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Ethics in Management Research and Artificial Intelligence *

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Abstract

Artificial intelligence (AI) is one of the most important and transformative technologies of our time, with potential applications in the field of scientific research. The advancement of management studies can benefit from the adoption of tools and methodologies based on AI. In this article, we argue that the use of AI-based tools for the development of scientific contributions in the field of management studies entails opportunities but also risks in the absence of an ethical approach, closely related to the intention to offer effective contributions to scientific advancement.

Keywords: Management Research, Generative AI, ChatGPT, Ethics

1. Artificial Intelligence Tools to Support Research

The use of AI to support management studies can be divided into two broad categories: assistance for authors in the writing process, and interventions aimed at evaluating the quality and validity of papers. Over the last few years, the use of AI techniques for evaluating papers has spread significantly. Tools such as plagiarism detection software and automated peer review platforms can help tutors, reviewers, and editors evaluate the quality of a manuscript. These tools, when used correctly, help guarantee the quality of papers submitted for publication and published scientific contributions, providing an objective basis for evaluation both at the time of publication and in the presence of evaluation procedures for career advancement.

These tools have been joined by other tools designed to provide valid support for authors in the preparation of manuscripts. In this context, the following can be included:

- Tools for literature review. These include software designed to provide bibliographical references for different study topics and new and emerging research (e.g., Semantic Scholar and Elicir), or to analyze large quantities of text for the identification of topics, concepts, or current trends in a defined research area (e.g., Penelope.ai).
- Tools for writing. There are numerous tools designed to improve the quality and readability of writing (e.g., Writefull, Quillbot, and Wordtune) and to help in preparing titles (e.g., CoSchedule), as well as OpenAI tools, such as

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ChatGPT, with functions for perfecting documents, planning study and statistical approaches, and creating full texts.
- Tools for preparing figures. With these tools, it is possible to create images from text descriptions (e.g., the OpenAI DALL-E 2 tool).
- Combined literature review and writing tools. These are tools for providing summaries, outlines, and entire sections of manuscripts based on a given set of sources (e.g., Cohere).

AI tools represent an opportunity to improve the quality of scientific research in the field of management, but at the same time, they are not free from risk. On the one hand, tools aimed at evaluating the quality and validity of papers represent an improvement in a scientific context characterized by a global comparison and a growing increase in the number of scientific contributions in the field of management. On the other hand, there are significant risks if the authors' use of AI in the writing process is not limited, based on pre-acquired scientific competence and respect for ethical principles.

Starting from such considerations, this article delves deeper into the risks involved with the use of AI and how self-interested behaviors can be overcome only through the establishment and diffusion of ethically correct research practices. The analysis, although of general value, will be specifically focused on the area of management and OpenAI's most widespread tool, ChatGPT.

The risk exposure implied by the potential incorrect use of AI is assuming growing importance to the point that publishers are beginning to express concern about the choices made by authors in this regard. This concern has stimulated the development of the first approaches aimed at preventing the improper use of AI by establishing rules to govern its use in manuscript preparation. Notably, some editors have argued that AI tools should only be used to improve the readability and language of a research article, not to replace data interpretation. In some cases, it has also been established that ChatGPT and other AI applications will not be accepted as credited authors of a research paper, and that researchers must disclose the use of these tools in the methods or acknowledgments sections.

2. Risks in Management Research: The Artificial Intelligence Perspective

The recent development of digital technology has introduced the opportunity to use AI in many fields (Rovai et al., 2023), including research. Although these tools can support the researcher in various ways (e.g., spell checking, control over literature completeness, revision of the study), they imply specific risk factors that potentially jeopardize the quality and transparency of achieved scientific results (Else, 2023; Barros et al., 2023). This topic has particular relevance with regard to so-called "generative AI tools" (Gen AI) that are able to create texts, images, or other data by developing learning processes based on training data.

The concern that these tools could have downsides is fed both at the national[1] and international levels. In this regard, in 2019, the OECD formulated a framework for AI including five principles based on values and five recommendations for governments, to push each member and non-member state to promote and implement the responsible use of AI in their policies.

