ETHICAL REGULATIONS OF AI IN ACADEMIC PUBLISHING – AN OVERVIEW

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Abstract. This article addresses key ethical questions surrounding AI in academic publishing and provides a short overview of existing policies and guidelines from major publishing organizations. Publishers today face the challenge to completely reshape their attitude towards new technologies and traditional methods of publishing and regulations shaping the publication process from start to finish. Comprehensive AI policies are required at every stage – from author's guidelines to detailed instructions for editors and reviewers. The evolving publishing landscape raises important ethical considerations, extending beyond the publishing process itself to fundamental concepts such as authorship. A reevaluation of authorship as an institution is essential, along with a phenomenological approach to understanding the role of technology in generating meaning and mediating new ideas. While AI challenges traditional publishing, it also offers tools to combat unethical practices in publication process today.
Keywords: AI; publishing ethics; LLMs; policies
JEL: M15; O30; O32

1. Introduction

AI is revolutionizing the publishing industry entirely, influencing research, fiction, and non-fiction alike. This overview paper explores the evolving role of AI, emphasizing the need for a comprehensive ethical framework through the analysis of existing policies and guidelines. Thus, it raises critical questions about the future of publishing, particularly the deconstruction and reevaluation of concepts, such as authorship.

In a podcast on the changing landmark of publishing, Thad Mcllroy, author of the *AI Revolution in Book Publishing*, mentions that now is the most exciting moment in publishing in his 50 years in the industry.[1] The rapid integration and usage of AI tools may be exciting, new and challenging for both publishers and authors, but among the excitement uncertainty is also

[1] PENN, J. (host). 2024. *Artificial Intelligence (AI) in Publishing with Thad Mcllroy*. The Creative Penn Podcast for Writers [Audio podcast]. Available from: https://open.spotify.com/episode/1DBVMwF2zQWRVT71Ne2IKy?si=be58d762a210484d. [Last visited: 2024.11.25].

present and plays a special role in shaping publishing policies and authors' attitude towards writing.

The rise of data journals and open publishing models underscores the need to understanding how technology is reshaping the industry. The phenomenon is not new or particularly unique to publishing industry but applies to all spheres. The technology debate starting from the technological critique by Marcuse to recontextualizing science as technoscience shows rapid changes in existing traditional structures and their reinterpretation through the technological medium. Peter-Paul Verbeek's (2005) concept on technological mediation even goes further in reshaping human actions and behaviors based on the interaction with technology. Among all these discussions a prominent one arose and is directly related to the ethical framing of AI in academic publishing.

2. AI in Publishing – state of play and current debates

The topic of AI in academia and scholarly communication is not recent. However, the academic publishing sphere faced a significant challenge between the end of 2012 and early 2023 regarding authorship and the usage of large language models in scholarly articles. These debates engaged numerous professionals across scholarly publishing, posing questions about the formal role of AI in manuscripts and its potential impact on the peer-review process.

In early 2023, Chris Stokel-Walker published an article addressing the increasing occurrence of manuscript submissions to reputable scientific journals where authorship was attributed to Open AI's large language model – ChatGPT (Stokel-Walker 2023). This issue, relatively new to the realm of scientific publishing, sparked extensive discussions within the European Association of Science Editors (EASE) and other organizations. In the context of its emergence, managing editors of scientific journals faced unprecedented situation with no clear resolution. Notably, OpenAI's GPT was listed as a co-author in numerous articles and even had the required author's persistent identifier ORCID, which was later locked for violating ORCID's terms of service (Martínez-Ezquerro 2023).

The response was prompt. In early 2023, the Committee on Publication Ethics (COPE) released an official statement addressing the use of LLMs and other AI tools in generating, processing, and/or manipulating scientific text, producing images or graphical elements in articles, as well as for collecting and processing research data. COPE's statement, along with organizations such as WAME and JAMA NETWORK, emphasized that large language models and AI tools do not meet the requirements and criteria for authorship of a scientific publication. In this sense, they cannot take responsibility for the submitted manuscript or "assert the presence or absence of conflicts of interest nor manage copyright and license agreements" (COPE 2023). Soon Elsevier

also published their *Generative AI policies for journals*[1]. Explicit instructions for all authors state that when such tools are used, they must disclose with sufficient description and accurate representation the usage in the manuscript, mainly in the methods section or a similarly appropriate part of the submitted manuscript, depending on the journal's specifics.

