as: "interesting topic," "good journal." The frame of reference for the female applicant might instead lead one to think something like "I wonder if the coauthor is her advisor?" In addition, there is likely to be a double whammy for a female coauthor on a quantitatively sophisticated publication. Note that there is nothing wrong with any of those points – all are relevant to the search, but the positive ones came out in the context of the male applicant and the questioning one came out in the context of the female applicant. Adding up a lot of these "molehills" can lead to "mountains" of evidence against a female candidate (Valian 1999), even though her record is equal to the male candidates getting rave reviews. The frame of reference creates a context in which her work is viewed differently.

Letters of reference are another place where we can check ourselves for possible biases. Trix and Psenka (2003) examined letters of reference for successful applicants for faculty positions in medical schools. They found that letters for men were longer, and contained more references to the curriculum vitae, publications, patient interactions and work with colleagues. Letters for women were shorter, contained more references to personal life and contained more doubt raising phrases. Looking back at the letters of reference we have written can give us a window into the possibility that our own biases show up in ways we would rather they did not. The Visions in Methodology Conferences, which are "designed to address the broad goal of supporting women who study political methodology" discussed this research and other related topics.

The final general issue we want to raise is the concept of "stereotype threat" (Steele, Spencer, and Aronson 2002; Stone et al. 1999). This refers to the subtle pressure a person can feel when they know they are in a minority in a given situation. For example, Shih, Pittinsky, and Ambady (1999) find that Asian American girls when reminded that they are Asian American (by a simple questionnaire) before taking a math test do better on the test than Asian American girls who are not reminded. On the other hand, Asian American girls reminded that they are girls before the test (by a different simple questionnaire), do worse than Asian American girls who are not reminded of either fact before the test. This sheds light on the issue some women report of feeling that they are not at their best in interacting with their male professional colleagues – being one of only a few women can leave one constantly reminded that one is the odd person and that pressure can lead to being less successful than one would be without those reminders.

The combination of gender and math is likely a reason for the Political Methodology Section seeing lower numbers than other sections of the American Political Science Association. Perhaps reflection upon the literature on implicit bias has implications for equalizing success at the Political Methodology Meetings and in our classrooms, such as general encouragement and positive reinforcement. Most likely,

the problem starts much earlier in the pipeline and thus the outreach at even earlier levels, including the "Motivating Politics as a STEM Discipline for Middle and High School Students through Participatory Experiments and Demonstrations," is important. The Motivating Politics Program was a collaborative among the Political Methodology Section, NSF, and the Midwest Political Science Association (with great thanks for James Rogers at Texas A&M and Shane Nordyke at the University of South Dakota as the leaders).

Relatedly, Ely (1994) talks about how being one of an underrepresented group in a community can lead some members of the group to not want to identify with the group in order to enhance their status within the group. That is, sometimes women contribute to these biases when they try to distance themselves from other women within the community. To us, this is a complicated issue. It does help explain some of the reactions to the Women's Dinner kickoff at the Methods Meetings. It was designed to provide a friendly welcome at the start of the conference, but has met mixed success. In contrast, VIM (which is a conference only for women with both substantive and professionalization topics) has had uniform success.

Although we have focused on gender issues in implicit bias, the same mental processes are at play in all kinds of other inequities including race, sexual-orientation, age, weight, and many other personal characteristics that have no particular relevance to qualifications for a position. These ideas are crucial to bringing more diversity into academic fields and to helping others succeed. All of us, but particularly those of us who have a role in these decisions or have an opportunity to mentor, have a responsibility to become aware of our implicit biases and to take steps to de-bias ourselves and to set up processes that diminish the ability of biases to play a role.

Moving Forward

NSF's ADVANCE institutions provide many examples of changes to policy and practice. For example, the University of Michigan's STRIDE program offers excellent examples of best practices for de-biasing faculty search processes. See also Washington State University's ADVANCE Program on mentoring, Texas A&M's ADVANCE Program on retention and promotion, and the University of California at Davis' ADVANCE Program on creating a level playing field for success. Ohio State University's Kirwan Center has resources on debiasing.

Many of the ideas are easily adapted to recruitment searches in Political Methodology, invitations extended to speakers in our departments (avowing homophily tendencies), or even for recruiting women discussants at the Political Methodology Meetings or the Political Methodology Section at other major professional meetings. The recent lead-

ership of the Political Methodology Section have not only supported, but pushed for such innovation and change. The most important steps start with the individual in educating oneself and decision makers about implicit bias because awareness serves to reduce reliance on stereotypes (Correll 2013). We hope that this article starts to illuminate that process and the progress already made with programs such as Motivating Politics and VIM.

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Thoughts on Mentoring to Train and Retain Methodologists

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Mentoring as a Tool for Retaining Methodologists

"But I'm not a methodologist!" I have heard this refrain many times from graduate students and younger faculty members who would seem to me to be extremely methodologically knowledgeable and have always wondered what this claim says about us methodologists. For I am a methodologist and have no problem saying so just as plainly as I would claim to be an Americanist. Yet no one who studies American politics would say "But I'm not an Americanist!" Of course, if I am methodologist then at one point I suppose I must not have been one, which begs the question: when did I become a methodologist and why? And how can we get more talented young scholars to make the same transition?

Not to spoil the surprise, but in truth I have no idea when this metamorphosis occurred. I certainly didn't think I was a methodologist when I got a B+ in Linear Regression in graduate school. But I figured I probably was one when I was entrusted with hosting the Summer Meeting. In between lay teaching a bunch of graduate methods classes and writing a handful of methods papers, so it probably happened somewhere along the way as a junior faculty member. I certainly doubted my "status" at times, from the time my advisor ordered me to introduce myself to Gary King as a graduate student (he was very friendly once I mustered up the courage, of course) to the first time I presented a paper at the summer meeting (which was one of the three most nerve-wracking talks I've given).