In April 2021, the European Commission formulated a proposal for the regulation of AI (EC, 2021) called the Artificial Intelligence Act, which became definitive in July 2024, after its publication in the Official Journal of the European Union (European Commission, 2024).

The Artificial Intelligence Act aims to regulate AI to prevent potential abuse and to guarantee the safety and respect of fundamental rights. Attention to the potential risks of AI is relevant in many fields, including scientific research, and as stated by the European Commission, "Under all circumstances, any research and development activity should be carried out in accordance with recognized ethical and professional standards for scientific research and should be conducted according to applicable Union law" (European Parliament, 2024, Provisional agreement resulting from interinstitutional negotiations, 12c).

The use of generative AI tools requires careful observation of the potential negative effects on achieved results. With specific reference to management research, this topic must be addressed with regard to the boundaries and impacts characterizing the research performed in that field. The management field relates to corporate functioning according to a broad concept, including a wide set of activities relating to corporate governance, operations, and control. Hence, management research has highly pervasive connotations involving the main steps of corporate life, often through the development of specific in-depth analysis (e.g., knowledge management, human resource management, logistics and supply chain management, international marketing management, foreign exchange management, management of information systems, decision analysis and operation management, and strategic and business management).

Thus, management research leads to theoretical or empirical studies aimed at improving the knowledge of corporate management through the formulation of frameworks explaining basic variables and orienting corporate behavior toward best practices (Bacharach, 1989; Patriotta, 2017; Tourish, 2020). In this regard, management research is characterized by relevant practical implications, as it affects management practice by changing management's way of thinking and acting (Rynes et al., 2001; Brondoni, 2007; Brondoni, 2008; Salvioni, 2010; Salvioni & Almici, 2020; Salvioni & Brondoni, 2020; Wickert et al., 2021). Chia (2022) defined management research as an activity "dealing fundamentally with the production and legitimization of the various forms of knowledge associated with the practices of management" (p. 1). Similarly, Bell and Bryman (2007) defined management research as "a community of practice that relies on commitment to a specific domain or body of knowledge for its development" (p. 64). The significant impact of management research is also demonstrated by the aim and scope stated by management journals; for example, the Asia Management Review "pursues to publish original and high-quality research articles and notes that contribute to build empirical and theoretical understanding for concerning strategy and management aspects in business and activities." Similarly, the Journal of International Management "is devoted to advancing an understanding of issues in the management of global enterprises, global management theory, and practice," while the Academy of Management Review states that the journal's mission is "to publish theoretical insights that advance our understanding of management and organizations." Finally, the Journal of Management "is committed to publishing scholarly empirical and theoretical research articles that have a high impact on the management field as a whole."

These quotes enable a better understanding of the potential risks involved with the use of AI tools in management research, whose primary function is to direct management toward resilient and virtuous models. In this regard, there are generally no critical issues when AI is used for performing activities aimed at supporting the research (e.g., spell checking performed at a basic level or English assistance for non-native speakers). Risks occur when the researcher uses these tools in violation of the journal's ethical codes and guidelines or the principles of good research shared by the scientific community.

- Risk factors related to the use of AI services can be classified according to the following domains:
- The research activities' context (either the paper's writing or publication process);
- The nature (direct or indirect) of negative effects on the quality of scientific research;
- The likelihood that a negative event will occur (low, medium, or high); or
- The magnitude of the risky event's impact (low, medium, or high).

With reference to the research context, it is possible to distinguish between the risks related to the activities of writing the paper and those concerning the publication process (Table 1).

Table 1: *The context of research activities and nature of risks*

Research activities' context	Nature	Typology of risks
Writing of the scientific contribution	Direct	Authorship risk Plagiarism risk Misinformation risk Substantive editing risk
Publication process	Indirect	Risk of lengthening the revision time Downgrade risk Trust risk Revision risk

The first group of risks relates to negative conditions occurring during the writing process of the paper. These risks have a composite nature due to the extension and change process – caused by AI – of the relevant types of risk in management research. Before AI, the main risks affecting research were related to limited hypotheses, the lack of some authors' participation in the research, the duplication of other studies' content, and scarce scientific innovation. The use of AI services provides a number of opportunities for research, which implies new risks whose understanding and treatment require careful consideration in terms of potential impacts on research in general, and on management research specifically. In particular, the following risk conditions may relate to the writing of an article:

1. The risk of using the AI as an author (authorship risk), which occurs when the scientific article is written using a digital tool but published citing a

specific person's name. This risk can occur, for example, when the researcher copies *ad verbatim* the text provided by the AI tool. This can strongly affect management research, whose quality depends on the usefulness and pertinence of the achieved results in relation to a specific corporate functioning context. In this regard, AI tools can provide incomplete and inaccurate information. Hence, it is the responsibility of the researcher to check all the information retrieved from AI tools to ensure completeness, accuracy, and significance. Thus, the quality of the study depends on the researchers' ability and competence. Additionally, AI tools do not have information related to a specific business case, whose analysis can facilitate the formulation of new frameworks and interpretative models.

2. Plagiarism and violation of copyright risks if the paper includes content that has been already published by other authors and, thus, is legally protected by copyright (plagiarism risk). This risk also occurs in the case of alterations of original content with reference to pictures and images. This can easily occur, as AI tools generally refer to a wide set of information and data, including studies and articles that have already been published. Using these data, AI systems develop learning processes to generate texts that are likely to include other authors' content, thereby impoverishing management research and potentially leading to lawsuits for plagiarism. It is evident how this risk can jeopardize the quality of research by nullifying every innovative, original, and effectively contributing study to the scientific community. In this regard, the risk of spreading papers written by collecting the findings of other authors hinders the function of management research in formulating new theoretical models aimed at improving management knowledge.
3. The risk of formulating incorrect recommendations based on incomplete, false, or biased indications, orienting firms and policy makers toward harmful practices in corporate management (misinformation risk). Answers provided by AI tools can appear convincing when the formulated text is incorrect or false. In this regard, Else (2023) stated, "If scientists can't determine whether research is true, there could be dire consequences. As well as being problematic for researchers, who could be pulled down flawed routes of investigation, because the research they are reading has been fabricated, there are implications for society at large because scientific research plays such a huge role in our society. For example, it could mean that research-informed policy decisions are incorrect." Additionally, the literature has underlined how the output of AI tools is usually obtained as a result of learning processes based on a wide set of data, leading to the risk of maintaining the bias and stereotypes of these data (Norori et al., 2021; Varsham, 2023). In fact, the bias of the training data could be reflected in AI output, with negative effects in terms of unreliability and inaccuracy of results (algorithmic bias).
4. The risk of using AI tools to perform content and developmental editing to substantially modify the scientific contribution through the reorganization of paragraphs and the rewriting of sentences (substantive editing risk). Although these tools can, in theory, contribute to the improvement of clarity and effectiveness of the scientific contribution, a lack of adequate checking by the researcher can lead to distortions of the information, with negative consequences for the research quality.

With reference to the process of reviewing and publication, it is possible to identify the following risk conditions:

1. Lengthening of review times due to an increased number of articles submitted to journals using AI tools (risk of lengthening revision time). The use of digital techniques can facilitate the reduction of writing time, leading to a significant increase in articles that editors must check for consistency with the journal's scope and potential further revisions. These activities require time, more so for articles written by AI, which may lack consistency with the journal's aims. This situation can create potential damage for all scientific community members in terms of lengthening publication times and slowing down the advancement of research.
2. The risk of suffering a downgrade for journals that unknowingly publish articles written by AI. This can jeopardize the scientific standing of authoritative management journals if they publish articles that, at a later time, are identified as being written by generative AI (downgrade risk).
3. The risk that the scientific community progressively loses the trust of the community and policy makers. A widespread attitude of mistrust could develop with regard to the authenticity of published articles (trust risk).
4. The risk of obtaining results that jeopardize the quality of research in the case of reviews performed with AI (revision risk). A human review enables the holistic analysis of the journal's submitted articles by considering multiple aspects (originality, contribution to the extant literature, methodology robustness, adequacy of the theoretical model, etc.). A human review enables the provision of constructive suggestions to improve the paper by highlighting potential solutions for the author, which AI cannot do in a tailored way and with reference to the specific business case. Hence, it is difficult for AI tools to contribute to management research through review activity due to their inability to understand the researcher's perspective of analysis and provide suggestions specifically aimed at improving the scientific contribution.

