Perceptions frequently mirror reality, but they often are far slower to change. Today’s perception may reflect yesterday’s reality. One perception long extant in the biomedical science community is that there is a bias against work by authors from outside the United States, particularly authors whose first language is not English. A panel at the 2000 CSE annual meeting addressed the questions “If English is the language of science, are authors not fluent in English at a disadvantage? What can journals do to support them?” The panel was chaired by Susan Eastwood and moderated by Michael L. Callaham, editor of Annals of Emergency Medicine, and included Ana Marusic, editor of the Croatian Medical Journal, Daniel Ncayiyana, editor of the South African Medical Journal, and John Overbeke, editor of the Dutch Medical Journal. I set out to study the first question—to compare the perception with the reality—using my experience with the Journal of the American Medical Association (JAMA) and the AMA Archives Journals, combined with input from a few other US journals, and then to see how the second question might be answered.

Foremost among the reasons the panel found for bias were language difficulties, although it is important to note that not all manuscripts from other countries reflect problems with English and that not all manuscripts written by native English-speakers are well written. Fixing the problems can be “incredibly labor-intensive”—and that translates into higher expense—for publishers or authors. Ann Weller, in Editorial Peer Review: Its Strengths and Weaknesses, noted that editors “identified poor writing as one of the top six reasons for rejecting a manuscript.”

Another key reason for bias may be the subject matter of mainstream medical journals. In speaking of what kinds of problems he has noted in manuscripts from other countries, the editor of Archives of Dermatology, Ken Arndt, noted that sometimes research from other countries is not put into context, is anecdotal, or discusses uncommon diseases in small numbers (oral communication, October 2001).

Those possible reasons for bias may originate with editors or publishers, who perhaps cannot afford to spend their resources to correct serious writing problems or to work with authors to address the problems of content. Another source of bias may be reviewers. At the 1997 International Peer Review Congress, Ann Link presented a study of non-US submissions to Gastroenterology, a journal that during the 2 years studied received 70% of its manuscripts from outside the United States: “US and non-US reviewers evaluate non-US papers similarly and . . . papers submitted by US authors more favorably, with US reviewers having a significant preference for US papers.”

In addition to editors or publishers and reviewers as potential sources of bias, a third source of bias discussed by the panel is particularly intriguing: authors themselves. “Bias can also originate with small countries’ authors themselves, who believe that their work will not be published in ‘outside’ journals without their having a mentor.”

So bias may come from journal editors, journal reviewers, or authors, and it may have its primary origins in difficulties in language and differences in content or presentation of subject matter. These all go a long way to explaining what the panel described as “at least a perception of bias”. Some of these problems may be correctable, and some may not be.

**Statistics from Journals**

What is the reality? I turned first to statistics on this point from JAMA and the Archives Journals.

In 1988, 9% of all JAMA submissions were from non-US authors. In 2000, that fraction was 24%. The number is growing. In 2000, the acceptance rate for all manuscripts was 7%; that for non-US manuscripts was 5%. The gap is narrowing. (Note: It is important, as I begin to list the “statistics”, to note that different journals track country of origin differently. JAMA uses the address given for the corresponding author. No system is perfect—the corresponding author may be from the United States and all others from outside the United States; or a US author may be living outside the United States and hence appear to be a “non-US author”. These difficulties make it next to impossible to provide a “neat” chart or graph, so the statistics for each journal will be presented individually.)

In 2000, for four of the nine Archives Journals, the percentage of all non-US submissions was 40% to 50%. (Note: Most of these track by “any author” from outside the United States.)

The other part of the picture is the acceptance rate for the increasing non-US submissions. Archives of Internal Medicine, which has been following the number of non-US acceptances with keen interest for over 10 years, saw a rise from 11% in 1989 to 29% in 2000. Eskild Petersen, associate editor, who has been tracking this, also found an interesting pattern: Authors from outside the United States often “entered” the journal through a letter to the editor, and then—after being published in the letters section—were successful at getting a clinical article published in the journal.4
Comparing some other submission and acceptance rates for the Archives Journals, we see that there is still a gap between US and non-US acceptances: Archives of Otolaryngology-Head & Neck Surgery, non-US acceptances, 30%, and overall, 46%; Archives of Ophthalmology, 17% and 37%; Archives of Neurology, 38% and 54%; and Archives of Surgery, 25% and 46%. However, the Archives journal with the lowest proportion of non-US submissions (7%), Archives of Pediatrics & Adolescent Medicine, like JAMA, shows fairly similar acceptance rates for US and non-US submissions (21% non-US, 29% overall).