By December 2023, major organizations and publishers, including ICMJE, COPE, WAME, JAMA, PNAS, Science, Nature and Lancet, had introduced their initial policies on AI usage for authors. These policies define the permissible usage AI, outline restrictions and specify disclosure requirements. Some of the permitted uses include tasks such as review, safeguarding against biases, plagiarism detection and verifying proper citation. Among the organizations five are flexible with the usage of AI in image-generation, while *Nature*, *Lancet* and *Science* prohibit it (Lin 2024). *Springer Nature* cites legal copyright and research integrity concerns as reasons for this prohibition, but also acknowledges the rapid development in the field, committing to "review and adapt their policies"[2] Additionally, the policy clarifies that AI-assisted copy editing does not require disclosure, with permissible improvements limited to: errors in grammar and punctuation, tone, wording and formatting.

All of the mentioned are describing how the usage should be disclosed and where – either it requires the full disclosure in notes, or presenting the prompts, date and time of the content used. However, Lin (2024) highlights a critical gap: none are addressing the issue of citation or provide detailed guidelines on the extent of AI usage and involvement in scholarly articles.

Another example is the *Assistive and Generative AI Guidelines for Authors* by SAGE Publishing[3], which do not prohibit the citation of AI-generated text,provided it adheres to the recommended reference style. However, their *Artificial Intelligence Policy* clarifies that: "authors should cite original sources, rather than Generative AI tools as primary sources within the references."[4]

Table 1 presents three additional publishers and key points of their AI policies, including their stance on AI citation, the role of AI tools in manuscript preparation, and the extent of editorial oversight required to ensure compliance

[1] Elsevier – *Generative AI policies for journals*. Available at: https://www.elsevier.com/about/policies-and-standards/generative-ai-policies-for-journals. [Last visited: 2024.09.23].

[2] See: *Nature AI Policy.* Available at: https://www.nature.com/nature-portfolio/editorial-policies/ai#generative-ai-images. [Last visited: 2025.11.26].

[3] See: SAGE Publishing 2023. *Assistive and Generative AI Guidelines for Authors*. Available at: https://group.sagepub.com/assistive-and-generative-ai-guidelines-for-authors. [Last visited: 2024.11.25].

[4] See: SAGE Publishing 2023. *Artificial Intelligence Policy*. Available at: https://us.sagepub.com/en-us/nam/artificial-intelligence-policy. [Last visited: 2024.11.25].

with publication ethics. The Royal Society explicitly prohibit the citation of AI in their journals, while the AI policies of APA journals and Taylor&Francis lack clarification on this specific restriction. Notably, a significant number of policies, require rigorous editorial oversight to ensure that authors use AI tools in accordance to publishers' ethical standards.

Table 1. Policy overview of major publishers

AI POLICIES

Publisher/ Journal	Allowed	Prohibit	Disclosure
APA journals	editing	cannot be named as an author; authors are prohibit to enter any draft, data, or other information of the submitted manuscript into gen AI	methods section and cited
Taylor&Francis	Idea generation and idea exploration; Language improvement; Interactive online search with LLM-enhanced search engines; Literature classification; Coding assistance	not be listed as an author; text or code generation without rigorous revision; synthetic data generation to substitute missing data without robust methodology; generation of any types of content which is inaccurate including abstracts or supplemental materials; creation and manipulation of images and figures	the full name of the tool used (with version number), how it was used, and the reason for use. For articles: in the methods section or acknwledgement
Royal Society Journals	improve readability and language of the work; may be used as a 'search engine'; to aid identification of suitable code or statistical techniques.	producing scientific insights, analysing and interpreting data or drawing scientific conclusions. not list AI and AI-assisted technologies as an author or co-author, nor cite AI as an author.	statement providing detail of which elements of the work were generated by AI and AI-assisted technologies

