**Six Things Peer Reviewers Can Do To Improve Political Science**

Ideally, published political science would provide high-quality information to policymakers and the public. One of the most important mechanisms for increasing the quality of published political science is peer review, in which qualified persons evaluate a manuscript before publication. Peer review received widespread support in a survey of APSA members (Djupe 2015). However, the peer review process often misses major errors and shortcomings in submitted manuscripts (Baxt et al. 1998, Godley et al. 1998, Schroter et al. 2008). The present manuscript supplements prior advice on peer reviewing (e.g., Miller et al. 2013, Nyhan 2015) to suggest six actions that peer reviewers of quantitative political science can take to improve the representativeness and validity of political science publications, and, for each recommended action, illustrates how the recommended action could have improved published political science.

**To increase representativeness**

Political science that is published would ideally be representative of the political science that has been conducted; otherwise, non-representative publication could produce research that does not replicate, if, for instance, researchers selectively report only studies or models for which their hypotheses have been confirmed. The opportunity for political science estimates and inferences to be non-representative is substantial: measured associations within a study can vary based on factors such as estimation technique, model specification, and inclusion criteria, and measured associations across studies can vary based on factors such as random assignment error, sampling error, and measurement error. Researchers thus can possess flexibility to selectively report from a range of studies and from a range of associations in a given study, which can in turn produce misleading inferences about the replicability of published associations. However, peer reviewers can help increase the representativeness of published political science with the following three actions:

1. Request reporting of novel alternate specifications

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2. Request declarations about related research

Some journals require authors to make disclosures such as whether the methods section of the manuscript reports all outcome measures that were analyzed.[[1]](#footnote-1) Such disclosure requirements are not widespread in political science, but political science peer reviewers can nonetheless request that a manuscript include declarations that would inform the reader about the representativeness of the reported research, such as whether the research has a related preregistered research plan. Moreover, for research based on surveys for which a full questionnaire is not available online, peer reviewers can request that the full questionnaire be included in the supplemental materials.

For an example of how such a peer review request might work, the Cassese and Barnes (2018) article on White women, sexism, and support for Republican candidates using data from American National Election Studies (ANES) Time Series Studies might have mentioned the authors' preregistered data analysis plan regarding White women, sexism, and support for Republican candidates using data from American National Election Studies Time Series Studies (Cassese and Barnes 2017), which could have led to questions being raised in peer review about differences between their preregistration plan and their article research design, such as in the measurement of hostile sexism or the inclusion of measures for biblical literalism and racial resentment.

3. Check for available relevant information on the research

Peer reviewers do not need to rely only on author disclosures, when relevant information is publicly available. For an example of how such a peer review check might work, Cassese and Barnes (2018) stated about the 2012 and 2016 ANES surveys that: "Whereas both surveys contain other items gauging gender attitudes (e.g., the 2016 survey contains a long battery of hostile sexism items), the items we use here are the only ones found in both surveys and thus facilitate direct comparisons, with accurate significance tests, between 2012 and 2016". Checking these publicly-available 2012 and 2016 questionnaires would have revealed other gender attitudes measures available in both studies in addition to those used in Cassese and Barnes (2018).[[2]](#footnote-2)

**To increase validity**

Research results that are fully reported and replicable can nonetheless produce misleading inferences if the underlying research methods are not valid. Peer reviewers can help increase the validity of results reported in published political science with the following three actions:

4. Request tests of discriminant validity

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5. Request reporting of summary statistics for regression-based inferences about groups

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6. Request a statistical test for inferences about group differences

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**Discussion**

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1. See here for the disclosure requirements for Psychological Science: [https://web.archive.org/web/20171115110444/http://www.psychologicalscience.org/publications/psychological\_science/ps-submissions](https://web.archive.org/web/20171115110444/http%3A//www.psychologicalscience.org/publications/psychological_science/ps-submissions). [↑](#footnote-ref-1)
2. Additional gender attitudes items on the 2012 and 2016 questionnaires are: MODSEXM\_MEDIAATT (and associated branches MODSEXM\_MEDMORE and MODSEXM\_MEDLESS), WOMEN\_WKMOTH, and WOMEN\_WKEAS. See ANES (2014) and ANES (2017). [↑](#footnote-ref-2)