The above-stated risks can be classified according to their nature, distinguishing between direct and indirect risks, depending on the typology of the negative effects. Direct risks relate to the writing of the paper, jeopardizing the management research quality directly. These risks include the risk of using AI as an author (authorship risk), the risk of copying other studies (plagiarism risk), the risk of providing incorrect recommendations (misinformation risk), and the risk of substantially modifying the paper (substantive editing risk).

Indirect risks mainly refer to the review and publication processes, as the use of AI tools for writing articles may cause dysfunctionalities in activities related to publishing the paper, with indirect impacts on the quality of management research. These risks include the risk of lengthening revision times, the journal's downgrade risk, the risk of trust being lost in the scientific community, and the risk that the review negatively affects the quality of the reviewed article instead of improving it.

With reference to these impacts and the likelihood that a specific risk condition will occur, it is possible to distinguish three levels of intensity (high, medium, and low) (Fig. 1). The impact measures the presumed magnitude of the negative effects on the quality of the research, while the likelihood indicates the degree of possibility that a specific event will occur.

Figure 1: *The impact and likelihood of AI risks*

		Impact		
		High	**Medium**	**Low**
Likelihood	**High**	Authorship risk Plagiarism risk	Substantive editing risk	-
	Medium	Misinformation risk	Lengthening of revision time Revision risk	-
	Low	Downgrade risk Trust risk	-	-

The high-impact and high-likelihood risks mainly refer to the writing of the article using AI tools (authorship and plagiarism risks). These risks can deprive the scientific contribution of the basic elements required to enhance the quality of research. In particular, plagiarism and the use of AI as an author are behaviors that violate laws and editorial guidelines by damaging research quality.

The risk of AI outlining incorrect or false research implications (misinformation risk) has a high impact and a medium likelihood. The research's practical implications can strongly affect management practices by orienting firms' decisions. Thus, the presence of misleading indications is a risk condition that potentially nullifies the basic aim of management research. The use of AI tools to perform content and development editing activities involves medium-impact risks but with a high likelihood, considering the ease with which researchers can use these tools.

Indirect risks include medium-impact and medium-likelihood risks related to, for example, the lengthening of revision time or the use of AI techniques for performing review activities. In this regard, the potential negative effects on management research have a moderate impact, as they do not nullify the quality of the scientific paper but can negatively affect the process of publishing the article. Finally, indirect risks are high impact ones but low likelihood, such as the journal's downgrade risk and loss of trust from the community and policy makers (trust risk).

This highlights how AI can jeopardize management research. The main risks that have been identified show a high or medium impact, and half of them are direct and therefore able to affect the quality of research directly and with high intensity.

3. ChatGPT and Ethical Concerns in Management Research

The use of AI tools involves risk conditions of wide relevance and with clear ethical implications (Schlagwein & Willcocks, 2023). Attention to AI's ethical consequences is also emphasized at the international level; for example, the 2021 European proposal of the so-called "AI Act" states, "In 2017, the European Council called for a 'sense of urgency to address emerging trends' including issues such as artificial intelligence (...), while at the same time ensuring a high level of data protection, digital rights and ethical standards" (European Commission, 2021).

The topic of ethics relates to the choice between what is fair and what is unfair; in other words, ethical behavior depends on what is morally acceptable as "good" in contrast to what is perceived as "bad" in a specific context (Simms, 1992). This dilemma emerges in the scientific research context, in which researchers may have to decide between undertaking unethical behaviors that are potentially useful for the achievement of personal interests (egoism) (Reidenbach & Robin, 1990) and ethical behaviors that are potentially disadvantageous for the researcher.

For example, the writing of a scientific article using AI systems can considerably reduce the time usually required and facilitate an increase in the number of publications. Research performed without AI tools means greater effort and longer writing times for the paper, although with potentially better qualitative results. The abuse of AI tools generally implies a competitive advantage, mainly related to the shorter time required for research development, while the content is usually weak and improvable (Gadamer, 2004; Broussard, 2018). In general, the ethical dimension of the researcher's decisions is related to what is fair/correct and what – even if potentially leading to advantages in the short term – is unfair/incorrect. In this regard, the range of possible alternatives is considerably increased due to AI tools, exposing the researcher to the risk of bad research practices (Hill-Yardin et al., 2023; Lund & Wang, 2023).

