

Revista de Administração Contemporânea Journal of Contemporary Administration



e-ISSN: 1982-7849

# Editorial

Artificial Intelligence and the Identity of the Researcher

A Inteligência Artificial e a Identidade do Pesquisador



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The development and large-scale dissemination of Generative Artificial Intelligence, defined as a technology capable of producing human-like content – raises questions about the future of many sectors, including education. The debate around the future of research and researchers has intensified. Will we be replaced? Will we become obsolete in less than a decade?

I don't think so. However, I believe the outcome depends more on human agency than on technological advancements. Let me explain: Artificial intelligence will continue to advance and perform increasingly complex tasks – this is both expected and inevitable. This editorial focuses on a key question: how will we harness AI?

Technology, in itself, lacks ethics and morals (Eco, 2020). It offers us affordances (Bygstad et al., 2016) that can

be used ethically or unethically for personal gain or for the benefit of a larger group, with either a short-term or longterm focus. In this sense, I have observed and experienced the use of artificial intelligence in research that helps us overcome long-standing cognitive barriers, enhancing our capacity to process data, interpret content, and identify patterns. This extended mind (Clark & Chalmers, 1998) enables us to perform tasks and gain insights that would otherwise be impossible, which is wonderful.

The dark side of the same coin is to observe individuals attempting to delegate authorship, creativity, and critical thinking to AI, merely seeking to reduce their workload. I will not address these slackers here.

I am more interested in discussing those who use AI to broaden the scope of phenomena they can understand

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Cite as: Chimentii, P. (2024). Artificial intelligence and the identity of the researcher. Revista de Administração Contemporânea, 28(5), e240329. https://doi.org/10.1590/1982-7849rac2024240329.en

Publiched em: November 13, 2024.

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and explain. What is the identity of a researcher who has become an 'assemblage,' in the Deleuzian sense (Deleuze & Guattari, 1987), and is now what they were and what they have become by adding the potential of computational artifacts that know literally everything? What do we have in this case? Does the idea of a 'tool' adequately describe what a large language model is? Here, we have a researcher using not just a 'tool' but a cluster of elements, an assemblage, where it is increasingly challenging and less meaningful to distinguish where the biological part of the researcher begins and ends. In any case, it seems clear that the use of AI in research will impact the construction of our identity as researchers. Is it worth thinking about this matter? I believe it is - if we consider that this is not AI's only impact on research. In every phase of the research process, people are already integrating AI, as the following examples illustrate.

**Conception:** Imagine that you had the opportunity to discuss your research ideas with someone very wise who had already read everything written about a given subject. This is how my colleagues feel when they interact with algorithms to discuss research topics and questions. One very interesting aspect of this exchange is the possibility of expanding our own cognitive capacity and gaining access to previously hidden worldviews. A common parable in academia is the story of a guy who lost his car keys and asked his friend to help him find them near a streetlight. After an hour of searching without success, the guy says to his friend: "The problem is that I didn't lose the keys here; I lost them in the parking lot." To which his friend retorts: "Then why have we been looking here for so long?" And he replies: "Because this is where the light is.".

When we say that we stand on the shoulders of giants to see further, that is exactly what we are doing. We are shedding more light on already illuminated areas and advancing along paths that have already been trodden. In principle, there is nothing wrong with this, and this is how we have progressed over the centuries, but from time to time, anomalies accumulate, and we are forced to change paradigms and follow disruptive paths.

Now imagine that you could interact with an artificial intelligence that does not necessarily share your worldview and can creatively combine elements that our mental model would never intuitively combine. This happened with AlphaZero, an artificial intelligence developed by Google DeepMind, which was given the rules of chess and a few hours to train by playing against itself. AlphaZero not only defeated Stockfish, which until then was the most successful computerized chess program, but also, according to the great chess player Kasparov, revolutionized the way chess is played (Kissinger et al., 2021). Just as chess players observe AlphaZero relearn how to play chess and explore other game possibilities, we can relearn how to observe reality through the conversations and provocations of AI.

**Design:** the common research designs respond to a need to resolve resource scarcity. Historically, we have answered our research questions by choosing between qualitative approaches, which allow us to observe a small number of individuals very closely, or quantitative approaches, which allow us to observe a larger volume from a distance and without much detail. The scarce resource here is the analytical capacity of the researcher, who sometimes opts for mixed approaches, seeking a more pragmatic vision (Creswell, 2018) to resolve these issues.

