



THE MACHINE ADVISES, DOES THE HUMAN BEING DECIDE? ARTIFICIAL INTELLIGENCE AND SCIENTIFIC RESPONSIBILITY

A MÁQUINA ACONSELHA, O SER HUMANO DECIDE? INTELIGÊNCIA ARTIFICIAL E RESPONSABILIDADE CIENTÍFICA

¿LA MÁQUINA ACONSEJA, EL SER HUMANO DECIDE? INTELIGENCIA ARTIFICIAL Y RESPONSABILIDAD CIENTÍFICA

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With the advent of artificial intelligence (AI) and its developments, various concerns have also arisen. Nevertheless, this rapid advance has optimized processes and made it possible to overcome stages that once required excessive time or became obsolete in the face of new technological possibilities. This milestone also encompasses the extinction of some professions and the appreciation or rise of others.

I recall my Undergraduate Research experience in 2016, marked by rigor in writing and double-checking questionnaire transcription. A few years later, access to the cloud and the optimization of digital instruments changed the entire process of data collection, storage, and extraction. The machine was transformed in step with technological evolution itself: we lived through the era of the floppy disk, the CD, the DVD, the flash drive, and now the cloud.

During this same period, we experienced a pandemic that further accelerated digital media, the use of software, and the dissemination of AI. Although discussions about the possibility of automating thought predate the twentieth century, it was in 1950 that British mathematician and logician Alan Turing published *Computing Machinery and Intelligence*, in which he posed the question “can machines think?” and presented the imitation game⁽¹⁾.

Rather than dwelling on the complex definition of what it means to “think,” Turing proposed assessing whether a machine would be capable of producing, in a text-mediated interaction, responses indistinguishable from those provided by human beings. This shift in perspective, later recognized as the Turing Test, established an important framework for studies on machine intelligence and remains present in contemporary discussions about its ability to simulate aspects of human behavior. A few years later, in 1956, the expression “artificial intelligence” was used in the proposal for the Dartmouth Conference, prepared by John McCarthy, Marvin Minsky, Nathaniel Rochester, and Claude Shannon⁽¹⁾.

Today, we have a vast array of software that incorporates milestones of AI into its interface and development. We can use it in different types and stages of studies. However, persistent fear marks our transitional evolution. In the past, researchers had to request printed articles from libraries; today, they can access scientific databases, such as those of Elsevier, read summarized articles, and make multiple requests with the ease offered by reliable platforms.

When addressing the production of evidence syntheses, Cochrane, together with the Campbell Collaboration, JBI, and the Collaboration for Environmental Evidence, recognizes the potential of AI to support processes that were previously slower and manual. However, this incorporation must be accompanied by methodological responsibility; researchers need to report which tool was used, for what purpose, which parameters were adopted, which limitations

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were recognized, and how the results were validated. Thus, AI should neither replace human supervision nor compromise the principles of rigor, transparency, integrity, and reproducibility that underpin systematic reviews and other evidence syntheses⁽²⁾.

In Brazil, the publication of the National Council for Scientific and Technological Development (CNPq) Ordinance No. 2,664, dated March 6, 2026, represents a relevant milestone in the regulation of scientific integrity in the face of advances in Generative AI. By establishing the Policy on Integrity in Scientific Activity, the CNPq incorporated the use of AI into the formal guidelines for research supported by the agency. The regulation establishes that any use of this technology must be declared at all stages of scientific work. In addition, the regulation links the use of AI to broader integrity practices, such as the correct attribution of sources, fidelity to summarized ideas, prevention of self-plagiarism, correspondence between citations and references, transparent data management, and the possibility of sanctions in cases of violations, including warnings, suspension of benefits, interruption of grants, prohibition from participating in funding actions, and other measures provided for in the Ordinance⁽³⁾.

Despite the constant fear that pervades us, we cannot believe that the machine performs all the work by itself. On the contrary, we still retain control of the process. AI is a work tool. On its own, it does nothing without a command. From this perspective, it is understood that the holder of knowledge, intentionality, and the creative process continues to be the human being. The final answer is ours; so are the conception and the command. Therefore, the machine can assist, suggest paths, and expand possibilities, much like the advisers of ancient courts, whose role was to offer the ruler analyses, guidance, and recommendations. Although their words could influence the course of a decision, it was for the sovereign to deliberate and answer for its consequences. Likewise, AI can support choices, but it should not remove critical judgment or responsibility for the outcome from the human being.