In this context, it is useful to observe how a specific generative AI tool works. We focus on ChatGPT (generative pretrained transformer), which consists of a large language model (LLM) based on a machine learning system that learns from training data and provides answers to users' prompts in a similar way to what humans do (Costello, 2023; Korzynski et al., 2023; Lund & Wang, 2023). It is an advanced language model developed by OpenAI and released in November 2022, with several functions, including language translation, text summarization, question answering, and creative writing generation. ChatGPT consists of a chatbot using a machine learning model able to understand and generate texts based on the developed learning patterns and textual inputs provided by users.

With specific regard to management research, ChatGPT (release 3.5) is able to develop the article design, identify a relevant title, write the abstract and the introduction, select the topics to be addressed, and write the conclusions.

In response to the input "Write an article for top management journals," ChatGPT provided the following output, which has been limited to the title, abstract, introduction, and conclusions:

> □ *Title: Strategic Leadership in the Digital Age: Navigating Complexity and Fostering Innovation*
>
> *Abstract: As businesses continue to evolve in the digital age, the role of strategic leadership becomes increasingly crucial in navigating the complexities of the modern landscape. This article explores the dynamic relationship between strategic leadership, innovation, and adaptability, shedding light on the key principles that can empower organizations to thrive in the ever-changing business environment.*
>
> *Introduction: In the rapidly evolving digital era, organizations face unprecedented challenges and opportunities. Strategic leadership, characterized by the ability to anticipate change, foster*

> *innovation, and navigate complexity, is more vital than ever. This article delves into the core principles that underpin effective strategic leadership, providing insights for managers and executives seeking to steer their organizations towards sustainable success.*
>
> *(...)*
>
> *Conclusions: In conclusion, strategic leadership in the digital age requires a multifaceted approach that encompasses adaptability, innovation, technological leverage, effective decision-making, and talent development. This article provides a comprehensive overview of these key principles, offering valuable insights for managers and executives aiming to lead their organizations through the complexities of the modern business landscape. As the digital transformation continues to shape the future business, strategic leadership remains the linchpin for sustainable success.*

In reading the output generated by ChatGPT, it is clear how the AI system can contribute significantly to the article's writing, replacing the researcher in the choice of topic and title, and in creating the abstract, introduction, and conclusions (Dwivedi et al., 2023). The excerpt demonstrates how plagiarism risk can occur, for example, as the ChatGPT text is formulated using other researchers' publications and information, as well as authorship risk, as it is written by an artificial system rather than by a researcher (Thorp, 2023). It is important to point out that the above output is generated by ChatGPT version 3.5, which is equipped with less advanced features than the most recent release available (GTP-4), which is able to analyze more complex requests and provide deeper responses, amplifying the above-described risk conditions.

This analysis highlights the ethical nature of researchers' decisions about the use of AI tools. In this regard, the presence of a strong system of ethical principles should orient researchers toward a careful weighing of the effects of these decisions to safeguard the quality of management research. Unethical behaviors undertaken in the pursuit of self-interest may lead to the abuse of AI tools by threatening the function of management studies.

4. Mitigation of Artificial Intelligence Risks: The New Role of Ethics in Research

The management of risks related to AI is a challenging goal, as there are no adequate and fully effective techniques to detect the inappropriate and abusive use of generative AI tools (Leibowicz et al., 2021). The use of AI tools without any rules can have advantages for both authors and editors with article processing charges (APCs). Authors can increase their number of publications, with a consequent increase in their notoriety and career opportunities, as the result of rulings that are not strictly based on the quality of publications. Editors with APCs can increase their profitability by increasing the number of journals and published articles with the payment of a fee by the author. In the last few years, there has been a proliferation of editors of management journals with APCs and of the scientific productivity of some authors.

A relevant safeguarding condition for the possible abuses AI can facilitate is the enhancement of ethics in research. Respect for specific values and principles, such as correctness, honesty, methodological rigor, and integrity, is a condition of increasing relevance for ensuring a qualitatively advanced scientific contribution. In this context, when digital technologies and AI enter in a disruptive way, ethics is a measure of the positive orientation of a researcher's behaviors and of the mitigation of risks implied by new AI techniques.

