


EDITORIAL

# Progress on the representation of women in JGP

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In July 2018, JGP instituted a new policy requiring that every paper sent out for review would be seen by at least one female reviewer; I refer to that policy here as Reviewer Equity (Gordon, 2018). One year on, it is time to examine the effectiveness of Reviewer Equity and its consequences to date.

The Reviewer Equity policy was prompted by an analysis of data from the journal *eLife* showing that manuscripts from female senior authors had lower acceptance rates than manuscripts from male senior authors when the review teams were entirely male but not when they were mixed gender (Murray et al., 2018). Because these data were based on nearly 24,000 submitted manuscripts and had built-in controls, their power to identify bias against female senior authors was unprecedented. JGP is a community journal with a much narrower focus, different review criteria, and orders of magnitude fewer submissions than *eLife*, but I saw no reason why the implicit biases that disadvantage women in *eLife*'s review process would be any different for JGP.

I have experienced firsthand the everyday denigration, dismissal, and discouragement to which women in the scientific workforce are subjected. As the first female Editor-in-Chief of JGP, I therefore sought to minimize any marginalization at the journal and reduce what some perceived as the “good old boy” flavor of our Editorial Advisory Board (EAB). In the six years that I have been at the helm, I have increased the representation of women on the EAB threefold (Fig. 1) and also improved age and geographic diversity. I consider the diversity of our EAB to be important for getting the best reviewers, recruiting papers from new authors, and making sure that all members of our community have a voice in the Journal's direction and programs. The *eLife* data, however, pointed to an even more urgent reason: the need to eliminate bias against female authors.

Fairness in the evaluation of science is not optional. It is not a luxury we can indulge in only when we have time and resources. Fairness is the value on which our entire system of evaluating science is based. To learn that our current male-dominated system of review was unfair to female authors was a shock. How bad is it? I wondered. What fraction of our reviewers were women? In recent years, JGP has actively encouraged authors and editors to consider diversity when suggesting and selecting reviewers. How effective was that? Between my first year as

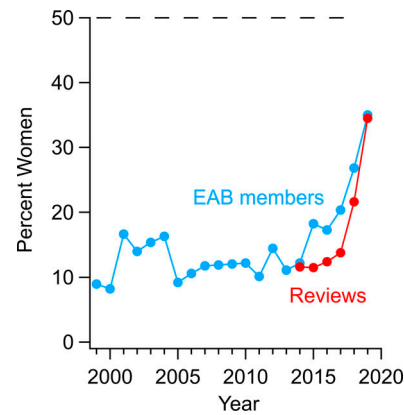


Figure 1. Percentage of women in the EAB (blue) and percentage of reviews contributed by women (red). Years reflect calendar years.

Editor-in-Chief (2014) and the time at which Reviewer Equity was implemented (July 2018), the representation of women among JGP reviewers only increased from 13% to 18% (Fig. 1, red). I would argue that the approach of encouraging authors and editors to consider diversity when suggesting and selecting reviewers had largely failed. Because the Associate Editors and I felt strongly that fairness of the review process was an urgent issue, we instituted the Reviewer Equity policy.

The Reviewer Equity policy has been a resounding success. In the 12 months since implementing Reviewer Equity (August 1, 2018 to July 31, 2019), women contributed to 34.8% of all reviews. In that period, we had an average of 2.6 reviewers per paper, and 78% of papers were reviewed by mixed-gender teams. That leaves 22% of papers reviewed by male-only reviewers. Interestingly, those papers reviewed by all-male review teams tended to fall outside the immediate expertise of the Associate Editors, suggesting that further expansion of our EAB and more extensive use of guest editors may be effective strategies to achieve 100% mixed-gender review teams.

