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## 250 Manuscripts before the Mast: Reflections of an Outbound Editor

Two and a half years of service as an editor of the *Journal of Geophysical Research-Solid Earth and Planets* have given me some experiences and insights about writing and reviewing research reports, which I offer here as an editorial swan song. Let me start with a few of the highlights of my tenure.

- The author at a Pacific atoll observatory who wrote that the arrival of his long-awaited acceptance letter cured him of malaria.
- The referee who copyrighted his review so that the authors could not incorporate his corrections without violating the copyright.
- The reviewer who blamed the authors for someone else's unsuccessful tenure application, which led to a furious and even more fatuous reply to the offending reviewer by one of the authors, suggesting that the reviewer's science was no more informative than stirring the entrails of dead sheep (although "Dead Sheep Entrails" did sound like a good topic for a Special Issue). From this exchange and the foregoing I learned that some reviews are best returned to sender.
- The many reviewers who took umbrage that my admonishment to reviewers (the offspring of "Sheep"), "to be polite in all remarks to be seen by the author" was a preemptive strike on their history of sending lurid review to the editors.
- The guest Associate Editor of a Special Issue who pressed his authors to meet the submission deadline, only to fail to get either his own paper or his introduction to the Special Issue written.
- The author whose paper was destroyed beyond reconstruction by a typhoon.
- The author who asked me if I thought he should submit a paper to a Special Issue and, when I encouraged him to do so, wrote the guest AE that his paper had already been accepted and he would just be putting the finishing touches on it.
- The authors of a 116-page treatise who, when I wrote that I wanted their manuscript split into two papers (the first of which was accepted and the second provisionally so) called me in a rage that I had dealt them a deathblow.
- The second author who refused to make any requested revisions to the manuscript of the then-absent first author (his graduate student) because that would put the student's work in a more favorable light than it deserved.
- The third-world author from whom I received a steady stream of greeting cards but no revised manuscript.
- The Associate Editor whose reviews carried this disclaimer in microscopic print: I am not responsible for the contents of this letter but I am being forced to write it by terrorist graduate students.
- Getting manuscripts from everyone—regardless of discipline—who figured I owed them a favor or to whom I was related by marriage.

I also would like to commend for valor:

- The many unselfish scientists who performed saintly acts for third-world and Eastern European authors by translating and typesetting the text into standard English, re-drafting figures, and helping the authors respond to reviews.
- The AGU Publications staff, who put up with my ever-mounting requests for more computer hardware, software, printers, copiers, furniture, file cabinets, phone lines, and assistant's hours, and who were forbearing in the face of my constant whine for fewer manuscripts, weekly page-charge-experiment reports, monthly expense and manuscript reports, and semi-annual editor's reports.

Standing in judgment on papers sent to me during the same period when I was submitting manuscripts to other imperious editors taught me something about my own frailties as an author and reviewer. Here is my perception of some of the key problems encountered in writing and reviewing scientific papers.

## **Writing**

The editorial message of JGR is simple: Give us your best work. That does not, by necessity, mean your longest treatise or your experiment with the latest technology, but your most important research report and, because of this, a finely crafted manuscript. Perhaps the principal reason why submitted papers are not the best they can be is that many are sent into the world about two months premature. What happens to these "preemies" is that the editor and referees are forced to decode the text, reorganize and streamline the prose, and search for the key contribution of the investigation. More often than not, the premature delivery also means matching sketchy Figure 9 to its caption as Figure 10 and its callout as Figure 11. Under such circumstances reviewers tend to glaze over and put the paper under a pile somewhere. Everyone goes comatose.

I have found that authors who can summon the patience to ask their colleagues -- both someone within the field and someone well outside -- to read their paper before it is submitted fare immeasurably better in the review process. Before a paper is written, ask yourself, to whom is this paper addressed? Write for the widest possible audience so that your efforts are rewarded by readers. Instead, most of us write papers with just a few enemy referees in mind. That leads to a bunker mentality. The manuscripts are written defensively, encrypted with jargon, and with protected ramparts rather than exposed logic and flaws. Papers the rest of us can understand, and in which shortcomings are acknowledged along with successes, will gain credibility and their authors maintain integrity.

As our last act before submission, most of us place the Conclusions in a trash compactor and turn the key. Voila! Out comes the abstract. The result is text in its densest packing configuration. Of all the sections in the manuscript, it is the abstract that will be most widely read and thus must be most easily read. The abstract not only telegraphs the key message of the paper, it should also invite people to read further. Use the abstract to tell us why the work was done, what's new, and why it's important-with "Details at 11". Too much compression or too many facts rob an abstract of clarity and impact

## **Reviewing**

The fundamental purpose of reviewing is to identify ways to make submitted papers better; screening out ill-conceived manuscripts is subservient to this goal. Most referees approach a manuscript like a school marm grading a math test. The paper arrives with a score of 100 and is marked down for every mistake uncovered; the surviving paper has the least red ink in the margins.

This approach only encourages defensive writing and low-risk ideas. Rather, an editor needs to know what's good about a paper. Is it the data, the theory, or their integration? Are the assumptions sound, inclusive and defensible? Does every paragraph and figure contribute to the analysis? What are the original exciting and well-supported findings? Authors who learn from the reviews what was well received in addition to what was deficient have an easier time overcoming revision inertia, and a better guide for recrafting their manuscript.

Reviewing is a time-consuming and selfless educational enterprise in which a largely anonymous group of people contribute to the quality of published papers. Reviewing is vital to the scientific enterprise, although the rewards of this labor are vicarious. In fact, one could nearly substitute "Reviewing" for "Research" in AGU's apt motto, "Unselfish Cooperation in Research."

Scientists who fail to honor their commitment to submit their reviews - or who do so only after endless editorial needling - are the scourge of the journal. They should be made to wear scarlet letters at AGU meetings. Instead we reward these people by excusing them from any further reviewing responsibilities, trading their names like baseball cards at AGU Editors meetings. In contrast, responsible, punctual insightful reviewers are burdened by additional reviewing assignments. Is there no justice?

So the next time you beat a manuscript into submission and hurl four double-spaced copies of your thunderbolt at the editor under the nearest rock, ask yourself, is your paper as succinct, coherent, and illuminating as you can make it, or can it stand refinement? And when you are next called upon to review a paper, search as hard for its secreted pearl of wisdom as for its fatal flaw.

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