Source: Author's systematization

It is, indeed, crucial for publishers to extend and clarify all possible aspects of AI usage considering these aspects and provide more in-dept instructions for authors. Without proper regulation, the use of AI poses significant ethical threads to publishing. While LLMs offer remarkable advances in processing vast datasets that exceed human capabilities, their limitations are particularly evident in scientific field – from inaccurate or outdated training data, hallucinations, and biases to the limitation in contextualizing new information and transparency. A notable example is Bret Schickler's AI-generated children's book, raising additional questions about the institution of authorship today.

Initially, the primary focus of publishers and their statements regarding the use of artificial intelligence centered on the role of the author. COPE's main

argument asserts that such tools do not meet the criteria for authorship, and thus, positioning LLMs in the author sections of a manuscript is unacceptable. Amid ongoing discussions about the use of AI tools in scientific research, particularly GPT, Avi Staiman's March 2023 commentary in *The Scholarly Kitchen* highlighted the hasty and inadequate negative reactions of some academic publishers. Staiman argues that many publishers lack a thorough understanding of AI tools and their potential benefits for research and publishing. The discourse among publishers revolves around interpreting AI tools in relation to authorship, a topic Staiman (2023) calls "an obscure issue". Furthermore, he suggests rethinking the CRediT taxonomy and shifting back to the researcher rather than the author (Staiman 2024).

The phenomenological interpretation of the author's role and the significance of incorporating meaning into text is more relevant than ever. The concept of author's institution has been extensively debated throughout hermeneutical and phenomenological discussions, from Barthes' (1977) proclamation of the "death of the author" to Russon's (2009) emphasis on the author's role in initiating dialogue with the reader. In this context it is crucial to additionally ask about the academic author in the era of LLMs and if the institution of authorship is autonomous today? Academic publishers have provided a clear answer – AI cannot be considered an author, a stance consistently reinforced in journal policies.

To define and establish effective publication policies that normalize the use AI in academic writing and publishing, it is necessary to revisit and reconsider fundamental concepts such as authorship, plagiarism, and the overall process of creating, peer-reviewing, and disseminating scholarly texts in the AI era. These questions must be considered not only within academic publishing but across the entire publishing industry. Authorship, as both an institution and a role, is rapidly evolving, requiring scholars and publishers to adapt to these specific shifts. The hermeneutical reconstruction of the term "author" in the technoscience era demands a thorough redefinition and repositioning to prevent the danger of authors becoming brands, marketers or mere prompt engineers.

3. Risks and benefits of AI tools in Publishing

Currently, the EU AI act serves as an exemplary framework for risk-assessment classification by defining the risk levels and recognizing potential harms of AI systems. This structured approach could serve as a useful example for future in-dept publishing policies, ensuring AI tools are logically categorized and their usage regulated based on the potential ethical risks. Taking a holistic view, the current state of AI could be defined as a "mid-summer" phase, but researchers also remind us of past "AI winters" seen since the term was coined in the 1950s (Toosi et al. 2022; Francesconi 2022). Floridi

(2020) warns about the cyclical nature of seasonal metaphors, where overhyped development often leads to disillusionment during cool-down periods and society realizes the limitations of the technology. Schuchmann (2019) analyzes previous AI winters, identifying insufficient results compared to expectations, government funding cuts, and lastly the technological limitations as recurring causes. Today, however, private companies play a significant role in driving AI advancements, altering the previous funding dynamic that caused the emerge of the AI winters.

Despite these differences it is crucial to manage expectations against realistic outcomes. The regulatory framework for using AI in research is natural response to the need to understand and define these tools while addressing broader ethical implications. These concerns extend beyond academic publishing and intersect with fundamental human rights, highlighting global inequalities in access to AI tools. Smaller academic publishers and independent publishing houses are particularly vulnerable, facing challenges from both a lack of resources and uneven implementation of AI tools in publishing process.