So having been through these experiences, now when I talk to a graduate student or junior faculty member who seems pretty on top of things to me, it frustrates me to hear this phrase. If our goals is to get interested and energetic people involved in the group and attending and contributing to our meetings at a higher rate, then we should all recognize that the phrase "but I'm not a methodologist" has become our enemy.[1]

How do we banish this thinking? How do we get more people to come (and come back) to the meeting? How do we attract more people doing methodologically intelligent and creative work? How do we encourage them to submit that work to *Political Analysis*? While many academic, intellectual, and societal forces interact to make people reluctant to stake a claim to being a methodologist, one that I think matters quite a bit and that we can control is mentoring. I know that I neither would have found myself in some of the aforementioned situations nor would I have been as prepared to survive them as I would have without my graduate advisor's support and counsel.[2]

Mentoring graduate students constitutes one of the most enjoyable and rewarding parts of this profession. It is also one of the most important tools at our disposal for recruiting and retaining new generations of methodologists into our ranks. Given the hesitation that many young scholars feel in declaring themselves part of our group, mentoring must feature even more prominently in attracting new scholars to our meetings, journals, and conversations than it might for students working in other areas. And even more so for students outside the prevailing core of methodologists, those that might bring greater numbers and diversity to the group, whether from outside the top schools, or women, or minorities. As Shannon's initial contribution in this symposium notes, these potential methodologists face even greater challenges in overcoming their reluctance to give up the thinking that leads one to say "But I'm not a methodologist."

To that end, this contribution offers some thoughts on mentoring and advising graduate students. The underlying motivation rests with getting more students interested in methods and joining the methods community and, in particular, with overcoming the peculiar form of methods phobia described earlier, but most of the content should likely be useful beyond methods or methods students in particular. It goes without saying that what follows represents just one person's thoughts – one man's thoughts. The set of

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[1] In general, the game of defining what makes a methodologist in some absolute sense is not helpful. Of course, when one serves on a job search for a methods position such distinctions must be made at some level, but here I prefer to draw the outlines broadly. To me, anyone who acknowledges the important of methods for the credibility of their empirical claims and will pursue knowledge about methods in order to improve those claims deserves to be called a methodologist.

[2] In fact, I probably would have been an economic historian. But that's a different story.

experiences that I have had give me a particular viewpoint on mentoring. And while my perspective has evolved over the years through conversations with many members of the field, my department, and at home about diversity issues in political science and academia in general, it nevertheless heavily represents the sum of my own personal experiences.[3]

What works for me will therefore not necessarily work for everyone, neither would every advisor nor advisee be best served by heeding my suggestions. My experience alone has taught me that the best advising approach varies substantially across students and that the advisor must find the approach that works best in a given situation.

I've also noticed that being an effective advisor for one student increases the chance that other students will approach you in the future and that those students will already have a sense of your comparative advantage in terms of advising style, which tends to increase the chance of a successful outcome. And, let's be honest, since I tend to fit into the caricature of the scary senior methodologist, it doesn't hurt to have an established track record of effective advising to increase the chance that students will put that aside and come talk to me.

Mentoring Students as Professionals

For those just starting out as advisors or even for those more seasoned but willing to consider someone else's experiences, some of the suggestions here might prove useful. Admittedly, I have somewhat more limited experience to draw upon than many of the more seasoned members of our group in this area. Still, I have directly supervised dissertations for at least eight Ph.D. students – most successful but some not – and have written at least twenty recommendation letters for more than ten different Iowa Ph.D. students to attend the summer meeting in the last ten years, half of which were for women.

Advising students with an eye towards getting them involved in more technical pursuits – whether methodological or theoretical – takes a fair bit of time and work in my experience. Certainly some students come ready with the training and skills to immediately excel at more technical pursuits, but this seems more the exception than the rule and I suspect that such students will likely face few challenges in participating in the methods community. But for the rest, which constitute a large part of those that we want to reach out to, more time working on skills, developing research projects, and providing feedback appears beneficial.

The earlier you can begin the process, the better. Having started my service as an advisor in anywhere from a student's first to fourth year, I can unequivocally say that starting earlier provides more opportunity to expose students to the research and training that will give them a better chance to succeed in methods.

Get students involved in a collaborative research process as soon as possible, ideally in their second year. This offers a chance to lead by example. If the paper has a methods component, even better, but that is not necessary. Attention to methodological details plays a crucial role even in research with fairly standard data analysis and it offers an excellent chance for students to get familiar with the various software and models that they may have only just been exposed to in their classes. Practice brings comfort which can then be leveraged to learn more advanced techniques. This also provides a great opportunity to build good coding and documentation habits, though I have found that no matter how much I stress the use of batch files, good code, and good notes, students still often go for the easiest short-term approach at first (Nagler 1995). But this just sets the stage for the epiphany of the wisdom and value of good practices in a year or two when you go back to revise the paper and analysis. Learning from mistakes has its place.

I also use this year to let students explore their own research interests, usually by letting them pick an article or two every week or two to discuss. This eventually helps identify a research area and a dissertation topic. I think it's best for students to identify their own research interests rather than to hand them a topic. Not that I'm above sharing good ideas, but even then students will be more interested and willing to invest in advanced skills when they have a role in selecting the idea from a menu they've helped construct. This process can take a year or two and occasionally a little longer, but when a great idea comes along it really tends to jump out to everyone and stick. Identifying the topic earlier allows more time to invest in the specific skills needed to execute it, but even when it takes longer I always encourage students to take lots of methods classes and get training outside of our program whenever possible. This helps build a stable of skills that can inform potential research interests as well as provide a foundation for understanding methods talks or preparing to offer a wide variety of classes as a faculty member.

As the student begins to work on a collaborative research project or their own work – whether a conference proposal, grant submission, research paper, or dissertation chapter – they will come to you with questions or ask you to read drafts. Respond immediately when they come by your office with a question. Read drafts and provide comments within one day whenever possible. This accomplishes two things. First, and especially early on, you want to encourage questions and provide positive reinforcement by answering quickly. This helps build a supportive relationship and establish trust – something that you will need in abundance when you tell them to propose and present a poster at a methods conference. Second, research is all about momen-

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[3]For longer exposition and more detailed treatment of the many facets of mentoring, see: Johnson, W. Brad. 2002. "The intentional mentor: Strategies and guidelines for the practice of mentoring." *Professional Psychology: Research and Practice* 33 (1): 88-96.

tum, especially when you are graduate student and it becomes the central feature of your life. Waiting two weeks for comments on a paper from your advisor interrupts that momentum and throws the entire project off track. Students usually don't have as many projects as faculty members going simultaneously and they probably don't have quite the same ability to shift effortlessly between projects. So help keep them going by providing timely feedback.

