

HOUSE OF COMMONS SCIENCE AND TECHNOLOGY COMMITTEE INQUIRY INTO RESEARCH
INTEGRITY
WRITTEN RESPONSE FROM THE PUBLISHERS ASSOCIATION

Introduction

1. The Publishers Association welcomes the opportunity to submit written evidence to the Committee's inquiry into research integrity.
2. The Publishers Association is the leading trade organisation representing book, journal, audio and electronic publishers in the UK. Our members include academic journal publishers such as Elsevier, Wiley, society publishers and University presses.

Academic Publishing

3. The UK punches above its weight in the production of world-class research. Despite making up less than 1% of the world's population and 4.1% of researchers, the [UK accounts for](#) 9.5% downloads 11.6% of citation and produces 15.9% of the world's most cited journal articles, more than any other country after the US.
4. The UK journal publishing industry is a world-leader in itself, home to 10% of the 2,000 scholarly publishers worldwide. Around 400,000 research articles are published from the UK each year, with UK publishers responsible for over 5,000 journal titles and a fifth of the articles each year. In addition, academic publishing plays an important role in investing in innovation, helping academics build on and scrutinise the work of others and helping them share and refine their own work.
5. The UK academic journal market is worth £1.1bn, making a significant contribution to the UK economy. Approximately 90-95% of this revenue comes from exports.

The role of publishers in ensuring integrity

6. The primary ways publishers ensure research integrity are through enabling, supporting and monitoring the peer review process, by managing quality through the production processes (editing, proof reading etc.) and through maintaining the integrity of the version of record, including management of retractions, expressions of concern and corrigenda etc. These are therefore the main areas that our response will focus on.
7. We would also like to highlight how in recent years publishers have been increasing their training for reviewers, editors and researchers in order to minimise cases of research misconduct.

Peer review

8. Publishers play a crucial role and make substantial investment to ensure research outputs are edited, peer reviewed and prepared for publication. The management and facilitation of peer review is key to the value that publishers bring to the publishing process and we are constantly mindful of ways to refine the peer review systems and processes applied to journals.
9. Peer review is a core part of the scholarly journal, where the quality of research is assessed and checked for validity, significance and originality. Peer review is the quality filter in the publishing process, asking whether papers are scientifically sound. It also informs the process of editorial selection whereby editors decide whether individual articles are appropriate for the journal.
10. The publisher's role in the peer review process is primarily managerial and supportive. Publishers do not influence the process of peer review. Editorial independence of the judgment of journal editors and editorial boards is fundamental to the academic publishing process. The assessment and selection of content is independent to the publisher.
11. However with online peer review, the role of publishers within the peer review process now extends beyond just the facilitation of peer review. The online systems being developed by

publishers enable the monitoring of editor and reviewer performance and the tracing and exposure of fraudulent behaviour.

Strengths and weaknesses

12. Although there are some criticisms of peer review and debates about how to enhance the system, academics remain strongly committed to peer review. A [recent survey](#) conducted by the Publishing Research Consortium on the attitudes towards peer review among research authors and reviewers showed that 82% agreed that without peer review “there is no control in scientific communication”, while 74% said that peer review improves the quality of the published paper, more or less unchanged in previous years. Meanwhile a [study into](#) peer review by Taylor & Francis found that that most researchers rate the benefit of the peer review process towards improving their article as 8 or above out of 10, with improving quality found to be the most important aspect of peer review. Although the study also identified some weaknesses in the peer review process, it found that researchers primarily demonstrated a wish for tweaks to the current systems rather than a radically new way of assessing the quality and validity of researcher outputs.
13. There is evidence that researchers and authors think peer review should be better at detecting plagiarism and fraud, but there is also a recognition that this is not always practical. A report by [Sense in Science](#) in 2009 showed that 79% of researchers thought peer review should detect fraud and 81% said it should detect plagiarism, but 33% and 38% respectively thought the system was not capable of this. The impracticalities of examining raw data was given as part of the reason why this would not be feasible.
14. However editors and reviewers may report suspected cases of misconduct within the normal course of review. Many publishers are active in monitoring peer review systems to check for instances of misconduct, working with editorial teams to maintain standards.