Editorial teams are already grappling with these issues, given that the publishers themselves face uncertainty in defining possible frame of AI usage. As illustrated in Figure 1, a search in the Science Direct database reveals a significant increase in journal editorials discussing AI in publishing between 2022 to November 2024, clearly illustrating the growing attention to these concerns.

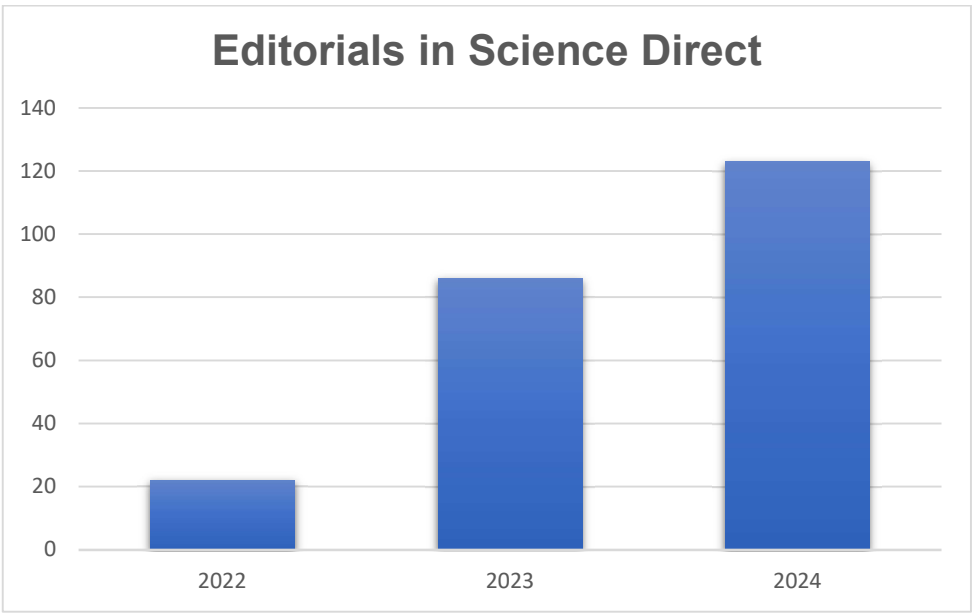

Figure 1. Growth of AI-related Editorials in Science Direct database
Source: Author

The urgency of the problem also presupposes the need for a swift response from academic publishers, who are responsible for disseminating scientific knowledge within established ethical frameworks. The rise of AI introduces new challenges for academic publishers, compounded by threads of unethical practices in the publication process. Covid-19 pandemic highlighted major problems with scientific publishing, retraction of research articles, multiplying of predatory journals and the overall distrust in science. Hamed et al. (2024) notes that fake content and misinformation in science were significant concerns even before AI's emergence, but AI introduces additional challenges in authenticity and transparency. However, these challenges do not stem directly from the language models or their applicability but arise from the slow regulation of their use tied to malicious practices associated with predatory publishing and paper mills. AI tools could be also contextualized as a promising solution to address these problems. Numerous articles and editorials in scientific publishing address issues like ghost authorship and gift authorship (Burger 2020; Grimm 2022). Consequently, the nondisclosure of the LLM usage in a scientific paper could also be classified as a "noval form of ghost authorship" (Tsigaris & Teixeira da Silva 2023). Another major problem is the arising crisis with translated plagiarism, coming along with the improvement of AI models translating features.

Unlike the official sphere of academic publishing, the grey zone of paper-mills is thriving in integrating AI in their practices. Text generation system combining rapid implementation with fluent language accelerate the production of papers that mimic scientific work but lack genuine content. This would benefit paper-mills by increasing their output, while making it more difficult and time-consuming to identify fraudulent research (Grimaldi & Ehrler 2023, 879). The classification in recognizing predatory journals by Elmore & Weston (2020) emphasizes on the low language quality of the websites and papers as a way of recognizing potential predatory journals. Unfortunately, with the availability of AI language tools this detection becomes more difficult than ever based on the improved quality of the websites, language and even the phishing emails. Similarly, the flood of predatory journals publishing papers containing phrases like "As an AI language model …" [1] or "Regenerate response" underscores the lack of editorial and peer-review practices in certain open access journals.