This lesson took me a few rounds to figure out. My recollection of my time as a graduate student involves stopping by my advisor's office virtually every day with some question or another and I didn't understand why my students weren't doing the same.[4] At first I just chalked it up to the scary methodologist image or the fact that I probably seemed really busy. (If the answer to the question "are you busy" isn't almost always yes, you should reconsider your work habits as well as the example you set for your students. But being busy isn't a reason not to make time for your student as soon as possible.) But then I realized that by delaying feedback I was not providing proper incentives to come talk to me. If a question won't get answered or a draft read in fairly short order, why ask it or send it rather than keep working? Once I changed my strategy here my students' behavior shifted correspondingly.

As you give advice your strategy should shift over time. At first it will be helpful to offer somewhat specific answers, but over time you want to shift to helping the student figure things out on their own. In the first year or two, I might spend some time interactively working through questions with a student to illustrate how to tackle a tough problem and build problem-solving skills. Over time, though, you have to shift responsibility to the student so that they can own their work and start to rely on their own abilities and instincts. So then you might just provide hints to point them in the right direction (mine occasionally get so vague as to get completely missed over the course of three or four conversations). Eventually, you have to let the student succeed or fail on their own terms and providing too much support undermines that. Somewhere in the process of writing the dissertation I tend to let students decide how to handle the technical details of the estimator, or the nuances of the theory. I'll still provide comments and highlight areas of concern, but they become their problems to address along with the associated consequences. By the time they do their actual dissertation defense, I say very little. I think that advisors that jump up to answer questions for their students in public settings like these do them a disservice. Talk with them afterward about how they could do better, but don't undermine them in public.[5]

Conference attendance provides a parallel stream through which to build confidence. Going to MPSA and APSA are fine and provide a good first look at the broader discipline, but they don't provide the same type of environment as the Society's Summer Meeting. I don't want a student's first experience with a methods conference to be at the summer meeting the year they hit the job market. I've had great success getting 4-8 students a year to go to our regional methods conference, SLAMM!, which offers a smaller, safer environment in which to see top-rate methods research and meet faculty and graduate students working in this area. These trips are usually cheap and quick, so you can get a caravan of students to go and have a bit of fun. This gets them attending even in their second year when they can really begin to see the wider world of methods beyond their basic training. If possible, host your regional methods meeting every few years, since even more students will attend.

Along these lines, encourage students to go to ICSPR, EITM, Essex, or other summer schools. In addition to receiving specialized methods training, they get a chance to meet faculty and students from other programs and begin to build relationships. Those relationships make it even easier to show up at the summer meeting since you may already know 10-20 people with whom you can strike up conversations. I believe that meeting students from other universities at similar stages of their career really helps. Not only does it help build a broader cohort that can sustain itself over the years and mutually reinforce good behaviors like conference participation and even collaboration, but it also helps students situate their own abilities. Usually that helps since they will find that while some students may be a bit more advanced many students will be at the same level or even a bit below. Learning that as soon as possible makes doing methods as a graduate student seem less intimidating.

To the same end, I also encourage students to attend the summer meeting a full year before they go on the job market. I view this as a gradual escalation from regional meetings to a sort of practice run at the summer meeting followed by the real thing the year of the job market. Getting a feel for the meeting one year provides good perspective and lessens the shock and pressure the second time around when a student applies for jobs. It also helps build the general pattern of attending the meeting on a regular basis that will hopefully continue even after graduate school.

At all of these conferences, keep an eye on them and make sure they are mingling and meeting new people. If not, take the initiative and introduce them to people. Make introductions to faculty with overlapping interests whenever possible. Introduce them to good role models or good mentors. Connect them to former students from your program

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[4]Sometimes I can't believe my advisor put up with me for so many years. Frankly, the best way I can think of to repay his patience and tolerance is to do the same for my students.

[5]An exception exists for the first few rounds of conference talks if they involve a coauthored paper, especially a more technical one that you had a hand in. Don't let the student suffer for your decisions.

to build community and see examples of people who were in their position a few years earlier.[6]

Mentoring Students as People

Along the way, I think it's good to get to know advisees as people. It helps you learn how they think about things and where their strengths and weaknesses lie. These kinds of conversations often develop better outside your office when one can have a less rushed conversation. I find that an occasional lunch or cup of coffee can be a good way to provide opportunities for more general conversations about a student's work, professional goals, or an assessment of their progress. It also provides a chance for the student to ask questions that might have been lingering but that they never felt there were time for in a more focused office meeting. Studies have found that providing both social-emotional and more research-focused support both lead to a better working relationship while also increasing student satisfaction with their advisor and their graduate school (Tenenbaum, Crosby, and Gliner 2001). I tend to have these types of meetings more often as a student progresses since by the time they graduate they need to have some insight into what it means to be a faculty member, so you need to let them see a little bit of that side of your job. But don't go too far – I don't think it's helpful for students to know too much about behind-the-scenes departmental politics since it rarely helps them and usually just distracts from the main task at hand of getting research done.

Relatedly, I also believe you have to maintain the clear supervisory nature of your role – don't get too casual about the topics you discuss, departmental or otherwise. While the relationship can be friendly, don't let students mistake that for being friends. As an advisor you have to make a number of important decisions about students' progression through the Ph.D. program and you want those decisions to be made on neutral grounds, whether it a positive decision in which case you want it reflect upon the quality of the student's accomplishments or a negative decision, in which case you need them to see clearly where they need to improve in the future. Overall, you have to maintain your authority as a mentor while building trust and teaching students how to interact with faculty members as equals in the near future.[7]

Along the way, it's important to remember to celebrate big accomplishments: a first conference presentation, a successful dissertation defense, a first publication, a job offer. But perhaps even more important is dealing with disappointment. Our discipline seems designed to provide many more instances of negative than positive feedback: most journals and grant agencies accept far fewer than 15% of submissions and most jobs receive dozens of applications. While it may be easiest (and even occasionally true) to reach for a convenient explanation that may reduce the sting at first – so and so won that award/got the publication/got hat interview because they know what's-her-name – in the long run this doesn't help. Use the review or denial to identify ways to improve a paper or application and make it better. In the long run good people doing the best work they can do will succeed in this discipline. It may take years to establish oneself, but when good outcomes start to happen, it will be worthwhile. Your job as advisor involves helping to build confidence in order to ride out the disappointments and to help students stay focused on what they can control, namely the quality and quantity of their work and the rate at which they submit it to conferences, journals, and other outlets.[8] Methods requires even more of this attitude since it can be a longer road to develop and publish a more technical paper at the boundaries of knowledge.

