



Science for Sale: Improve Ethics Education

WE APPLAUD *SCIENCE* FOR ITS INVESTIGATIVE journalism on “China’s publication bazaar” (M. Hvistendahl, *News Focus*, 29 November 2013, p. 1035). This article should stimulate other journals to undertake similar research. Indeed, we would like to suggest that conducting such research become a standard component in the responsible conduct of research courses now required of all National Science Foundation (NSF)–funded students and postdocs.

Unfortunately, the NSF requirement is, at many universities, met with minimalist online courses. Even at our own institution, there has been resistance to making ethics education mandatory for all graduate students. We believe that just as true science and engineering education requires original research or experimental designs rather than simply learning the results of others’ work, ethics education should include more than studying classic ethical theory, professional codes, and case studies. This would, however, require turning a one-credit course into a more substantial effort. Such a course would not only enhance ethics education. It could well benefit the fields of science and engineering, as well as the ways in which these fields serve society.

Finally, we would recommend that courses in research ethics be required of all graduate students, not solely those who receive support from NSF or National Institutes of Health grants.

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CORRECTIONS AND CLARIFICATIONS

News Focus: “China’s publication bazaar” by M. Hvistendahl (29 November 2013, p. 1035). Wang Mouyue, managing director of the *Chinese Medical Journal*, was quoted incorrectly due to an error in transcription from the original Chinese. The article quotes Mr. Wang as saying that “China’s paper-selling market is very large, and there’s every sort of agency imaginable out there.” He actually said: “China’s paper-publishing market is very large, and there’s every sort of agency imaginable out there.” Also, the article stated that the *Journal of Zhejiang University-SCIENCE* is not indexed in SCI. The three journals under the title *Journal of Zhejiang University-SCIENCE* are all listed in SCI Expanded. The PDF and HTML versions online have been corrected to reflect these changes. In addition, the article described how Core Editing had advertised authorship for sale on 12 papers listed on its blog. The corresponding author of one of these papers, later published by the *Canadian Journal of Neurological Sciences*, has since provided documentation to *Science* and to the editor of the *Canadian Journal of Neurological Sciences* indicating that none of the authors paid to have their names added to the paper.

tic. Rather, to truly deal with antibiotics, we are going to have to find innovative ways to reconfigure the production environments on animal farms that are grounded in sound husbandry principles and obviate the need for low-dose antibiotics in any form.

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References

1. M. T. Brewer *et al.*, *Am. J. Vet. Res.* **74**, 1078 (2013).
2. FDA Center for Veterinary Medicine, “Guidance for Industry #209: The Judicious Use of Medically Important Antimicrobial Drugs in Food-Producing Animals” (www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM216936.pdf).

Science for Sale: Fair Evaluation Standards

IN HER NEWS FOCUS STORY “CHINA’S PUBLICATION bazaar” (29 November 2013, p. 1035), M. Hvistendahl points out that many scientists and organizations are starting to abandon the use of impact factors to evaluate a single researcher. Science leaders in China are considering new standards as well, such as total paper citations.

The use of the Science Citation Index (SCI) may have some disadvantages, such as the financial incentives to forgery described in the article. However, in China, it may be the fairest standard to assess scientists. Without the SCI standard, the chance of getting research funding in China would be entirely based on the scientist’s relations with government. Using total paper citations or number of patents awarded would have similar problems, because both of these metrics can be influenced by money.

Letters to the Editor

Letters (~300 words) discuss material published in *Science* in the past 3 months or matters of general interest. Letters are not acknowledged upon receipt. Whether published in full or in part, Letters are subject to editing for clarity and space. Letters submitted, published, or posted elsewhere, in print or online, will be disqualified. To submit a Letter, go to www.submit2science.org.

Thus, although the SCI or impact factor system has drawbacks, it is still a fair standard. More research is needed to build a system, based on impact factor or SCI, in which cheaters stand to lose more than they gain.

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Science for Sale: Authorship Confirmed

IN HER NEWS FOCUS STORY “CHINA’S PUBLICATION bazaar” (29 November 2013, p. 1035), M. Hvistendahl highlighted the issue of scientific articles being for sale in China. This problem is not widely known by journal editors outside of China. The article indicated that a meta-analysis published in the *Canadian Journal of Neurological Sciences* (CJNS) was available for sale on 21 August 2012 on Core Editing’s blog, before submission of the paper to CJNS. At CJNS, we conducted an investigation of the paper in question. The corresponding author was able to provide detailed information of their data analysis, including screen shots of a list of files used for data analysis from the first author’s computer, output from the data analysis program used, copies of handwritten notes used for data analysis, records of discussion between the authors regarding the results, and previous versions of the paper. The authors also provided records of e-mail correspondences from February 2012 between the first author and the author of a paper included in the meta-analysis in which the first author asked and obtained data for the meta-analysis. These e-mail communications were independently verified by the U.S.-based author who provided the additional data. On the basis of this information, we concluded that the paper published in CJNS was the work of the first and the corresponding author of the paper.

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