Measures to strengthen peer review

15. Publishers are mindful of ways in which the peer review system can be reviewed and have sought to understand the motivations of researchers to review for journals in order to assess how better they can support and train peer reviewers.
16. For example publishers spend time on the education of reviewers and authors through training and workshops. Many also publish guidelines on how reviewers should conduct peer review, and provide checklists on how reviewers should report feedback. These checklists also give guidance to peer reviewers about what they should do if they suspect plagiarism, fraud or other ethical concerns. Meanwhile the cross-industry initiative iThenticate, a plagiarism checker, has been set up to help verify the originality of written work.
17. Publishers have also continued to adapt their peer review process to ensure that peer review remains as robust as possible. For example a number of journals have started offering open peer review, where authors and reviewers’ names are revealed to each other, and in some cases the reviewer’s names are then made public by attaching them to the article. Meanwhile others offer double-blind review which blinds both authors’ and reviewers’ identities. There have also been initiatives by journals to recognise and reward the valuable contribution reviewer’s make to journal articles.
18. Another significant initiative to strengthen the peer review process is the [PEERE COST Action](#) project, which is conducting experiments in peer review to try and address possible bias and cases of misconduct. Springer Nature, Wiley, Elsevier and the Royal Society are all collaborating with the project.
19. Notable work in the project been around the registration of results (which aims to reduce bias against negative results) and a ‘results free’ peer review process (which means reviews of research manuscripts submitted for publication will not be able to see the results or discussion

sections until the end of the review process) which BMC Psychology is trialling to see if it can help reduce publication bias.

20. But ultimately while publishers can offer different methods of peer review, it is down to the academic community to respond to these options and select which one they pursue.

Publication ethics

21. Publishers play a crucial role in the management of ‘publication ethics’ which includes article retraction, erratum (correction of errors), corrigendum (changes to an article the author wishes to publish after acceptance) and expressions of concern. This is an area that publishers generally manage on behalf of journal editors.
22. If a potential misconduct is reported a key way publishers help ensure research integrity is through their article retraction process. Journal publishers understand the sensitivities of such a situation due to the severe consequences of a retraction, and therefore take a high level of care in handling these situations. The majority of journals have documented policies and procedures in place to handle these sorts of cases.
23. Once a query about an article is received, journals will investigate and decide upon the appropriate action to take in accordance with the Committee on Publication Ethics guidelines. This process can be incredibly detailed and time intensive, but is crucial to the integrity of research and the reputation of the publisher of that research. More than 11,000 journals are members of COPE, which provides advice to editors and publishers on publication ethics. As well as providing advice on how to handle cases of research and publication misconduct, COPE also publishes ethical guidelines for peer reviews which sets out the basic principles and standards to which all peer reviewers should adhere to during the peer review process.
24. Most publishers and individual journals have statements for potential authors on ethical behaviour and publishers work to raise awareness among their journal editors and communities.
25. If an article is retracted publishers will link the retraction statement to the original article, clearly identify the retracted article and will publish any retractions promptly to minimise harmful effects.
26. This points to the importance of researchers being confident that they are accessing the most up to date version of an article and the role publishers play in curation. If there are multiple copies of published articles in multiple repositories this creates obvious problems in the retraction process.

Increase in research misconduct

27. We would also like to comment on the findings in the POSTnote on the rise of retractions and research misconduct. The committee seeks views on the recent causes and drivers of trends. Although the PA is not in a position to provide an all-encompassing analysis on the reasons behind the rise in retractions, we would like to respond to the parts of this finding which relates to journal publishers.
28. Firstly we would like to note that part of the reason behind the rise in retractions is likely to be because of improvements in detecting these kinds of issues rather than necessarily showing an increase in misconduct in itself.
29. For example, a [recent study](#) looking at why the number of retractions has increased found evidence which suggested that the rise could partly be attributed to journals reaching further back in time to retract flawed work, an increasing rate of publication and an expansion in the reasons why works are retracted to include plagiarism. Evidence from publishers also suggests that duplicate publications has been a further major cause of retractions.
30. The study suggests that the spike in retractions appears to be a “consequence of changes both in institutional policy and in behaviour of individual authors”. It points to an increase in the proportion of retractions by authors with a single retraction, an increase in retraction for “new”

offences and a drop in the timescales to retract flawed work as being partly behind the retraction increase.

