

Addressing Ethical Standards: Anti-Plagiarism Software

In 2002, the ASPB Executive Committee instructed the Publications Committee to begin to develop a comprehensive set of guidelines to address ethics in publishing. This exercise had two goals. One goal was to develop procedures for the handling of allegations of ethical violations in the Society's publications. The second and more important goal was to educate the Society's membership as well as authors, editors, reviewers, and staff associated with the Society's journals. The ethical issues associated with scientific publication are many and often subtle, and we were motivated in the spirit of "an ounce of prevention is worth a pound of cure."

Of all the ethical issues we have considered to date, plagiarism is arguably the most complicated. Our ASPB policies define plagiarism as "taking material from another's work and submitting it as one's own." We last addressed plagiarism in this column one year ago (*ASPB News*, November/December 2004, pages 10–11). Our article emphasized that ASPB holds authors—not the Society or its editors and reviewers—responsible for ensuring that all the ideas and findings included in a manuscript are attributed to the proper source. We also referred to our role as steward of what constitutes ethical conduct and, conversely, ethical misconduct and our commitment to continue to strive to educate all the parties in the publishing process. Education is paramount, because if there is one thing we have learned after dealing with several cases of alleged plagiarism over the past year, it is that plagiarism can be a bit of a gray area, not just for authors but for editors and publishers as well.

Help may be on the way, in the form of plagiarism-detection tools adapted for the scholarly peer review process. The May 19,

2005, issue of *Nature* noted in an article titled "Taking on the Cheats" that academic publishers hold hope that the software already used by universities to catch cheating students can soon be adapted to catch instances of plagiarism, intentional or otherwise. Critically, no totally reliable plagiarism-detection tool exists, even today. Bob Campbell, president of Blackwell Publishing, suggested in *Nature* (p. 259) that the overall solution probably will "come when publishers collaborate on industry-wide detection systems." The May 19, 2005, edition of the *Chronicle of Higher Education* covered the same topic—using software to uncover plagiarism and self-plagiarism.

Even if there were reliable and sensitive plagiarism-detection software, many issues would remain to be addressed. For example, how much copying is legitimate? Clearly, the reuse of large amounts of others' text constitutes plagiarism. But what should one think about copying short passages from the author's own earlier work, such as commonly occurs in the Methods section? After all, how many ways are there to describe the growth conditions used for one's seedlings or the procedure to detect a protein by immunohistochemistry? In the *Nature* article it is suggested that some journals set a quantitative limit whereby the amount of text that can be reused is limited to about 30 percent. This may be utilitarian, but it seems curious and arbitrary that 25 percent of copied text might be deemed acceptable whereas 30 percent might not. Indeed, two authors who copied the same number of words could find themselves on opposite sides of that border if one author simply was more verbose and thus diluted their plagiarized content below the threshold! No, this is not a simple issue at all.

A second issue is the role of ASPB as gatekeeper or policeman: Should the Society or its journals routinely screen all submissions for plagiarism? An alternative approach might be to provide access for all authors to such software at the ASPB journal sites (in the Instructions for Authors sections) to facilitate authors screening their own work. This "honor system" would be in keeping with a role as stewards and educators. The journals would then address allegations of plagiarism that emerged during the review process or after publication, much as is the case at present. Again, these are challenging issues that we would like the Society's membership to consider.

So, in our ongoing spirit of education, we wish to draw our members' attention to this issue of plagiarism. Our intent is not to define what is and what is not acceptable, but to encourage the consideration and discussion of this issue among our members and their colleagues. It would make an excellent topic for your next group meeting! To inform these discussions, the first few paragraphs of the *Nature* article are reprinted below, by permission, with a link to the full article appended.

References

- Carlson, S. (2005, May 19). Journal publishers turn to software to root out scholarly plagiarism. *Chronicle of Higher Education*; <http://chronicle.com/daily/2005/05/2005051901t.htm>.
Giles, J. (2005, May 19). Taking on the cheats. *Nature* 435:258–259.

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SPECIAL REPORT

Taking on the Cheats

The true extent of plagiarism is unknown, but rising cases of suspect submissions are forcing editors to take action.

—Jim Giles reports

The fight against plagiarism is about to take a decisive turn. Academic publishers have told

Nature they hope that software designed to catch cheating students could soon be used to unmask academics who plagiarize other researchers'—or their own—work.

Big publishers such as Elsevier and Blackwell, which between them publish more than 2,500 journals, have been prompted to act by reports that plagiarism is becoming more common. "We're hearing about it more frequently

from editors," says Bob Campbell, president of Blackwell Publishing in Oxford, UK.

Self-plagiarism, in which authors attempt to pass off already published material as new, is a particular problem. In an increasingly competitive environment where appointments, promotions and grant applications are strongly influenced by publication record, researchers

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are under intense pressure to publish, and a growing minority are seeking to bump up their CVs through dishonest means.

The extent of the problem is hard to assess. Defining plagiarism is not straightforward...and measuring the incidence of even the most clear-cut cases is difficult. Studies in certain fields have estimated that anything up to 20% of published papers contain some degree of self-plagiarism.... This may not be representative of basic research, but no rigorous, multidisciplinary study has ever been conducted.

And although most cases are never discovered, almost all of the editors and publishers contacted by *Nature* agreed that self-plagiarism is on the rise. "Editors are noticing many more cases,"

says Scott Dineen, director of editorial services at the Optical Society of America, which publishes ten journals. Last month, the increase prompted the society to issue an editorial statement on its commitment to expose plagiarism.

The advent of antiplagiarism software, such as that used by universities to check student essays, means that editors and publishers finally have a practical way to tackle the problem. Online services check essays against massive stores of documents generated from web trawls and purchases from media outlets. Supervisors can see which parts of the essays seem to be plagiarized and where the copied material comes from.

Subscribers can view the article in its entirety at <http://www.nature.com/nature/journal/v435/n7040/index.html>. Nonsubscribers will not have access to the article. 