

## 3.20

# Journals

## At the front lines of integrity in academic research

*Marta M. Shaw and Krina Despota<sup>1</sup>*

Editors of journals are the gatekeepers and arbiters of the scientific record. They grant legitimacy to research, which, in turn, shapes public policy, influences the direction of future research and informs professional choices, from medical treatments to business strategies. Publication in academic journals can result in financial rewards and personal accolades for authors. It is crucial for professional advancement within academia, offering a quantifiable, widely accepted and easily interpreted indication of scholarly accomplishment.<sup>2</sup> Given the significant powers that accompany their position, journal editors must put themselves at the front lines of defence against academic misconduct, including undue influence, fraud, fabrication and plagiarism in research. There is no doubt that the majority of editors take these responsibilities very seriously. Nevertheless, it bears examining how editors can ensure that they are working to the highest ethical standards, neither abusing their positions for personal or professional gain nor shirking from their duties of holding authors, peer reviewers and publishers to high standards of integrity in research.

### Promoting honesty in authorship and influence

As David Robinson in Chapter 3.18 in this volume and Melissa Anderson and Takehito Kamata in Chapter 3.19 in this volume discuss, unjustified authorship (honorary or ghost authorship) bestows false credit to individuals who played no significant role in the research being reported. Likewise, failure to identify significant contributors as authors denies readers the opportunity to consider the potential influence or agenda of those contributors.<sup>3</sup> Because authorship establishes lines of accountability to all stages of research, editors should require authors and those who receive public acknowledgment to identify their specific contribution to the work.<sup>4</sup> Dishonest authorship is not uncommon; for instance, a survey of articles published in six medical journals in 2008 found that one-fifth (21 per cent) included an undeserving honorary author, and 8 per cent of articles may have omitted important contributors.<sup>5</sup> Some biomedical journals, whose failure to uphold integrity in research arguably poses some of the greatest societal risk, have adopted one promising model: participating journals require authors to submit a 'contributor list' that details each author's roles throughout the course of the study, using categories such as 'obtaining funding', 'coordinating, collecting, and analysing the data' or 'writing and revising the manuscript'.<sup>6</sup>

Conflict-of-interest disclosure by authors is another important tool that editors use to increase transparency. Such disclosure policies seem to be increasing, particularly among medical journals. In the mid-1990s over one-third (34 per cent) of medical journals with circulations greater than 1,000 had disclosure policies, with that rate somewhat higher (46 per cent) for US medical journals.<sup>7</sup> By 2010, 84 per cent of 180 medical journals published in the United Kingdom, United States or Canada had disclosure policies in place.<sup>8</sup> Despite the improvement, many of these disclosure policies leave something to be desired. For instance, in the study cited above, only 28 per cent of medical journals state explicitly the sorts of activities or relationships that constitute a conflict of interest.<sup>9</sup>

In addition to developing specific conflict-of-interest disclosure instructions, journal editors should also make sure that their policies apply to all those who contribute to the research. A 2008 survey of 256 high-impact medical journals found that, while 89 per cent of them had conflict-of-interest policies for authors, only 54 per cent required *each* author in a study to sign a conflict-of-interest statement. The result, the researchers argue, is that it may only be the corresponding author who is required to comply with a journal's conflict-of-interest policy, meaning that some contributors may avoid disclosure.<sup>10</sup>

Encouragingly, groups such as the World Association of Medical Editors and the Committee on Publication Ethics (COPE) have published guidance on the need for conflict-of-interest disclosures. Nevertheless, there remains great variety between journal policies, both in what they ask authors to disclose, and whether they publish disclosures online. By moving towards comprehensive and universal conflict-of-interest policies, editors can remove ambiguity for authors and help promote a higher standard of integrity across publications. To help improve journal policies, the International Committee of Medical Journal Editors, for example, has published a standard disclosure form that several member journals have already adopted.<sup>11</sup>

## Planning responses to fabrication, fraud and plagiarism

Plagiarism, the fabrication of data, and the falsification of research findings can all constitute forms of corruption in academic research. Plagiarism becomes corruption when an author abuses a position of authority to gain from the ideas of another researcher, be it cribbing words and concepts or using another researcher's data as his or her own. In the case of publicly funded research in particular, falsification and fabrication abuse public trust and waste scarce resources on findings that may turn back scientific progress or lead to misinformed public policy. Text recycling, or self-plagiarism, in which a contributor submits work that has been published in part or in full elsewhere, is also a practice against which editors must be vigilant. Duplication of work without appropriate attribution to the first instance of publication is not just an ethical issue; it also distorts the academic record, filling it with redundant content, and it can represent a breach of copyright.<sup>12</sup>