AI takes us from the logic of scarcity to that of abundance, causing the blurring of the traditional boundaries between qualitative and quantitative research, for example, when performing interpretative analyses of large volumes of data. This is possible through the incorporation of artificial intelligence into the research process, where both algorithms and researchers collaboratively conduct rounds of analysis, as shown in Figure 1 by Fonseca et al. (2023), in their article 'Using deep learning language models as scaffolding tools in interpretive research.'



**Figure 1.** A 'research-as-assemblage-framework' for interpretive research in an era of data abundance. Fonte: Fonseca, A. L., Chimenti, P. C. P. S., & Suarez, M. C. (2023). Using deep learning language models as scaffolding tools in interpretive research. *Revista de Administração Contemporânea*, 27(3), e230021. https://doi.org/10.1590/1982-7849rac2023230021.en

Data collection: imagine obtaining valuable information about consumer behavior without interviewing any consumers. Some researchers have successfully explored this possibility. This is because it is possible to explore the generation of synthetic data through large language models, conducting research that compares (and eventually replaces) traditional data collection methods, such as surveys, with algorithms trained to behave like a certain group of people.

Argyle et al. (2023) reproduced the results of the 2016 American elections by asking the algorithm to behave according to predefined characteristics. Horton (2023)

replicated microeconomics experiments with AI (*Homo silicus*), obtaining results similar to those of humans. Synthetic data can replace humans in experiments and other situations, making some research viable.

Writing and proofreading: This has been the most talked about aspect of AI in research, but, to me, it seems to be just the tip of the iceberg. I believe that the elements we have discussed so far have a greater potential impact, but it is a fact that the use of artificial intelligence has been more popular at this stage. One reason for this is the possibility of breaking down barriers such as language barriers. Who has never received a review saying, "Please have the article reviewed by a native speaker, even though they have tried hard to write in perfect English? Well, my dear colleagues, "not anymore." This barrier has fallen, and with it comes the advantage of those who have invested years and years in perfect academic writing in English. I do not see this as a problem but as an opportunity. If you guarantee the authorship of your text and its originality, take responsibility for everything written, and are absolutely transparent in the use of AI, there is no problem obtaining the help of a review algorithm. It is interesting to note how this is also a change that affects the identity of the researcher because, from one moment to the next, many who did not recognize themselves as capable of matching the quality of the text of the foundational articles they cited began to see themselves, in this aspect, at least, as world-class researchers.

The initiatives I have listed above are a small fraction of the volume of research that is using AI. I did not intend for it to be exhaustive. My aim was simply to illustrate the different ways in which the use of AI, in addition to generating results that could not be achieved otherwise, can produce a new identity for researchers. Discussing this is relevant because, as in any situation in which a new technology produces a radical change in how we operate and see ourselves, our identity can be paralyzed. We have seen this happen with executives who did not see themselves as belonging to the new world that their businesses were being taken to and, as a result, fought fiercely against changes that they could not prevent. If academic research is moving toward a situation where AI is part of the researchers turned into assemblages - supposing there is no hierarchical distinction between artificial and human intelligence - who will you be in this new context? This is a difficult question to answer. I do not have an answer for myself yet. However, I do think there is an intermediate identity that we need to develop - that of the assemblage researcher who does not remain motionless in the face of uncertainties of this magnitude.

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# **Conflict of Interests**

The author has stated that there is no conflict of interest.

## Funding

The authors reported that there was no funding for the research in this article.

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Typesetting and normalization to APA standards: Eduarda Pereira Anastacio (ANPAD); Simone L. L. Rafael (ANPAD, Maringá, Brazil).

Frequency: Continuous publication.

**Circulation:** Free open access to the full text.

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Scopus, Scielo, Redalyc, DOAJ, Latindex, Cengage/GALE, Econpapers, IDEAS, EBSCO, Proquest, SPELL, Cabell's, Ulrichs, CLASE, Index Copernicus International, Sherpa Romeo, Carhus Plus+, Academic Journal Guide (ABS), DIADORIM, REDIB, ERIHPlus, OAJI, EZB, OasisBR, IBZ Online, WorldWideScience, Google Scholar, Citefactor.org, MIAR, Capes/Qualis.

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