Consequently, amid the rapid expansion of digital technologies, the University of São Paulo published a guidance document on good scientific practices, highlighting the responsible use of AI in research. AI has already been incorporated into different stages of scientific production and can contribute to the quality of works, academic competitiveness, and the acceleration of discoveries, especially when employed to identify gaps, organize ideas, synthesize evidence, analyze data, prepare figures and tables, and support scientific editing. However, these resources should be understood as auxiliary tools, not substitutes for human intelligence, because the creative process, interpretation of results, data integrity, and ethical decisions remain the exclusive responsibility of the researcher. Thus, authors must preserve the authorial nature of the writing, critically validate content produced with AI support, verify the accuracy of information, avoid verbatim reproduction of texts, not attribute coauthorship to these tools, and ex-

plicitly declare the use of the technology, indicating the tool used, its purpose, and the section of the manuscript in which it was employed⁽⁴⁾.

Undeniably, we must be cautious about what lies behind these machines and about who controls and commands them. Human supervision requires attentive and critical reading. Furthermore, these tools are constantly being trained. Let us not deceive ourselves: each system has its own forms of data control and use. By using them, we may or may not make our ideas available. The machine can absorb part of the creativity entered into it and improve its future responses. Attention is required, especially when working with sensitive data.

The use of AI agents facilitates many automation processes. Within an AI tool, it is possible to create a knowledge base supplied by reliable sources and control it so that it responds only to the combinations defined by human commands. It was in this context that researchers, databases, scientific bodies, ministries, governments, and agencies began to warn about the use of sensitive data in AI systems.

Before adopting any AI tool, it is important to examine its terms of use and privacy policy. In practice, this means checking whether the platform preserves the confidentiality of entered data, whether it stores or reuses content, whether it uses the material for model training, whether it shares information with third parties, and whether it imposes restrictions on subsequent publication. This care is indispensable when dealing with unpublished manuscripts, sensitive data, content protected by intellectual property, or personally identifiable information⁽⁵⁻⁷⁾.

In peer review and editorial work, the recommendation is even more restrictive. Because submitted manuscripts are confidential documents, reviewers and editors should not enter this content into AI tools that may retain, reuse, share, or learn from the material. When the technology is used, it should be limited to specific support, such as language improvement or the organization of reviews and editorial letters, always with human supervision, preservation of scientific and editorial decision-making, and preference for private, corporate, professional, or locally hosted tools, provided that their terms confirm privacy protection, no improper retention of data, no use of content for training, and no transfer of rights over the entered material⁽⁵⁻⁷⁾.

The discussion becomes even more complex when the role of chatbots in the editorial ecosystem is considered. WAME draws attention to the fact that these tools are no longer used only for grammatical corrections or stylistic adjustments, but also to generate ideas, draft texts, support analyses, produce tables, figures, and code, and even influence communications among authors, reviewers, and editors. In this context, the central issue is not simply to allow or prohibit the use of AI, but to define how far it may participate without compromising authorship, confidentiality, transparency, and scientific responsibility⁽⁸⁾.

In contrast, I delight whenever I encounter a new technology. I am impressed and fascinated to observe

how the machine can respond to our desires and expectations. Our brain imagines, designs, and requests an image; we write, and AI transcribes, reorganizes, or materializes that desire. Fortunately, or unfortunately, we no longer depend exclusively on third parties to present solutions: we give the initial command, and the machine presents possibilities, paths, and innovations to achieve a given goal.

In this debate, Wiley's guidelines offer a practical path for authors who wish to use AI in writing without losing control of the creative process. The recommendations include mapping the workflow, beginning with smaller tasks, formulating clear prompts, and using the technology for defined objectives, such as summarizing research, identifying patterns, refining language, improving transitions, and exploring different ways of explaining concepts. The guidelines also distinguish among the available resources: large language models, aimed at textual interaction, idea generation, and content reformulation; tools specialized in tasks such as grammar checking, citation management, or plagiarism detection; and analysis and reasoning resources, useful for examining arguments, checking terminological consistency, and recognizing gaps. Regardless of the resource used, authors must preserve their voice, crit-

ically review the results, and ensure that the final text expresses their experience and intellectual choices⁽⁷⁾.