With advances in technology, journal editors have a greater chance than ever to detect misconduct in research. With the development of text-matching software that checks submissions against an extensive database of published literature and other online sources, the number of retracted articles is increasing. In the United States, about 40 articles were retracted from biomedical journals annually in the late 1990s. By 2009 this had risen to over 200, and by 2011 the number had doubled.<sup>13</sup> In addition, new software has now advanced to the point that it allows identification of the digital alteration of photographic data or discrepancies in data that might be indicative of fraud.<sup>14</sup>

Software can help identify some forms of misconduct; however, it is up to journal editors to make difficult judgement calls as to the seriousness of various forms of plagiarism, fabrication and fraud in articles that have been published or submitted for publication. The

UK-based Committee on Publication Ethics, with over 7,000 members globally, helps editors navigate these challenging decisions. The organisation offers editors guidelines and decision flowcharts, while recognising that all cases are different. How an editor responds to plagiarism, for instance, may require considering whether misconduct was intentional: citing a few lines from another author's work may be unintentional and the product of sloppy research, while claiming someone else's data as one's own is not a careless mistake.<sup>15</sup> Even minor and unintentional infractions can lead to serious consequences, though. How editors react, and whether they alert the author's institution, will also, in many cases, depend on the suspected intentions and research experience of the author. Editors may choose to send an 'educational letter to very junior researchers' while taking more stringent steps with more senior authors.<sup>16</sup>

Given the great professional consequences that accompany allegations of research misconduct – regardless of their grounds or merit – journal editors have a responsibility first to reach out to the author or authors suspected of wrongdoing. Nonetheless, for situations in which suspicions persist after responses from authors, journals should have systems in place to work closely with the institutions that employ the researcher or researchers.<sup>17</sup> COPE calls for open lines of communication between institutions and the journals to address suspected research misconduct. Editors should be prepared to share with institutions or funders of research information they have that points to possible misconduct. To protect the research record, journals should likewise be prepared to issue expressions of concern in their publications while investigations are under way, and to publish retractions or corrections if investigations prove them to be necessary.<sup>18</sup>

Although many editors recognise and act upon their responsibility to maintain the integrity of the scientific record, others have proved to be reluctant to act when confronted with allegations of plagiarism or fraud. In 2009, one group of researchers reported that of 212 articles they identified as containing text that was likely to be plagiarised,<sup>19</sup> more than a half received no action from the journal editors who were alerted to the duplication.<sup>20</sup>

Inadequate responses to allegations of misconduct are disappointing given the high stakes of much academic research. In one well-known case, the *Journal of the American Academy of Child and Adolescent Psychiatry (JAACAP)* published a study in 2001 that gravely misrepresented the suitability of the drug paroxetine to address adolescent depression.<sup>21</sup> Publication in *JAACAP* legitimised the use of the drug to such an extent that sales representatives were encouraged to use the paper in their sales pitches.<sup>22</sup> Subsequent consumer lawsuits against the pharmaceutical company resulted in the release of documents demonstrating that commercially damaging findings had been hidden and data falsified. In fact, eight adolescents who had taken the drug as part of the study had either harmed themselves or reported suicidal thoughts, compared to one adolescent in the placebo group.<sup>23</sup> A Food and Drug Administration examiner who looked closely at the data believed the article's claims to be greatly exaggerated.<sup>24</sup> Rather than demonstrating 'remarkable efficacy' for treating adolescent depression, the drug's harmful effects were quite serious.<sup>25</sup>

Requests for retraction were made to the journal on the basis of concerns that included fabrication and falsification, failure to disclose the financial interests of authors, and allegations that the article had been ghost written. The editor of the journal refused to retract the piece, claiming that, in the eight years since the publication of the article, there had been found 'no evidence for such errors nor any justification for retraction according to current editorial standards and scientific publication guidelines'.<sup>26</sup> This response in the face of such serious allegations is troubling, both because of the considerable reach of the article within the medical community, and because of the health risks posed by the drug.

## Supporting whistleblowers

Journal editors are often the first to be notified of alleged misconduct by whistleblowers. Individuals who seek to shed light on research misconduct often do not receive sufficient protection and support within the academic community.<sup>27</sup> An allegation of misconduct places a whistleblower at risk of retaliation from colleagues and scrutiny from institution administrators. If an allegation is not handled properly by editors and administrators, the whistleblower faces subtle or overt denial of professional opportunities and alienation from colleagues.<sup>28</sup> Such risks increase for junior scholars who make an accusation against a senior academic. While ensuring the allegations of misconduct are investigated by the appropriate bodies or authorities, editors must meet their responsibility to protect the anonymity of whistleblowers, and particularly vulnerable junior members of the academic community.