Although the current efforts to highlight the importance of recognizing predatory publishing are significant, AI poses dual challenge and opportunities

[1] For example, the paper "The economic effects of environmental and climatic changes on the economic sector" published in *International Journal of Modern Agriculture and Environment*, vol. 1, Issue 1, p. 71, DOI: 10.21608/ijmae.2023.216207.1017. The text or at least a large portion of the text is generated through AI. The author does not disclose this usage and it is clear no editorial or peer-review corrections were made.

for academic publishing. While it accelerates unethical practices, it also provides the tools for addressing and detecting these issues.

Highlighting the ethical challenges coming with AI produces timely measures by editorial teams contributing to its normative framing and reflection within official publication documents. The editorial response of reputable journals is seen, but the slow introduction to AI policies in smaller academic journals is almost non-existent in Bulgaria. This poses another significant tread not only to the journals who lack regulations regarding AI usage but also to the quality of research published and openly disseminated.

The benefit of AI tools is mainly highlighted in academic publishing, from language and grammar correction (Jacques et al. 2023), to improving research quality, writing and thinking skills (Martínez-Ezquerro 2023), helping in the detection of AI generated texts through GPTzero and GPT detector (Tsigaris & Teixeira da Silva 2023), usage of ChatGPT for manuscript revision and a tool for more sufficient interaction between author-editor-reviewer (Fiorillo & Mehta 2024) to the integration of AI tools in classes and the benefits for students (Vetter 2024).

In his *AI Tools Boot Camp* for researchers, Avi Staiman highlights the positive role of AI tools in different stages of writing and publishing by examining and proposing concrete tools and their application – from language editing (Paperpal, Draftsmith), literature discovery (R Discovery) to literature review and evaluation (Scite) and deep literature search (Undermind) and more[1].

Conclusion

Given the current debate and arising of new policies regarding AI in academic publishing the need for a standardized policy for AI ethical usage with risk-assessment of specific tools will significantly benefit publishers. Following the given examples AI journal policies now are concise and point out the allowed and prohibited usage of AI tools. However, it will be beneficial for clear and example-based guidelines be introduced, clarifying all aspects in AI usage from authors to editors and peer-reviewers. Based on the existing AI policies we can conclude that editors and reviewers AI usage's framing is not always clear enough. Adaptation of AI policies is also crucial based on the specific scope of the journals and the variety of AI tools that could be utilized in the whole publishing process.

Dynamic changes in publishing highlight a shift in the author's role. Critical and systematic thinking is crucial for researchers and publishers to harness technology effectively. In order to do that publishing policies are the

[1] See: Academic Language experts. Available at: https://www.aclang.com/ai-bootcamp.php. [Last visited: 2024.11.26].

core link between authors, editors and reviewers. Integration of these tools requires a balanced approach and robust ethical framing to maintain research integrity.

REFERENCES

BARTHES, R. 1977. *The Death of the Author*. London: Fontana. ISBN: 0006861350.

BURGER, MC. 2020. Caught between a ghost and a gift: Navigating authorship issues. *SA orthop. j.* [online]. Volume 19, Number 3, pp. 122-124.

COPE. 2023. *Authorship and AI tools*. Available at: https://publicationethics.org/cope-position-statements/ai-author.

COPE. 2019. *Authorship – Discussion document*. Ver. 2 [September 2019]. Available at: https://doi.org/10.24318/cope.2019.3.3.

ELMORE, S., WEATON, E. 2020. Predatory Journals: What They Are and How to Avoid Them. *Toxicol Pathol*. Volume 48, Issue 4, 607-610. Available at doi: 10.1177/0192623320920209

FIORILLO, L. & MEHTA, V. 2024. Accelerating editorial processes in scientific journals: Leveraging AI for rapid manuscript review. *Oral Oncology Reports*. Volume 10. Available at doi: 10.1016/j.oor.2024.100511.