While I intend the advice offered here to apply generally, in the context of this special issue it seems appropriate to reflect on mentoring strategies in the context of a wider discussion about diversity. As I said earlier, the best mentoring strategy varies with both the mentor and the mentee. You have to develop a style that works for you but you ought to adapt to specific student's needs to help them succeed. Given how daunting methods can seem to new graduate students, I think that getting an early start provides the best route to bringing people into our group. As soon as you can, get them interested in methods, expose them to cutting edge and new methods, and get them to more technically oriented conferences. You want to build confidence and a base of knowledge so that the kinds of presentations and conversations that occur at the summer meeting seem not so much foreign but rather engaging and relevant.

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[6]And remember that this is a two-way street. You should also take the time to talk to other people's students. I learned this lesson years ago from senior people in the field. In particular, I remember that as a junior faculty I was talking with a well-known senior methodologist who had some great comments on a paper of mine, but then concluded our conversation by saying that he wanted to save some time to meet some of the graduate students in attendance. I figured that if he could do that, then the least I could do is try to follow his lead – I try to have extended conversations with at least two or three students or junior faculty I don't already know at every methods meeting I attend now.

[7]For an extended discussion of ethical issues in the advisor-advisee relationship, see: Johnson, W. Brad, and Nancy Nelson. 1999. "Mentor-protégé relationships in graduate training: Some ethical concerns." *Ethics & Behavior* 9 (3): 189-210.

[8]A note for students here: while having raw talent certainly helps, nothing substitutes for consistent and sustained effort in achieving success. Show up for work every day. Spend as much of your work time as possible on your own research. By all means, take breaks and have lunch or coffee with your peers, but don't spend your time wandering the halls, chatting idly, or browsing the Internet for anything non-work related. Put in the hours and you will almost certainly write a good dissertation, publish some solid papers and get a job. Then you get to keep doing it for a few more years.

Mentoring Women and Minorities

I think it helps to be aware of the different ways that women and minorities may view or approach methods in general (as discussed by other authors in this symposium). As Shannon explains, women often face greater hurdles in a mathematically focused field like political methodology and are more likely to experience "imposter syndrome" than men. Research also shows that women may participate less in seminars or underperform in more competitive environments. Randomized experiments show that faculty in other fields (both male and female) may be less likely to mentor women graduate students (Moss-Racusin et al. 2012). Text analysis shows that recommendation letters for women tend to be shorter and emphasize different descriptions and types of content (Trix and Psenka 2003). Being attuned to these possible issues can help you be more responsive and provide opportunities to discuss them as appropriate. At a very minimum, pay attention to what goes on around you and think about how your actions affect the example that you set – once you start to pay attention you will probably notice things that you hadn't been aware of before. Then do what you can to correct them as needed.

For example, pay attention to your classroom environment to make sure that everyone has a chance to participate. Watch for comments or body language that might undermine someone's confidence or perception of their ability to do methods. Foster a collaborative classroom environment in which students work together to talk out research ideas or master a new estimator. This can be especially easy in methods since computer lab meetings offer a great opportunity for collaborative learning. Pay attention to your syllabi, seminar speakers, department committees, etc. to make sure that you provide examples of positive role models. This is part of your responsibility as a mentor, an instructor, and a role model in your department and beyond.

More broadly, talk to students, junior faculty, and your own peers and mentors about their experiences in this area; the conversations that I have had over the years with people in the profession have been the single most important source of information for learning about the very different ways that people experience and view methods. These conversations help my approach to mentoring evolve and improve.

To be frank, these aren't issues that I paid much attention to when I was a graduate student and was perhaps even skeptical of earlier on in my career as a faculty member. Being in a department with many senior women faculty members who are all involved in groups focused on mentoring and promoting women in Political Science in general (e.g., conferences hosted at Iowa such as Journeys and Visions in Methods; analysis of factors predicting success in graduate

school (Hesli et al. 2006), getting a job, or receiving tenure (Hesli, Lee, and Mitchell 2012); studies of gendered citation patterns (Mitchell, Lange, and Brus 2013); publications on the gendered nature of research (Kadera 2013)) has given me ample opportunity to have many conversations over the years that have shaped my awareness. I've also received an disciplinary outsider's perspective through my marriage to a mathematician who held a Clare Boothe Luce Chair that involved overseeing a program "to encourage women to enter, study, graduate, and teach" in science, mathematics and engineering and who has strong ongoing friendships with women from her cohort. This has given me other examples and perspectives from which to engage these topics.

Awareness of these issues will almost certainly help you be a better mentor. Often it may just be a matter of ensuring that you don't perpetuate or exacerbate any of the aforementioned obstacles that women may face more so than men. Sometimes it may mean having a conversation to discuss these realities. Other times it may lead you to offer advice or draw other resources to students' attention. And sometimes the best strategy involves referring students to other mentors who may have faced a similar situation personally and can talk about their experiences. As a man I don't pretend to have a complete understanding of how these obstacles manifest themselves and how a woman might react. That doesn't mean that my experiences, both personal and with other students, can't be of any help, but sometimes a different perspective may be needed. Remember the goal is to have as many good methodologists as we can and to have people interested in methodology. And training good students, both male and female, and setting a good example in that role will increase the diversity and quality of mentoring capacity in the next generation.[9] Even more selfishly, as an advisor I like working with good graduate students, including those interested in studying methods, so I want to do what I can to help them succeed. And I'd hate to lose out on working with a better student just because she wasn't as brash as an ultimately less skilled male student during a seminar in the first year of graduate school.