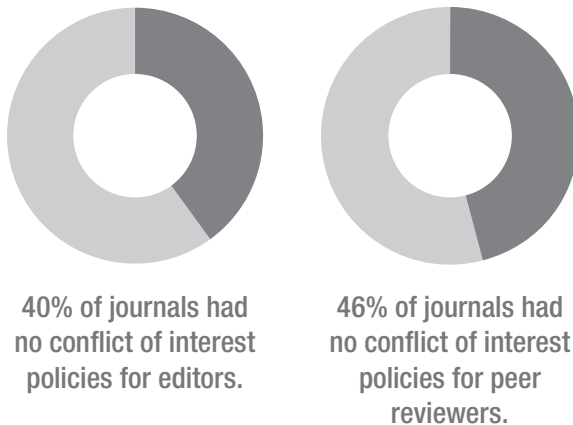
## Holding editors and reviewers to high standards of integrity

To hold the scientific community to high standards of integrity, editors must hold themselves and their peer reviewers to the same standards first. The degree of power they hold over prospective contributors requires measures to ensure that their authority is not abused for private gain.

Competing interests of editors and peer reviewers compound the risk of bias in editorial decisions, and it is the responsibility of editors to ensure that conflicts between public and private benefits are disclosed and appropriately managed. The most patent corruption risk in academic publishing arises when the editor or peer reviewer stands to gain financially from a decision to accept or reject a submitted manuscript. The benefit can be direct, as in the instance when an editor or peer reviewer holds stock in a company whose product is evaluated in a paper submitted to the journal. The possibility of financial gain can also take less direct forms, as when the editor has consulted for a company or research group in direct competition with the authors of a manuscript.<sup>29</sup>

Because of publication being the unique 'coin of the realm' in science,<sup>30</sup> however, non-financial conflicts of interest also create powerful incentives for abuses of authority. In the scientific field, where personal interest and the interest of science are always held in tension, these conflicts are harder to identify and manage than the more apparent ones that involve immediate financial gain. At the same time, the behaviours motivated by non-financial conflicts of interest have equally serious consequences. For example, an editor may cite an unjustified number of sources from his or her own publication in editorials and deny recognition to others. A peer reviewer may likewise purposefully delay the review of a manuscript similar to his or her own work so as to secure priority in publication, or recommend the rejection of an article on non-scientific grounds because of a strong personal belief on a controversial issue.<sup>31</sup>

Although many journals have introduced conflict-of-interest policies for authors in recent years, similar policies for editors and reviewers are less common. For example, fewer than a quarter of high-impact journals surveyed for one study across twelve disciplines had policies addressing conflicts of interest for editors.<sup>32</sup> In another study of medical journals, fewer than a half had such policies for editors (40 per cent) or reviewers (46 per cent), while 12 per cent published editors' disclosures of competing interests.<sup>33</sup> In order to improve the transparency of the reviewing process, COPE recommends that journals adopt policies requiring those involved in the editorial process to declare conflicts of interest.<sup>34</sup> A reviewer is then obliged to decline to review a manuscript if he or she has connections, whether competitive or cooperative, to the authors or institutions mentioned in the manuscript.<sup>35</sup> When a journal establishes its policies and guidelines, it should clearly define what is meant by 'conflict



**Figure 3.8** Full disclosure? Studying 91 biomedical journals

**Source:** Richelle J. Cooper et al., 2006.

are less likely to challenge editorial directions.<sup>38</sup> Editors who coerce citations to boost the standing of their journals abuse their authority and distort the true trail of progressing scholarly insight.

Journal editors play a central role in preventing corruption in the ways they define, follow and enforce integrity policies for all those involved in the journal's publication process. To respond to current corruption risks in academic publishing, editors should follow the recommendations established by the Committee on Publication Ethics for developing transparent policies and contingency plans, rather than being forced to do so by an unanticipated crisis that threatens the reputation of the journal and, in the long run, can erode public trust in the integrity of science.