FRANCESCONI, E. 2022. The winter, the summer and the summer dream of artificial intelligence in law. *Artif Intell Law.* 30, 147–161. Available at doi: 10.1007/s10506-022-09309-8.

FLORIDI, L. 2020. AI and Its New Winter: from Myths to Realities. *SSRN*. Available at doi: 10.2139/ssrn.3830584.

GRIMM, CH. 2022. *Ghostwriting as a Critical Lens: Authorship and Attribution in Professional and Academic Contexts*. Dissertation, Georgia State University. Available at doi: 10.57709/32639057.

GRIMALDI, G. & EHRLER, B. 2023. AI et al.: machines are about to change scientific publishing forever. *ACS Energy Letters*, 8(1), 878-880. Available at doi: 10.1021/acsenergylett.2c02828.

HAMED, A.A., ZACHARA-SZYMANSKA, M., WU, X. 2024. Safeguarding authenticity for mitigating the harms of generative AI: Issues, research agenda, and policies for detection, fact-checking, and ethical AI. *iScience*. Volume 27, Issue 2. Available at doi: https://doi.org/10.1016/j.isci.2024.108782.

JACQUES, T. et al. 2023. Artificial intelligence: Emergence and possible fraudulent use in medical publishing. [Editorial]. *Orthopaedics & Traumatology: Surgery & Research*. Available at doi: 10.1016/j.otsr.2023.103709.

LIN, Z. 2024. Towards an AI policy framework in scholarly publishing. *Trends in Cognitive Sciences*, 28(2), 85-88. Available at doi: 10.1016/j.tics.2023.12.002.

RUSSON, J. 2009. *Bearing Witness to Epiphany Persons, Things, and the Nature of Erotic Life*. New York: Sunny Press. ISBN: 978-1-4384-2503-0.

MARTÍNEZ-EZQUERRO, J. D. 2023. Authors in the age of language-generation AI: To be or not to be, is that really the question? [Editorial]. *Archives of Medical Research*. 54, 163–167. Available at doi: 10.1016/j.arcmed.2023.03.002.

SCHUCHMANN, S. 2019. Probability of an approaching AI winter. *Towards Data Science*. Available at:
https://towardsdatascience.com/probability-of-an-approaching-ai-winter-c2d818fb338a. [Last seen: 2024.10.04]
STAIMAN, A. 2023. Academic publishers are missing the point on ChatGPT. *Scholarly Kitchen*. Available at: https://scholarlykitchen.sspnet.org/2023/03/31/guest-post-academic-publishers-are-missing-the-point-on-chatgpt/. [Last visited: 2024.11.02]
STAIMAN, A. 2024. Dark Matter: What's missing from publishers' policies on AI generative writing? *Digital Science* [online]. Available at: https://www.digital-science.com/tldr/article/dark-matter-whats-missing-from-publishers-policies-on-ai-generative-writing/ [Last visited: 2024.11.26]
STOKEL-WALKER, C. 2023. ChatGPT listed as author on research papers: many scientists disapprove. *Nature*. 613, 620-621. Available at doi: 10.1038/d41586-023-00107-z.
TSIGARIS, P. & TEIXEIRA DA SILVA, J. A. 2023. The role of ChatGPT in scholarly editing and publishing. *European Science Editing*. Available at doi: 10.3897/ese.2023.e101121.
TOOSI, A. et al. 2022. A brief history of AI: how to prevent another winter (a critical review). *PET Clinics*, Volume 16, Issue 4, 449-469. Available at doi: 10.1016/j.cpet.2021.07.001
VERBEEK, P.-P. 2005. *What Things Do: Philosophical Reflections on Technology, Agency and Design*. Pennsylvania: Penn State University Press. ISBN: 978-0-271-02540-7.
VETTER, M. et al. 2024. Towards a framework for local interrogation of AI ethics: A case study on text generators, academic integrity, and composing with ChatGPT. *Computers and Composition*, Volume 71. Available at doi: 10.1016/j.compcom.2024.102831.

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