Rewards of Mentoring

Working with graduate students and seeing them flourish is one the more rewarding parts of my job and I do it for its own sake. In the long run, being successful means helping students achieve their goals, whether to receive a Ph.D. and get a tenure track job at a research university, or to take their skills to the public or private sectors to do work they enjoy. Whatever their objectives, I want my advisees to succeed in their field and to become part of their own research community, whether the methods group or another. Then,

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[9]I have an untested conjecture that people's advising style substantially reflects their experiences with their own advisor, suggesting a strong autocorrelation effect down the chain of advisor-advisee pairs.

if you are lucky, you get to watch them develop into mentors in their own right and train the next generation of students.

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Why Do We Need Diversity in the Political Methodology Society?

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What does diversity have to do with political methodology? Not much, it might be thought. Of course, it is nice to have a wide range of people at methods panels and at the Summer Meetings. We're glad to encourage a diversity of entry-level people to join us. But in the end, we may say, the central aspect of our professional lives is that we do science. It is really just about the *work*. And the whole point of the Society for Political Methodology is that we know how to do the work and how to train new people to do it, too. That is what constitutes us as an academic enterprise.

That perspective on the business of political methodology certainly captures one aspect of who we are. But taken as a full description, it seems to me quite mistaken. It fails to see our mission whole. In the end, it is naïve, both about politics and about the science of politics. And diversity is what it does not really understand.

The lived experience of being a woman is different from that of being a man. The experience is not different in every respect, of course, but it is different. The same is true of being African-American, Asian-American, or Latino rather than being an American of European ancestry. Like gender or sexual orientation or social class, race shapes our life to an important degree, whether we acknowledge it or not. And in shaping our life course, race helps determine what we know, how we think, and what seems to us valuable and important. Our subculture's presuppositions – whether wise or foolish, ignorant or profound – are "obvious" truths to us, and they usually go unquestioned, even by people with doctorates.

It follows that any field of study as intimately involved with human life as political science needs diversity if it is to be intellectually reputable. First, political science needs diversity in what it studies. The largest group of scholars in contemporary political science are white males, as I am. Most of us have little experience with working class life, and the great majority of us are straight. In consequence, some topics get more attention than they should, and others less. Too often, we cannot see certain topics because our eyes are blinded.

In my view, the long struggle for women's enfranchisement has received less study by political scientists than it should, to take just one example. More generally, the study of gender, sexual orientation, social class, and race are frequently marginalized into separate courses or even separate departments, offering a convenient rationale for not doing

what we ought to be doing if we were serious about politics, which is to mainstream those subjects in American politics courses. When such topics are omitted, students in our courses get a bowdlerized version of political life.[1]

Similarly, political methodologists often look past key inferential problems in the discipline because we know too little about the issues that raise them. Our students, copying what we do rather than what we say, frequently replicate our style in their applied work. By contrast, Harold Gosnell, the great pioneer of political methodology, spent the latter part of his career working with African-American political scientists on the substantive and methodological challenges of studying black politics in an era when African-Americans were poorly represented in surveys and many could not vote. The result was that he published something consequential about the topic before most other white political scientists even realized that the field of study existed.

Including the politics of neglected or marginalized groups in our coursework need not, and should not, result in ideological one-sidedness. Most of us are Democrats, and we need to guard against partisan bias in our teaching. It is not progress to replace one kind of blindness with another. But neither is it acceptable to set aside from our teaching the political lives of entire groups of people. The full range of American life needs to be taught, and to be taught with the full range of political perspectives we should bring to every topic. And these same topics need to be recognized in methods courses and connected to the statistical issues we teach for precisely the same reasons.

Second, political science needs diversity in the set of scholars studying it. In any society, not all of politics will be captured by the cultural norms and shared understandings of dominant groups. As sociologists have long understood, powerful sectors of society attempt to make their sectarian views normative, and they often succeed. This effect is no less true in academic life than in national economic and political life.

The result is that a set of highly talented but narrowly based scholars may sometimes fail even to get the facts right, as in the case of Thomas Jefferson's relationship with his slave mistress, Sally Hemings. The overwhelming consensus of (white) Jefferson scholars was that no such relationship had existed. The testimony of those who claimed to be Jefferson's mixed-race descendants was largely set aside or explained away – until DNA evidence showed that they were very likely correct. Nearly all the "experts" had been wrong.

The evidence for Jefferson's paternity occasioned a great deal more surprise among whites than it did among many African-Americans. Black people came to the question with a shared memory of inter-racial relationships under slavery. Here again, ancestry matters.

"Ah," we political methodologists will be tempted to tell ourselves, "this is *other* people's problem. Humanities types – they're different from us. By the nature of their methods, they will fall into all sorts of prejudicial errors. *We*, on the other hand, do science. There is a right and a wrong answer. "Eleven" has the same meaning in every culture. There is a clarity about judging good work in mathematical fields. More than most, we know how to be fair. We are trained scientists."

Apart from the anti-humanities prejudice, much of that self-described professional identity is valuable. Scientific training does have many admirable consequences. Yet professional narrowness can also blind us to conceptual failures that are obvious to those outside our field. Consider how we treat race and ethnicity in our partisanship, turnout, and vote choice equations – either when we are doing applied work or when we are producing methodological innovations. Nearly all the time, those explanatory factors enter only as dummy variables, with no interaction terms. Since whites constitute (still) the large majority in samples of American citizens, white respondents will be the primary determinants of the other coefficients. What we are saying, then, when we enter race and ethnicity only as dummies, is that Americans of African, Latin American, or Asian descent behave just like whites in every respect but one – their intercept terms differ. White behavior is taken as fundamental, and other groups are thought to differ only in the simplest way. But that gets the substantive science wrong. Just a few minutes of obvious statistical tests suffice to demonstrate that the constant-coefficients assumption is nearly always wrong. This is a problem in purely methodological explorations, too: We often forget that it is hard to learn much about the value of a proposed new estimator when the substantive model under test is brutalizing the data.

The simple fact is that people with different histories often have different coefficients. And who first pointed that out to me? An African-American political scientist, to whom the blunder of our usual procedures was much more obvious than it was to me.