## Notes

1. Marta M. Shaw is the Global Corruption Report Fellow with Transparency International and a PhD candidate in comparative and international development education at the University of Minnesota; Krina Despota worked for Transparency International as editor of the *Global Corruption Report* at the time of writing.
2. Jeffrey Seeman and Mark House, 'Influences on Authorship Issues: An Evaluation of Receiving, Not Receiving and Rejecting Credit', *Accountability in Research*, vol. 17 (2010), pp. 176–197.
3. Joseph Wislar, Annette Flanagan, Phil Fontanarosa and Catherine DeAngelis, 'Honorary and Ghost Authorship in High Impact Biomedical Journals: A Cross-Sectional Study', *BMJ*, vol. 343 (2011), pp. 6128–6134.
4. Council of Science Editors (CSE), 'Editor Roles and Responsibilities', in *CSE's White Paper on Promoting Integrity in Scientific Journal Publications* (Wheat Ridge, IL: CSE, 2012), pp. 2–20.
5. Wislar et al. (2011).
6. CSE (2012), p. 22.
7. Richard Glass and Mindy Schneiderman, 'A Survey of Journal Conflict of Interest Policies', paper presented at the 3rd International Congress on Peer Review in Biomedical Publication, Prague, 18 September 1997, cited in Sheldon Krinsky and Leslie Rothenberg, 'Conflict of Interest Policies in Science and Medical Journals: Editorial Practices and Author Disclosures', *Science and Engineering Ethics*, vol. 7 (2001), pp. 205–218.

of interest' and how such conflicts will be managed, and make the documents available to the public.<sup>36</sup>

Because of the reward structure of science, editors also have an inevitable interest in increasing the prestige of their journals. Recent reports suggest that some attempt to boost their impact factor scores by resorting to a practice known as coercive or manipulative citation: requiring authors to add citations from a journal to their paper as a condition of publication.<sup>37</sup> A recent survey of over 6,000 academics in the social sciences identified 175 journals as coercers, and found that coercion is more likely to affect junior than senior academics, who

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9. *Ibid.*
10. Jared Blum, Kalev Freeman, Richard Dart and Richelle Cooper, 'Requirements and Definitions in Conflict of Interest Policies of Medical Journals', *Journal of the American Medical Association*, vol. 302 (2009), pp. 2230–2234.
11. See [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) (accessed 6 January 2013).
12. InsideHigherEd.com, 'A Study of Self-Plagiarism', 3 December 2010; Sabine Kleinert, 'Checking for Plagiarism, Duplicate Publication, and Text Recycling', *The Lancet*, vol. 377 (2011), pp. 281–282.
13. *Chronicle of Higher Education* (US), 'Surge in Journal Retractions May Mask Decline in Actual Problems', 13 January 2012.
14. *Ibid.*
15. Elizabeth Wager, 'How Should Editors Respond to Plagiarism?', discussion paper (London: COPE, 2011).
16. *Ibid.*, p. 2.
17. See Elizabeth Wager and Sabine Kleinert, 'Cooperation between Research Institutions and Journals on Research Integrity Cases: Guidance from the Committee on Publication Ethics', *Acta Informatica Medica*, vol. 20 (2012), pp. 136–140.
18. Wager and Kleinert (2012).
19. These are articles with an average of around 86 per cent similarity to an earlier article.
20. Tara Long, Mounir Errami, Angela George, Zhaohui Sun and Harold Garner, 'Responding to Possible Plagiarism', *Science*, vol. 323 (2009), pp. 1293–1294.
21. Jon Jureidini and Leemon McHenry, 'Conflicted Medical Journal and the Failure of Trust', *Accountability in Research*, vol. 18 (2011), pp. 45–54.
22. *Ibid.*, p. 47.
23. *Ibid.*, p. 46.
24. Jennifer Washburn, *University Inc.: The Corporate Corruption of Higher Education* (New York: Basic Books, 2005), p. 114.
25. *Ibid.*
26. Jureidini and McHenry (2011), p. 50.
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28. Faunce, Bolsin and Chan (2004), p. 41.
29. CSE (2012).
30. Robert Merton, 'Science and Technology in a Democratic Order', *Journal of Legal and Political Sociology*, vol. 1 (1942), pp. 115–126.
31. CSE (2012).
32. Jessica Ancker and Annette Flanagan, 'A Comparison of Conflict of Interest Policies at Peer-Reviewed Journals in Different Scientific Disciplines', *Science and Engineering Ethics*, vol. 13 (2007), pp. 147–157.
33. Richelle Cooper, Malkeet Gupta, Michael Wilkes and Jerome Hoffman, 'Conflict of Interest Disclosure Policies and Practices in Peer-Reviewed Biomedical Journals', *Journal of General Internal Medicine*, vol. 21 (2006), pp. 1248–1252.
34. COPE, 'Code of Conduct and Best Practice Guidelines for Journal Editors' (London: COPE, 2011), available at <http://publicationethics.org/resources/guidelines> (accessed 6 January 2013).
35. Margaret Rees, *A Short Guide to Ethical Editing for New Editors* (London: COPE, 2011).
36. Ancker and Flanagan (2007).
37. Allen Wilhite and Eric Fong, 'Coercive Citation in Academic Publishing', *Science*, vol. 335 (2012), pp. 542–543.
38. *Ibid.*