31. Another [article published](#) in 2015 came to similar conclusions, finding that the growing number of retractions are “most plausibly a sign that researchers and journal editors are getting better at identifying and removing papers that are either fraudulent or plainly wrong”. The paper warned that equating the prevalence of retractions with that of misconducts risks hindering this positive trend.
32. Anecdotal evidence suggests that publishers are also seeing an increase in self-reporting as a cause for a retraction, again suggesting that the shame should be taken out of retracting articles to encourage more researchers to self-report.
33. Meanwhile increased scrutiny and whistleblowing, evidenced by the popularity of Retraction Watch and PubPeer, could also help to explain the rise in retractions.

Pressure to publish

34. We are concerned with the suggestion in the POSTnote that pressure to publish in high impact journals could be partly causing the rise in research misconduct. Particularly the suggestion that this is because of a perception that publication in high impact journals requires positive rather than negative findings or research with a practical application.
35. The requirements high-impact journals place on research include that they should have “outstanding scientific importance” (Nature) or “significantly advance scientific results”. They do not require the research to have received positive results.
36. Therefore, the desire to publish positive rather than negative results are not related to publishers journal policies, but seem more to be related to the attitude of the scientific community towards the publication of negative results. For example, Elsevier launched a journal focusing on negative results in plant sciences which it had to close due to a lack of submissions. Meanwhile Wiley also had to close its publication on negative results called Archives of Drug Information for the same reason.
37. The POSTnote also referred to concerns that researchers may exaggerate the application of research as some journals and funders are thought to prefer research with a practical application. However the cited study “The Culture of Scientific Research in the UK” only refers to such a push for practical application in grant submissions, demonstrating that while it may be an issue for funders, there is no evidence that such a drive is being driven by journals.
38. In addition, we would also like to note that other studies have also questioned the evidence basis supporting the idea that the integrity of scientists is being threatened by a pressure to publish. A [study](#) conducted last year tested this claim and found that evidence behind this is “either non-existent or derived from self-reports and other sources that have known limitations”.
39. By analysing bibliographic and personal information collected by co-authors of papers that have been retracted or corrected, the paper found that high-impact and productive researchers and those working in countries in which pressures to publish are believed to be higher, are less likely to produce retracted papers and more likely to correct them. It found that there were higher instances of misconduct in countries that lack research integrity policies, countries where individual publication performance is rewarded with cash, in the earliest phases of a researcher’s career, and in cultures and situations where mutual criticism is hampered.
40. Therefore, whilst we would not wish to dismiss claims that a pressure to publish might have an impact on researcher’s conduct, we would suggest that more evidence is needed on this issue.
41. Finally the POSTnote refers to the requirements from some journals to make data publically available as a condition of publication, and the extra burden this places on researchers.
42. Publishers understand that such requirements do require extra effort on the part of researchers and appreciate that their role is to provide the best tools for creating an eco-system where it is easy to deposit, discover and use research data and work to help manage this burden.

Reproducibility

43. Another area that has attracted attention recently and was addressed in the POSTnote is around concerns about the irreproducibility of research.
44. This issue is something which publishers are aware of and have been looking to address. For example, some journals such as Nature have introduced editorial measures to address the problem by ensuring that key methodological details are reported and by encouraging authors to be transparent such as by including their raw data.
45. However it must also be noted that it is difficult to find a solution that would work across the board on this issue, given the difference in subject disciplines. Some journals in the past have introduced reproducibility requirements which have raised their own challenges. For example in cases where a study has not been able to be reproduced has raised uncertainties around ascertaining which result was flawed.
46. Solutions are also likely to be subject-sector specific, as each area will have different ways to check reproducibility. Additionally the issue around the failure to reproduce studies is more acute for some subjects than others.
47. Whilst journals will continue to examine ways that they can help work to address this problem, there are other underlying issues which are outside the control of journal publishers.