The same kinds of mistakes occur in much else we do. We are familiar with the general result that better educated Americans are less likely to be pro-life. But at one point some two decades ago, I was surprised to find in survey data that among Roman Catholics who attend services regularly, the more education they had, the more pro-life they became – the opposite of the usual effect. Thus simply putting an education variable into an equation explaining abortion attitudes makes Protestant notions normative. It ignores the different perspective of devout Catholics, and no doubt those of many other religious groups as well.

When I finally had a chance to describe my finding during a talk at Georgetown University, a Catholic institution,

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[1]Needless to say, foreign scholars have a great deal to teach us, too, but the growing internationalization of political science and political methodology is too large a topic to be discussed in this essay.

much of the room nodded: It was not news to them. But few of us have the kind of colleagues who could help us understand the diversity of American religious belief and experience. Most political scientists are not specialists in religion and politics. Often we have only our own experience with religion to go on, which may be thin or non-existent, and in any case is necessarily narrow. We rely on those who know more, but there are few scholars with the relevant background and expertise in most departments. Yet religion is central to much contemporary politics, and so we often write about it anyway, hoping that our lack of depth will go unnoticed. Often it does: The reviewers are not well informed either. The resulting mistakes in our professional journals are all too obvious to religion-and-politics scholars. Here, too, our lack of diversity harms the science.

Political methodologists have done very little to help us think about how to model the variegated impact of religious diversity in a country where many denominations and sects are quite small and thus scarce in our national samples. Yet the topic is crucial to political science. Here as elsewhere in political science, the important methodological advances are those that break through a bottleneck impeding the progress of applied researchers. In those circumstances, marketing methodological innovation to our substantive colleagues is easy. But to make sales, ya gotta know the territory. We often don't. Our narrowness shows. No sale.

Political methodology and formal theory remain overwhelmingly white male enterprises. Once a field becomes monochromatic, or nearly so, then self-reinforcing mechanisms set in. The jokes, the small talk, the food preferences – all send subtle, or not so subtle, signals about who is welcome. In a subfield not famous for its practitioners' social skills, male insecurity can lead to clumsy combative behavior that makes the atmosphere even colder. The cumulative effect can be depressingly powerful. One need not spend much time talking to women political scientists who have attended past Summer Methods meetings to hear dreadful stories of dismissive or belittling remarks, stories that are not told with nearly the same frequency about other political science conventions.

I believe that we have gotten better on all counts. Certainly the racial and gender diversity of the annual meeting is broader than it once was. But there remains much to do to make the field of political methodology genuinely welcoming to a variety of backgrounds and perspectives. Among other things, we need more tenured professors in the field who reflect the country that America has become. How might that be done?

One of the biggest obstacles, in my view, is the notion that we do not have to be intentional about diversity in hiring. This is the view that we know what constitutes good work, and we know it when we see it. I have often encountered this view among natural scientists, though not only among them. When I was an undergraduate at Berkeley,

one physics professor was interviewed in the student paper on the topic of how to reach undergraduates with physics ideas. He said, "I don't teach students. I teach physics. Some of them can get it, and some of them can't." That was a man ignorant about human beings.

One can understand when academics without broad graduate training across the social sciences lack sophistication about cultural hegemony: Often they have never heard the relevant ideas. And even with that training, the ideas of our own kind of people inevitably seem completely correct to ourselves. Attention to what we do not already know, or to the skills that we personally are not good at, can seem a waste of time, the kind of thing that weaker minds would be drawn to, people who cannot master what *we* are good at. Besides, other kinds of people are different, and sometimes one has to work harder to communicate and make friends across social boundaries. It all seems hard, somehow. Better to think that we are fine as we are, and that making a department diverse is just lowering standards. But as I have already noted, the resulting scientific blunders are very much in evidence, and very much the responsibility of that blinkered point of view.

The first step is to admit that you have a problem. And what is that problem? It is, as one sociologist puts it, that "the people you know are a really bad sample." One high university official at another institution told me that year after year, departments had reported to him that there were no qualified minorities available to hire. What they meant was that they knew of none. Knowing that, this official eventually blocked other hiring slots until departments put in the time to call people different from themselves and ask them about talented individuals among their friends and colleagues. "You'd be amazed at how many highly qualified people they were able to find," the official said. And departments who diversify soon see that, once hired, these same new faculty members became prominent and respected members of their departments, so that their colleagues brag about having hired them. And of course, having hired a diverse faculty, majority scholars will have colleagues who can help them avoid the bad social science endemic to narrow groups.

To get a diverse faculty, one needs a diverse graduate student pool. And all graduate students need training. That is where the Society for Political Methodology comes in. In a profession where most scholars will use quantitative tools at some point in their careers, and in which no one department can possibly offer all the courses that students might need, the summer meetings of this Society are a crucial place for students to expand their methodological horizons and acquire some inspiration and mentoring from those who have preceded them. Methodology is tough: We all have to step up to a rigorous set of standards. But the trick is to offer that opportunity in a way that is welcoming, neither offputting nor dismissive. We don't just teach statistics; we

teach students.

Much has been done in recent years to ameliorate these subcultural deficiencies. As the meetings have grown larger, having smaller events for those not in the majority can be very helpful. But an equally important goal has to be a broad shift in how we think about ourselves. Yes, we take mathematics seriously. But no, we do not think that our math skills define who we are professionally, nor do they establish a single hierarchy that will determine all our professional decisions. After all, by the mathematical standards of theoretical statisticians or real mathematicians, everyone in political methodology and formal theory is a hopeless mediocrity. The argument for us as a field is that we have strong applied math skills, and we have serious substantive interests and real insight into politics, backed by deep political science graduate training. Our research requires both, and therefore our methodological graduate training does, too. Bright prospective graduate students will want to go where they can get an integrated understanding of both politics and methods.

In political methodology and adjacent areas of political science, all of us bring something to the table. Some of us will be better at mathematics than at depth of political understanding, and others will be the reverse, but all of us will need a good deal of both. The extremes in political methodology are likely to be weak, but the broad middle kingdom should have many mansions. That is what political methodology needs to help students build. And if that is so, then no one gender, no one ethnic or racial group, and no subcultural framework can be normative. We need to be open to everybody and genuinely welcoming to everybody – not just tolerant, but genuinely warm and collegial toward all.

