EDITORIAL

The Future of Peer Review?

Under the leadership of then Chief Editor Dr. Robert Maddox, the editorial staff of *Weather and Forecasting* began an experiment using a double-blind review process in 2002. Under this experiment the authors' names were removed from the manuscript title page and the acknowledgments were deleted. Reviewers only officially learned the names of the authors when the manuscript was accepted for publication. Thus, both the authors and reviewers were unaware of each other, in contrast to the traditional single-blind review process in which the reviewers know the names and affiliations of the authors. The American Meteorological Society (AMS) Publications Commission supported the double-blind experiment, but has not to this point expressed the degree of collective endorsement necessary to extend the practice to all AMS journals as a universal policy. Given the ongoing transition of the manuscript qualification responsibilities from the journal editorial offices to AMS Headquarters along with the stated desire of the Commission that all submitted manuscripts be qualified in a uniform manner across the journals, the double-blind paradigm for peer review of *Weather and Forecasting* papers was discontinued as of September 2005.

The main reason for initiating the double-blind procedure was a belief that the present single-blind review process can lead to reviewer bias. Published studies indicate that reviewers may have biases based upon gender, country of origin, and the number of authors (Tregenza 2002; Wennerås and Wold 1997). While no studies have been done regarding the review processes of AMS journals, as editors we have circumstantial evidence suggesting that reviewers are not always unbiased. The double-blind review thus was started to investigate if it might be a better way to conduct peer review than the single-blind review. While not perfect, we thought that the double-blind review might help to level the playing field for all authors.

As part of the experiment, we asked for authors and reviewers to provide comments on the double-blind review process. Not surprisingly, the large majority of authors and reviewers provided no input at all. However, of those that responded, roughly two-thirds viewed the double blind favorably and roughly one-third unfavorably. Younger scientists generally were more likely to view the double-blind process favorably than established scientists. In particular, young reviewers liked the process because the absence of authors' names limited their preconceptions of the paper. Some reviewers who did not like the double-blind, however, indicated that it was important to know the authors' names, since knowing the expertise level of the authors helped them tailor the review and make it more helpful. Other reviewers were offended that we would even presume to doubt their ability to be fair and unbiased.

There definitely are problems with the double blind. In a scientific discipline as small as meteorology, some reviewers have no trouble identifying at least one of the authors from presentations made at conferences, writing style, or figure style. In addition, references to previous works help to identify the authors in some cases. There are no easy fixes for these problems. However, the driving question to ask is whether or not we think the present peer-review process being used by AMS journals is fair, and if not, then what would be better? While we believe that reviewers usually are fair and helpful, we also believe that biases can be subtle and hard to recognize (even by the reviewer providing the review). It is important to

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have a peer-review system that is as fair as possible, and we remain concerned that the single-blind review process does not meet this high standard. While the double blind is also not perfect, it comes closer than the single blind to being as fair as possible and deserves more serious attention by our community. It is our hope that this editorial will provoke thoughtful discussion on the peer-review process, since although we may be comfortable with the present single-blind review this comfort level by itself is not sufficient reason to keep it as the foundation of the review process at AMS.

The double-blind review process always required greater effort from the editorial assistants at *Weather and Forecasting*. Altering the submitted manuscripts to fit the requirements of the double blind was not easy, and we especially want to thank Meg Brady Carr, Glenn Weyant, Barbara Ballard, Elizabeth Moldonado, and Karen Swanson for their efforts over the years. We appreciate the support of Ken Heideman, Director of Publications at AMS, and are very grateful for the editors who nurtured and cared for this experiment, namely, Robert Maddox, Greg Byrd, Shuyi Chen, and Paul Roebber. Finally, we thank the authors and reviewers who helped us with this experiment and gave us feedback. If nothing else, we were able to motivate some of you to think more deeply about the peer-review process.

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Harold E. Brooks
Co-Chief Editors

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