Diane Lang, assistant director of publications at the Radiological Society of North America (RSNA), reports that in 1984 about 10% to 25% of papers in each issue of Radiology were from outside the United States; today that figure is closer to 50% (written communication, 4 October 2001). Stephen Morrissey, manager of manuscript editing at the New England Journal of Medicine (NEJM), estimates that about 50% of all submissions come from outside the United States and about one-third of all manuscripts published are from outside the United States (oral communication, October 2001). That last proportion matches that from Mary Beth Schaeffer, administrator of manuscript processing at Annals of Internal Medicine: about one-third of all the manuscripts it published in 2000 were from outside the United States. She saw about a 10% increase in 1999-2000 in the number of non-US submissions over the previous year, and the number for 2000-2001 is about 5% to 10% above that (written communication, 2 October 2001).

So, despite the perception of bias, there has been an increase in recent years in the numbers of manuscripts from authors outside the United States submitted to the small sample of US journals surveyed. And, despite the fact that a smaller proportion of these manuscripts is accepted than of manuscripts by US authors, the gap between US and non-US acceptance rates appears to be shrinking.

**Increased Submissions: Possible Reasons**

Why is the number of non-US submissions rising? Is it by chance or by design? Some reasons why this might be happening if it were not being encouraged (that is, by choice) are the increase in international circulation of US publications, the increase in the number of international societies and international meetings, enhanced personal and professional relationships internationally, and the broader reach made possible by the Internet.

Even more interesting is how non-US submissions to US journals have increased by design. Here is a short list of some of the ways editors have sought to increase international submissions:

- Increase international members on editorial boards.
- Create international advisory boards or committees. Some journals not only have increased the number of members from outside the United States on their boards, but have created international boards. JAMA and four of the nine Archives Journals have such groups, and they use them both to attract papers from abroad to the journal and to obtain input on what would be useful to readers in their countries.
- Increase international peer reviewers. Monica Bradford, managing editor at Science, said that when Science decided a number of years ago that it wanted to increase its international submissions, one thing it did was increase the number of international peer reviewers—reviewers may become authors (oral communication, May 2001).
- Develop international features. A number of the Archives Journals have features that highlight activities in their specialties in other countries. Archives of Surgery initiated the feature “Surgery in Other Countries” in 1993 and recently collected the items in a booklet, Surgery Around the World. In the introduction, Claude H. Organ Jr, the journal’s editor, noted that the journal reaches more than 19,000 readers in more than 69 countries each month and that “the world has become smaller and distant countries are now our neighbors.”
- Create international theme issues. A number of the Archives Journals have an annual “international” issue in which articles from many countries are highlighted by the use of the flag of each author’s country and the presentation on the cover of each article in the language native to the author (Figure). The editors of Archives of Ophthalmology and Archives of Neurology, who initiated these recent international theme issues, hope that this will encourage even more international submissions.
- Publish more international editions of journals.
- Make more journals available online, with increased links and interactivity possible.
- Increase the presence at international meetings. At Radiology, Diane Lang (written communication, 4 October 2001) noted the effect of the increase in international presenters at society meetings on the increase in non-US papers published in the journal: “We have seen a remarkable increase in the number of non-US articles, both submitted and accepted. . . . We first noted an increase in the number of non-US presentations at our scientific meeting, especially from . . .
developed countries. RSNA leadership then actively worked to increase involvement of radiologists from less-developed countries in the meeting. These activities resulted in more non-US papers being presented and all presenters are required to submit their papers to our journals.”

**Editors’ Efforts**

The personal efforts of journal editors to attract authors from other countries take many forms and are very powerful. This raises the question of why: Why would an editor want to increase international submissions? In conversations with the editors of JAMA and the Archives Journals, four reasons stand out: to make their journals better, to serve their specialties better, to provide better health care, and to strengthen medicine and enhance global communication.

Wayne F Larrabee Jr, editor of Archives of Facial Plastic Surgery, said, “We are in a global economy and that applies to information as well as other products. We want the best ideas from around the globe, not just the United States” (written communication, 1 October 2001).

Ken Arndt, editor of Archives of Dermatology, commented, “I see our journal as an international journal. I want to make it the strongest journal possible and give the international authors a voice” (oral communication, October 2001).

Several editors, when questioned, said that many countries in the world have large numbers of patients as well as clinical experience with problems that we do not have much experience with in the United States. Sharing these experiences is helpful for patient care and the advancement of the specialty.