That is going to require even more changes than those we have already made. But it is what a modern science of politics demands. My generation has made enough foolish mistakes already. Meeting the scientific needs of the twenty-first century demands that we broaden both our membership and our intellectual vision. For all sorts of reasons, that is the right thing to do.

Diversity and Political Methodology: A Graduate Student's Perspective

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Graduate students, regardless of field of study, gender, race, or any other distinguishing characteristic, generally feel isolated from their peers, petrified of passing comprehensive exams and dissertation defenses, and intimidated by the academic job market looming ahead. The insecurity of being in a Ph.D. program is compounded by being a minority. Women, as the previous articles have established, are a minority within political science, and especially within methods.

It is daunting to discuss why there are not enough women in quantitative fields. It requires identifying macro-level societal issues, honing in on micro-level individual behaviors, but couching it in the framework of a larger discussion of what it means to be a woman and have a successful career. In an attempt to simplify, I focus on two selection mechanisms which may pull women away from successful and rewarding careers in quantitative fields: selection due to early-development socialization and selection due to gender-differential social pressures.

Early Development Socialization

A significant amount of work has explored the gender and math question. In short, the literature illustrates a weeding-out process, whereby girls grow up in a society that explicitly and implicitly deters them from quantitative fields. We inadvertently groom your young girls to give up when faced with difficult problems, and compound that with messages that math isn't for them.

Psychologist Carol Dweck's Mindset establishes two types of learners: fixed and growth. Individuals of a fixed mindset believe that qualities like intelligence or ability are innate traits that can be refined, but not significantly improved on. In contrast, those with a growth mindset believe that most skills are a function of hard work and dedication, not simply talent. These mindsets are an important and distinguishing characteristic when the individual is faced with difficulties. Those with a fixed mindset are more averse to challenges, as they fear failure will define them as "not smart," whereas those with a growth mindset are more capable of dealing with failure, as it is perceived as part of the learning process. While this mindset is seen in both genders, women are particularly susceptible to adopting a fixed mindset in math (Henderson and Dweck 1991). This causal mechanism has three parts.

At an early age, young girls are more developmentally advanced than young boys. Their brains develop language faster which results in young girls who are more expressive than their male counterparts (Burman, Bitan, and Booth 2008). This linguistic ability can be attributed to intelli-

gence. Accordingly we provide results-based compliments to our precocious little girls, saying things like "You're so clever!" for actions that come naturally to them. Parents also offer words of encouragement to their children who are not as capable, and little boys may hear action-based compliments, like "You're working really hard on that!" Dweck establishes that this form of reinforcement creates a fixed mindset. Paradoxically, more capable children can internalize that intelligence is intrinsic while their less able counterparts associate ability with hard work.

The second part of the mechanism that leads young girls to believe that they are not good at math is the tired, but still extant, stereotype that math is for boys (Blackwell, Trzesniewski, and Dweck 2007, 78, 246-63; Cvencek, Meltzoff, and Greenwald 2011). Cvencek, Meltzoff, and Greenwald (2011) observe this math-gender stereotype expressed in Implicit Association Test results for children ages 6 to 10. Children associated math with male, and little boys identified more strongly with math than little girls.

The literature on mindsets is particularly salient with regard to math and science. A two-year panel study of 7th graders found that children with growth mindsets significantly outperformed children with fixed mindsets, even though they both entered the analysis period with equal prior math achievement. Growth mindsets predicted success in college-level organic chemistry, when controlling for prior math ability. Similarly, women primed with a fixed mindset treatment performed significantly worse than women provided with a growth mindset treatment (Dar-Nimrod and Heine 2006, 435).

Society's attempts to remedy this situation runs the spectrum of offensive to brilliant. The poster child of well-intended, but rather ridiculous, "math for girls" is Danica McKellar's series "Math Doesn't Suck." Ms. McKellar (most famously known as Winnie Cooper from The Wonder Years), who has a BS in math and her name on a theorem, writes a series of books in pastel colored, curly fonts that sport covers that look like Cosmo. I'm surprised the I's aren't dotted with hearts. Her hair is always perfect, her shirt unbuttoned just so, and her head its tilted at a come-hither (to math, of course) 45-degree angle. At the other end of the spectrum, we have the promising line of girl engineering toys, GoldieBlox, created via Kickstarter by Debra Sterling, a Stanford engineer. GoldieBlox has received much press for their innovative line of fun, creative toys that encourage little girls to use applied simple math and engineering skills to solve problems – and their clever use of a Beastie Boys song.

As anyone who has ever shopped for young girls will know, GoldieBlox is the exception, rather than the rule. Girls who like math and grow up to be women in math-oriented fields are considered to be anomalies. What does this mean for women who do enter these fields, whether in academia or in the professional world? It means that we sit in classrooms where we are the only female. It means we sit in client meetings where we are mistaken for the secretary. It means our male advisors and supervisors occasionally get the wink-nudge "I see why you've got *her* working for you." At this year's MPSA, I was a panelist in a nearly-packed room. As I got up to speak, it occurred to me that I was one of only four women in the room, and the only person of color. We have few role models and little encouragement. Promising women are deterred from productive careers in quantitative fields, based on socialization rather than ability.

Gender-differential Social Pressures

Graduate school is best described as a monastic experience. We lead a sparse life, consumed by esoteric information-gathering that is appreciated by a small group. While most people respect a Ph.D., they generally have little understanding of what it is we *do*, exactly. Most of us manage to eke out a personal life, but it is generally limited by the all-encompassing nature of research and by the lack of disposable income. We continue to live in the pizza and free beer world while our non-academic counterparts move on to fancier affairs.

What does this mean for a woman in graduate school? In short, we are alienated. Most graduate students are in their twenties. The average completion time for a Political Science Ph.D. is 6.5 years, according to the National Research Council. The average age that Americans get married is 27 for women and 29 for men – skewing slightly downward for women and slightly upward for men. The pressure for women in their twenties to get married and have children is intense. The social expectations for women in their twenties can be at odds with what it means to be a successful graduate student.

