

Peer Review

# Review of: "The Role of Artificial Intelligence in the Lifecycle of Scientific Manuscripts: Authoring, Reviewing, and Editorial Selection"

Andrew Williams<sup>1</sup>

1. Division of Medicine, University College London, United Kingdom

Review

General comments:

The argument the authors propose is that the financial model of scientific publishing requires substantial modernisation in light of current and emerging AI technologies.

1. The abstract would benefit from refinement and a more nuanced exposition of current trends in AI and publishing.
2. The framework for the review is commendable, i.e., the Committee on Publication Ethics, in particular the emphasis on transparency and human accountability.
3. The author frequently cites himself throughout the article. This may introduce a conflict of interest, introduce bias, or be perceived as citation inflation.
4. The framework section is valuable. The suggestion that formal recognition of peer review in tenure, promotion, and funding decisions is an important consideration.

Specific comments:

1. The abstract's opening line, "driven by systemic crises in peer review and academic economic pressures.", represents only one possible factor in the rise of AI use during the publishing cycle. Others may include workload pressures, pressure to publish, reviewer laziness, ease of use and accessibility of generative AI technology, volume of reviewer requests, and the proliferation of predatory and online publishers.

2. In the section on hallucination and fabrication of references, the section would benefit from some recommendations, e.g., that all journals/publishers implement a process that cross-checks the validity of references, and that any author(s) found to have fabricated references be immediately rejected (or even black-listed!). This could also be included in section 7.

3. In section 4.2, the inclusion of a brief discussion would be beneficial on the epistemic factors that place human experts at the centre of scientific knowledge and judgement. As the review process is a multifactorial decision-making process that requires past knowledge, understanding of data, places the research into context, and warrants a consideration of future implications – real-world experience and epistemic expertise are essential.

4. It may be worth discussing the impact on scientific progress. For example, this recent ArXiv paper <https://doi.org/10.48550/arXiv.2412.07727> that highlights the discordance between personal advancement and scientific progress.

## **Declarations**

**Potential competing interests:** No potential competing interests to declare.