One concern that was expressed before implementing Reviewer Equity was that it would lengthen review times because editors might have to work harder to secure qualified female reviewers. Although finding the right women to review manuscripts did sometimes require a couple of phone calls or emails to

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Table 1. **Statistics comparing the 12 months before Reviewer Equity was implemented (August 1, 2017–July 31, 2018) to the 12 months following (August 1, 2018–July 31, 2019).**

|   | 2017–2018 | 2018–2019 |
|---|-----------|-----------|
| % F among all reviews   | 21.6      | 34.8      |
| % papers with F reviewers   | 49.2      | 78.0      |
| % F senior authors  | 17.6      | 26.8      |
| Average # reviews per male reviewer                                     | 1.8       | 1.8       |
| Average # reviews per female reviewer                                   | 1.8       | 2.0       |
| % young investigators among all reviews                                 | 13.4      | 11.9      |
| Days from editor assignment to reviewers secured (all manuscript types) | 3.1       | 2.4       |
| Days to first decision after review (original research)                 | 32.6      | 31.8      |
| Days to first decision after review (all manuscript types)              | 23        | 18.4      |
| Acceptance rate (original research)                                     | 50.5      | 55.0      |
| # original research manuscripts reviewed                                | 129       | 102       |

F, female. Gender identity was determined through first-hand knowledge or Google image searches with no attempt made to identify nonbinary individuals. Individuals whose gender presentation was unknown and whose image could not be found constituted <5% of the reviewer population and were excluded from analysis.

experts in the field, our data indicate that the Reviewer Equity policy did not lengthen review times. When comparing the 12 months preceding Reviewer Equity to the 12 months following, we found that the number of days to secure reviewers actually decreased from 3.1 to 2.4 (Table 1), and the number of days to make first decisions after review on original research manuscripts decreased from 32.6 to 31.8. From these data, I conclude that securing diverse reviewers did not constitute a significant burden on the editors nor a delay in conveying decisions to authors.

When Reviewer Equity was first instituted, we were careful to make sure that the policy was used to bring new reviewers into the community rather than overburden the women who were already regular reviewers. We succeeded in this goal. In the 12 months before the Reviewer Equity policy, both male and female reviewers reviewed a mean of 1.8 unique manuscripts per year for JGP (Table 1). In the 12 months since Reviewer Equity was instituted, male reviewers continued to handle 1.8 unique manuscripts/year and female reviewers reviewed slightly more (2.0 unique manuscripts/year). We were also mindful that newly recruited reviewers should be well-established scientists. This is because JGP has a Postdoctoral Mentoring Program, and its members are mentored through the review process by the Associate Editors and myself. It would have been easy to increase representation of women by tapping our postdoc reviewers more frequently, as we have already achieved gender parity in this pool. Our data indicate that postdoc reviewers were responsible for 13.4% of all reviews before the Reviewer Equity policy and 11.9% of all reviews since the policy was implemented. Thus, we did not increase representation of women by increasing the fraction of reviews involving postdoc reviewers.

Is our review process less biased since instituting Reviewer Equity? Are papers from female senior authors faring better?

Because we do not have a sufficient number of submissions to power a meaningful bias analysis, we cannot be sure. In addition, many of the papers submitted since we began Reviewer Equity do not yet have final decisions. Interestingly, a larger fraction of submitted manuscripts come from female senior authors and our acceptance rate has increased slightly since implementing Reviewer Equity (Table 1). We suspect that the increased submissions from female senior authors can be attributed to the increased representation of women on our EAB and perhaps also our pool of reviewers. Thus, increased submissions by top female scientists may be a happy benefit of our efforts to stop excluding women from the review process.

JGP's mission is to publish mechanistic and quantitative molecular and cellular physiology of the highest quality, to provide a best-in-class author experience, and to nurture future generations of independent researchers. My term as Editor-in-Chief concludes at the end of 2019. It is my hope that the next Editor-in-Chief will continue the work of diversifying authors, reviewers, and members of the EAB. As a community journal, JGP must reflect the diversity of its community in order to accomplish its mission. We aspire to more than just publishing papers. A community journal can be a source of nurture, support, and strength for all. It can reflect our values and demonstrate how to live by them.

## References

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