How are we alienated by society? First, we are constantly bombarded with messages and images of what it means to be a successful woman (hint: it has little to do with R skills). A glance at any 20-something's Facebook feed of female friends is a menagerie of engagements, first dances, and tastefully planned flower arrangements. This progresses to baby bumps, knitting projects, and first steps. Most societies applaud these accomplishments. Recently, a cousin of mine was married. In true South Asian style, the celebration was a week of elaborate parties, delicious food, and an obscene amount of gold. At the same time, her sister ranked first in her class at a competitive pharmacy graduate program. Even in my often-ostentatious society, there's no comparable reward for scholastic achievement.

How are we alienated by our graduate programs? The monastery analogy extends further to encompass family. Maternity leave has become a recent allowance at graduate programs. While a promising boost, what many schools offer is simply an extension of in absentia status. This can

mean no pay, and the potential of being removed from student health insurance, losing visa status, or reinstating suspended student loan payments. Expanded maternity allowance can help with the practical nature of juggling academics and family, but it does little to address the culture and perception of women who are pregnant or have children during their graduate career. Women who get married or become pregnant may be perceived as less serious, and an advisor with a limited amount of time and resources may choose to focus on more "promising" advisees. Similarly, the lack of emphasis on paternity leave reinforces the idea that the woman should be at home caring for children.

To better understand the culture, I suggest reading Anne-Marie Slaughter's 2012 article *Why Women Still Can't Have it All*. Her assessments of a work environment for mothers is parallel to the female academic experience. I often hear male colleagues complimented for being great dads was because they shoulder child care while their wives work. In contrast, a female professor once confided to me that at her first post-maternity leave faculty meeting, one of the male professors jokingly asked how her vacation was. Similarly, my female RA was hesitant to reveal her pregnancy to potential recommendation-writers, because she felt it would be counted against her. A recent article in Inside Higher Ed specifically addresses this issue in political science.

It is unfair to target only graduate programs for this stigma. As an undergraduate senior at MIT, many of us had the opportunity to interview with some of the top firms in any field. I remember being provided a word of advice from an alumna who had launched a successful investment banking career. "When you're asked the five-year question," she said, "never say you plan on being married. They'll see you as a liability." She was referring to the generic interview question of "Where do you expect to be in five years, professionally and personally?" For men in their early twenties, the advice was the opposite. Young men who have a goal of being married are viewed as reliable and stable, while women who expected to get married were viewed as a waste of resources.

What Can We Do?

Graduate women in quantitative fields have consciously chosen an alternative path that is explicitly and implicitly discouraged by our environment. The issues I point out in this article – mindset development and social pressures – are daunting but not impossible to overcome. As a woman who has weaved her way through the male-dominated environments of MIT, The Conference Board, analytic forecasting, and now quantitative methods within Political Science, I offer the following advice to women pursuing or considering pursuing graduate education in the male-dominated quantitative fields:

1. **Observe your mindset.** The best way to do this is to pay attention to your language. Women often attribute our success to luck and our failures to a lack of ability (interestingly, this is the opposite in men).[1] This is magnified in quantitative fields, where our negative thoughts are validated by the actions and words of others. If you are a woman in a Ph.D. program, you did not get there by chance. You are not "lucky" you got into a top-tier program. You are there because you belong there. To think otherwise is an insult to you and your hard work.

2. **Hold your own.** It is inevitable that you will be in situations that are uncomfortable for women, even if the males in the room don't see it that way. A colleague of mine related that she is the TA for a graduate class composed of military mid-career professionals. While she emphasized that her students are very respectful to her, it is still a fragile situation. In neither this, nor my MPSA experience, is the environment overtly disparaging or negative. But that is irrelevant; being the one that doesn't belong only amplifies any insecurities and self-doubts. Notice the situation, acknowledge it, and own it.
   One of my favorite stories to tell is from a conference where I was invited to dinner with senior academics in the field. It was me, eight tenured white male academics in their 60s and 70s, and one girlfriend of one of the academics in a rather small booth. It was an informal dinner where the food and wine flowed freely. I was the only sober individual while the others ranged from raucous to falling asleep at the table. By the end of the night, the waiter was deferring to me as the authority at the table, since I was the only person able to answer his questions clearly.

3. **Be friends with other women.** One of the most self-defeating things that women do is alienate other women. By doing so we reinforce negative stereotypes of groups of women as catty, gossipy, and unproductive. We also cut off a resource for ourselves by internalizing our problems or airing them to individuals who cannot relate and we put ourselves in a situation where we have to go it alone, by eliminating those who have done it already.

4. **Be a mentor.** Graduate students are often barely out of college. It is hard to us to view ourselves as a mentor to anyone, yet we are in a unique position where we have authority but can still relate to our students. Use that to help your promising female students. Make it a point to ask them how they are doing or to provide action-based compliments that develop

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[1] http://www.nber.org/digest/aug08/w13922.html

growth intelligence, such as, "I can see you're working really hard on this problem."

Quantitative methods can be a free-form field. While there is a hurdle of learning a programming language and the basics of statistics, the rest of our learning is often project-specific. If methodologists have a problem to solve, we Google packages, read vignettes, find github accounts and snag some code. We then hack away at our problem until the code works. We screw up quite a bit, and, at some point, screw up a little bit less. There is an degree of self-confidence that is required to tackle a problem in that manner.

Even that last sentence is a loaded statement. Women who have advanced in these fields usually do so in spite of their socialization and their environment. The rebuttal of the "confidence gap" literature is that these concepts of the qualities of a good leader (or university professor) are predicated upon the path that has been forged by men (Kay and Shipman 2014). While women may not be as aggressive self-salesmen, that does not make us less qualified as methodologists. What departments can do to improve their environment for women could (and should) be the subject of another blog post.

Due to the broad accessibility of information, advances in technology and statistical abilities and the growth of applied data science, the walls of the ivory tower are crumbling. For political methodology to remain relevant, interesting, and in order to advance the field in a meaningful way, we must embrace diversity. It is a detriment to the field that qualified and capable women are being turned away, and there is much we can do to draw the best and brightest, regardless of gender.[2]

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