With regard to transparency, the guidelines distinguish uses that should be disclosed from those considered minimal or immaterial. Disclosure is required when AI participates in drafting or substantially editing the manuscript; creates examples or case studies; translates content; produces summaries; rewrites entire sections; identifies research gaps; performs literature syntheses or analyses; interprets data; generates code; or prepares supplementary materials such as images, tables, graphs, exercises, or rubrics. In contrast, simple spelling, grammar, and punctuation checks, as well as basic reference formatting or specific assistance in choosing titles and sections, tend not to require formal disclosure, provided that they do not materially modify the content or conclusions of the work⁽⁷⁾.

Fear of the new afflicts us; however, when we know what to do, there is nothing to fear. We are thinking beings in constant evolution, and doubt emerges as a gift in the creative process. With each command given, our brain's ability to formulate, test, revise, and create is also revealed. Therefore, we remain the commanders of this revolutionary machine called AI.

REFERENCES

1. Oliveira AL, Figueiredo MAT. Artificial intelligence: historical context and state of the art. In: Antunes HS, Freitas PM, Oliveira AL, Pereira CM, Sequeira EV de, Xavier LB, editors. Multidisciplinary perspectives on artificial intelligence and the law [Internet]. Cham: Springer Nature; 2024 [cited 2026 June 15]. p. 3-24. Available from: <https://link.springer.com/book/10.1007/978-3-031-41264-6>
2. Flemyng E, Noel-Storr A, Macura B, Gartlehner G, Thomas J, Meerpohl JJ, et al. Position statement on artificial intelligence (AI) use in evidence synthesis across Cochrane, the Campbell Collaboration, JBI and the Collaboration for Environmental Evidence 2025. *JBIEvid Synth*. 2025;23(11):2162-2166. <https://doi.org/10.1112/jbies-25-00480>. PMID: 41220062.
3. Conselho Nacional de Desenvolvimento Científico e Tecnológico. Portaria CNPq nº 2.664, de 6 de março de 2026. Institui a Política de Integridade na Atividade Científica do CNPq. *Diário Oficial da União* [Internet]. 2026 [cited 2026 Jun 15];Seção 1:4. Available from: <https://www.in.gov.br/web/dou/-/portaria-cnpq-n-2.664-de-6-de-marco-de-2026-691779232>
4. Universidade de São Paulo, Comitê de Boas Práticas Científicas. Guia de boas práticas científicas [Internet]. 3. ed. São Paulo: Pró-Reitoria de Pesquisa e Inovação, USP; 2025 [cited 2026 Jun 14]. Available from: <https://site.fo.usp.br/wp-content/uploads/2026/04/Guia-de-Boas-Praticas-Cientificas-3aedicao.pdf>
5. Elsevier. The use of generative AI and AI-assisted technologies in writing for Elsevier [Internet]. [place unknown]: Elsevier; 2025 [cited 2026 Jun 14]. Available from: <https://www.elsevier.com/about/policies-and-standards/the-use-of-generative-ai-and-ai-assisted-technologies-in-writing-for-elsevier>
6. Elsevier. Generative AI policies for journals [Internet]. [place unknown]: Elsevier; 2026 [cited 2026 June 14]. Available from: <https://www.elsevier.com/about/policies-and-standards/generative-ai-policies-for-journals>
7. Wiley. Using AI tools in your writing [Internet]. [place unknown]: John Wiley & Sons; c2000-2026 [cited 2026 June 15]. Available from: <https://www.wiley.com/en-kr/publish/book/resources/ai-guidelines/>
8. Zielinski C, Winker MA, Aggarwal R, Ferris LE, Heinemann M, Lapeña Jr JF, et al. Chatbots, generative AI, and scholarly manuscripts: WAME recommendations on chatbots and generative artificial intelligence in relation to scholarly publications. *Colomb Med (Cali)*. 2023;54(3):e1015868. <https://doi.org/10.25100/cm.v54i3.5868>. PMID: 38089825.