

# The Rising Tide of Artificial Intelligence in Scientific Journals: A Profound Shift in Research Landscape

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Dear Editors,

I found the content of your editorials to be highly intriguing [1,2]. Scientific journals are witnessing a growing prevalence of publications related to artificial intelligence (AI). Three letters to the editor were recently published in your journal [3-5]. The renowned journal Nature has dedicated approximately 25 publications solely to the subject of ChatGPT. Moreover, a quick search on Pubmed using the term “ChatGPT” yields around 900 articles, with the vast majority originating in 2023. These statistics underscore the substantial interest of the scientific community in this area.

AI, especially the ChatGPT tool and the recent Bard, have faced criticism and been portrayed as significant adversaries of science. It is evident that many authors or researchers, who may not be well-versed in writing, can greatly benefit from these tools, as mentioned earlier. Without taking a contrarian stance, one should consider the potential advantages of such technologies for researchers in less privileged regions, where access to new technologies is limited, and local or regional challenges abound [6]. AI cannot be confounded with other technologies, as it specifically focuses on replicating human-like intelligence and decision-making processes, rather than simply automating tasks or improving performance based on data patterns.

The translation into English poses challenges due to the dominance of English in worldwide publications, with over 95% of articles being published in this language, and even reaching 98% in some fields. Although this manuscript was partially translated using AI, it can still benefit researchers from non-native English regions. Even simple tasks like text editing can be problematic for researchers in underprivileged areas. AI can play a crucial role in the evolution of online lectures and classes, providing valuable support for African maxillofacial surgeons who lack the luxury of taking breaks from work to update their knowledge, as they may be the only available option [7]. One of the remarkable features of AI is its ability to discover knowledge gaps. The use of simple tools like reference organizers is rapidly evolving and can become automated or semi-automated through AI. However, we must carefully consider whether we should refrain from relying too heavily on AI in certain cases, as this could be seen



as a significant regression.

On the other hand, we must be cautious about freely allowing AI tools to circulate in scientific journals and books without proper regulation [8]. Currently, accurately identifying texts generated by AI is challenging, and their effectiveness remains relatively low, at less than 30%. This means that only about 30 out of every 100 texts can be confidently classified as AI-generated. The technology must advance further to increase detection accuracy or at least raise suspicion. Academic journals no longer view authors acknowledging artificial intelligence tools as co-authors in their research favorably. This is crucial to prevent certain unscrupulous individuals, such as “false prophets,” charlatans, and flat-earthers, from infiltrating the realm of science, potentially impeding the progress of serious research conducted by professionals dedicated to advancing humanity through science.

It is essential to keep in mind that AI does not generate anything novel. Human authors can not be fully substituted [9]. In research involving groundbreaking concepts, innovations, case reports, or technical notes, the use of AI tends to be less frequent due to its lack of capability in creating innovative outcomes. On the other hand, reviews, whether narrative, systematic, or scoping, are based on existing publications. To address potential fraudulent practices, editors, reviewers, and journals themselves should exercise greater vigilance and apply more stringent filters for this type of publication.

An article from over a decade ago already discussed the professions most susceptible to replacement by computerization [10]. Maxillofacial surgeons, physicians, dentists, and psychologists are among the professions that are less likely to be displaced. This position can be attributed to the significant level of patient-professional interaction, the development of specific manual skills over time, and the ability to make adaptable decisions during procedures. These intricacies pose formidable challenges for AI to grasp, regardless of its level of advancement. We should maintain a composed yet vigilant stance at this juncture. Just as Portuguese navigators feared encountering serpents and sea monsters when they ventured into uncharted waters, the uncertainty and novelty of AI can evoke apprehension in us all. Nonetheless, we must embrace the benefits that AI can offer while imposing strict regulations and appropriate penalties to prevent any potential abuses carried out “in the name of science.”

Sincerely yours,

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***How to Cite;***

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