



Artificial Intelligence and Academic Journals: For Better and for Worse

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ABSTRACT

This editorial summarizes a talk presented during the 47th EnANPAD Annual Meeting in São Paulo, Brazil, exploring the role of artificial intelligence (AI) in academic journals. It highlights the impact perspectives of AI, recognizing its effects in various social and academic areas. Although the effects are extensive and their full ramifications are unknown and uncertain, the editorial highlights elements of opportunities and threats of this impact, as well as some ways to mitigate the impact. Journals could become smarter and more accessible with AI, providing a personalized experience for researchers and readers. However, significant challenges, such as the risk of inequality between journals with and without AI capabilities, are also highlighted. To seize opportunities and mitigate challenges, the author advocates for investment in AI, the creation of clear editorial guidelines, and an institutional commitment to responsibility and ethics.

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In September 2023, I had the opportunity to participate as a speaker at the 47th EnANPAD Annual Meeting in São Paulo, Brazil, discussing the role of artificial intelligence in academic journals. I was apprehensive about this discusse because, on the one hand, I am aware that the use of artificial intelligence has brought and continues to bring impacts in all areas of society, such as in the economy, industry, education, and science; yet, on the other hand, I acknowledge that these impacts are not entirely understood (Khan et al., 2022; Khare & Stewart, 2018; Tai, 2020; Makridakis, 2017).

Therefore, I integrated the expression 'for better or for worse' into the title of the presentation, as I believe that, as in all things in life, there is always more than one possibility. The discussion was highly intense and challenging, marked by significant participation — both in quantity, as the room was packed, and in quality, with numerous questions and opinions. I decided to incorporate some of what I presented there into this editorial, along with contributions from the participants.

As I commenced my discourse, I established some premises, which I reiterate here, as I believe they should be used as benchmarks for my standpoints and as parameters for readers to evaluate them. They are:

- 1. I am not an expert in artificial intelligence; I am a user in development.
- 2. The impacts of artificial intelligence are still poorly understood in any area; thus, I am expressing opinions or even speculating.
- 3. I believe that current artificial intelligence differs from that of the past. It can create rather than just analyze and replicate.
- 4. My comments here are made from the perspective of the chief editor of a scientific journal. This is my scope of speech.

I divide the remainder of this editorial into three sections: artificial intelligence for the better, artificial intelligence for the worse, and finally, immediate actions in the journals. It is obvious that the terms 'for the better' and 'for the worse' are used as figures of speech and essentially mean opportunities and threats, respectively. Read them in this context, and it will make much clearer sense.

AI FOR THE BETTER:

In general, I believe that artificial intelligence can contribute to accelerating scientific advancement. AI tools have the power to connect topics, works, and individuals in a much deeper and faster way than humans are capable of (Salvagno et al., 2023). Moreover, it demonstrates greater efficiency in data analysis, especially quantitative data. It can also suggest bibliographic references highly relevant to the study. It facilitates certain author activities such as improving writing and revision quality, assists in identifying relevant topics and high-quality translations (Baidoo-Anu & Owusu Ansah, 2023), and even in collaboration and connection among researchers.

For journals, the use of artificial intelligence has contributions at various levels. What strikes me most is the potential to make a scientific journal smarter, user-friendly, and accessible. I made a comparison, likening a journal to an enhanced 'Netflix.' I encouraged participants to engage in an imaginative exercise: envision the possibility of automatically publishing or reading in any language, receiving suggestions according to their areas of interest, evaluating read papers, and interacting with other readers in segmented discussion forums. I also highlighted the possibility of a tutor with questions and answers about specific papers, all this serving as a form of personalization for the researcher's, author's, or reader's journey (Khan et al., 2022).

Artificial intelligence can aid in accelerating the editorial process. It assists in reviewer selection, data analysis, plagiarism detection, and ethical conflict identification, for example.

But not everything is as positive.

AI FOR THE WORSE:

Artificial intelligence systems learn from the data provided to them or created by themselves. These data can be opaque, potentially containing biases and prejudices (what is its origin?).

There are also potential ethical problems, such as plagiarism, misuse of data, and authorship identification, among others (Salvagno et al., 2023). However, these problems exist even without the use of artificial intelligence.

However, two issues seem central when discussing scientific writing: the difficulty for an artificial intelligence tool to consider contexts for data interpretation (Baidoo-Anu & Owusu Ansah, 2023) and the substitution of human creativity.

In the paper selection and editorial review process, excessive use of artificial intelligence can also lead to biases, selection of inappropriate content, and errors in classification and indexing that affect content accessibility (Salvagno et al., 2023).

But what concerns me the most is the potential divide between larger or more relevant journals, with resources for AI usage, and smaller, more regional journals focused on local issues with fewer resources. I believe this could lead to a decrease in the number of journals and a concentration on general rather than specific topics that contribute to the development of a journal's influencing communities.

As I mentioned, the topic is complex, and there isn't a definitive synthesis or conclusion. But we can consider what a journal can immediately do to capitalize on these opportunities and mitigate or reduce the threats.

To seize the opportunities, investment in artificial intelligence, whether in technology or training and knowledge, is essential. Developing the entire editorial team for AI use is fundamental. Creating editorial guidelines for the journal regarding AI use should be clear and continuously reviewed (we are currently developing our guidelines at BAR, but this is a complex task). However, what I believe most is the effort of educational institutions at all levels to train people, students, scientists, and authors increasingly committed to responsibility and ethics.

Welcome to this discussion!

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