Perhaps, in the shadow of September 11, the quotation that resonates the most is one from Dr Larrabee (written communication, 1 October 2001): “Medicine is a brotherhood (or a sisterhood, if you’d rather). We need to reach out and communicate with each other. In this crazy world, enlightened institutions are one bulwark against violence and injustice. Our journals should provide witness to the worldwide unity and historical value of the medical profession.”

Given the sometimes labor-intensive task of helping authors from other countries whose first language is not English to make their manuscripts clear and succinct, intensive efforts may be required not only by editors and reviewers, but also by manuscript editors. Managing editors I spoke with at many journals indicated that it is their job to make all papers as clear and readable as possible. Jane Lantz, executive editor of the Mayo Clinic Proceedings, notes that “whatever a manuscript needs, we do” (written communication, October 2001).

Stephen Morrissey, of NEJM, said that “we treat non-US manuscripts as we would any other” (oral communication, October 2001). Mary Boylan, managing editor of Annals of Internal Medicine, made a valuable point—and echoes my first disclaimer: “A lot of [non-US authors] are very proficient in English and . . . ESL authors [authors for whom English is a second language] can be more precise about language just because it’s their second language” (written communication, 9 October 2001). But, she notes, their manuscripts also can require heavy editing. Peggy Perkins, of the University of Chicago Press, Medical Journals Group (written communication, 4 October 2001), commented that perhaps the most difficult task in editing these manuscripts is to untangle the syntax without changing the meaning—a challenge in any editing, but perhaps a more daunting one in working with ESL authors. In addition, there may be problems in word choice, the organization or structure of the argument, and the very structure of the language.

Magne Nylenæa, editor of Tidsskrift for den Norske lægeforening, said, “There will always be a threshold for writing in a second language. Far too often you will have to choose the second-best word because your vocabulary is limited.” To illustrate his point, he said an author who used “Doctors and Sex” as an article title might have led readers to think the paper was about something quite different than had the title been “Doctors and Gender” (written communication, 2 October 2001). Maria Campos, technical editor at Archives of Medical Research, an English-language journal published in Mexico, said that “the main problems [for an ESL author writing for publication in an English language journal] may have more to do with organization than with the English language” (written communication, 4 October 2001).

Returning to the two questions that we began with, it seems that although there were reasons for at least the perception of bias, the reality is becoming not only a lack of bias but a bias for rather than against manuscripts from outside the United States.

**Suggestions for Continued Progress**

Now, how can we do even better? A short list of ways to continue the progress that has been made in increasing non-US submissions and acceptances at US journals might include the following:

- Encourage international authors to seek help from their colleagues or from professional editors. Tim Albert, who writes books dealing with writing scientific papers and teaches courses for those who want to get their scientific papers published, suggests that perhaps "language can be left to language experts", even though this might require a change in the culture of scientific publication.

- Continue to look to editors, reviewers, and manuscript editors to give manuscripts the help they need, as much as is possible. Cristina I Cann, former associate editor of Epidemiology, notes that she and Ken Rothman, former editor of Epidemiology, “viewed [guiding authors through revisions] as an investment in promoting good scientific methods in data collection, analysis, and writing among those with fewer resources or..."
those who may not have had the opportunity to learn the most appropriate methods. We helped American authors with improving their methods, as well as foreign authors” (written communication, 14 November 2001).

- Support the efforts of such professional organizations as CSE, the American Medical Writers Association, and the European Association of Science Editors (EASE) to offer sessions at their meetings addressing this concern and offer workshops in other countries whenever possible (for example, those sponsored by EASE in Croatia, Poland, Slovenia, and Romania).

- Take an active role in such organizations as the World Association of Medical Editors (WAME) and participate in the WAME listserv.

- Support international meetings, such as the Peer Review Conference recently held in Barcelona.

- Treat authors with courtesy and kindness. To quote Fred Rivara, editor of Archives of Pediatrics & Adolescent Medicine, in an article on reviewing manuscripts for the journal, “It is not necessary to point out to authors of international submissions that English is not their first language; they (and the editors) know this. Offer them whatever help you can. If their article has scientific merit and is accepted, our copy editors will work to make it readable.”

In communicating with each author for JAMA and the Archives Journals, the copyeditor asks the author whether he or she found the editing helpful. A recent comment from an Italian author speaks to the extra effort involved in working with international authors—and to the extra benefits: “The editing of the manuscript is certainly very helpful, especially for authors from non–English-speaking countries. The process is prone to errors and it requires additional work on both sides of the ocean, but I think it is what it takes to obtain a high-quality product. The aim is to communicate!”

To bring perception closer to the reality that this sample depicts, perhaps it’s time to take another look in the mirror.

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