In particular, the ethical issue permeates all aspects of management research, as it relates to individuals' decisions and their interactions. The ethical dimension emerges whenever a decision must be made about how to achieve a specific result. This decision depends on the ability to choose between the "good" and the "bad," and ethics can orient the researcher in identifying a specific action to be undertaken for the achievement of the selected goals (Kernaghan & Langford, 1990; Xiaohe, 2000; Korac-Kakabadse et al., 2002). In this regard, ethics can be seen as a set of moral values, rules, and principles guiding individuals' behavior in terms of research activity. Ethical values affect so-called "research values," that is, the personal conditions orienting scientific research. It is possible to develop either research values based on ethical values or research values lacking a connection with the ethical rules shared within a community.

It is clear that quality scientific research requires research values that are structurally based on strong ethical values. In particular, a researcher's ethical orientation is affected by factors that can be classified as follows:

1. Personality-based factors, built on the researcher's cognitive development and personal experiences; they depend on family education, gender, professional position, and role played in the scientific community (Trevino & Youngblood, 1990).
2. Organizational-based factors, developed in relation to a specific organizational context as a result of the implemented ethical codes, incentivization systems, relationships between peers, and the organizational climate (Victor & Cullen, 1988; Jones, 1991).
3. Issue-related factors, whose establishment can be promoted, for example, by the introduction of specific incentives/disincentives to undertake ethical or non-ethical behaviors (Heimer, 1992).
4. Society-related factors, which are influenced by the socio-political context in which the researcher operates (Brenner & Molander, 1977).

The arrival of generative AI has brought into question the boundaries between what is ethical and what is non-ethical in scientific research, sometimes creating "shadow zones" about what is legitimate and what is ethically questionable. The availability of tools enabling the achievement of personal advantage can easily encourage a researcher to undertake incorrect behaviors, jeopardizing the advancement of management research.

The use of AI tools can create a dilemma for the researcher, whose resolution may lead to correct behaviors only in the presence of strong ethical values, thereby avoiding abuses and contributing to the development of new theoretical models aimed at orienting management toward good practices. The main dilemmas that AI imposes on researchers are related to conflicts between personal advantage and the

scientific community's best interests, personal values and the values of quality research, and transparency and falsification.

This analysis underlines how the disruptive introduction of AI tools affects research in general and management research in particular. Ethics has increasing relevance to safeguard the quality of published studies and has indicated the need to revise the ethical paradigm considering the risk factors introduced by these techniques. In particular, different actors of the scientific community (authors, reviewers, editors, research institutions, etc.) must address AI's risk conditions by adjusting the metrics that can be used to distinguish between what is ethical – and thus feasible and legitimate – and what is unethical, and thus punishable and to be discouraged. In this context, some journal editors have begun to revise editorial guidelines to promote ethical research behaviors in the presence of AI tools, and to identify ways to acknowledge the use of ChatGPT in academic texts. For instance, Elsevier (2023) has introduced a specific policy about the use of AI and AI-assisted technologies in scientific research, stating that it should be limited to the improvement of readability and language and that its use should be declared in the article. AI cannot be cited as an author, because it cannot be considered responsible for the paper.

Elsevier has published its own policy about the use of "generative AI and AI-assisted technologies in writing" as follows:

> □ *The policy only refers to the writing process, and not to the use of AI tools to analyze and draw insights from data as part of the research process. Where authors use AI and AI-assisted in the writing process, these technologies should only be used to improve readability and language of the work and not to replace key authoring tasks such as producing scientific, pedagogic, or medical insights, drawing scientific conclusions, or providing clinical recommendations. Applying the technology should be done with human oversight and control and all work should be reviewed and edited carefully, because AI can generate authoritative-sounding output that can be incorrect, incomplete, or biased. The authors are ultimately responsible and accountable for the contents of the work.*
>
> *Authors should disclose in their manuscript the use of AI and AI-assisted technologies and a statement will appear in the published work. Declaring the use of these technologies supports transparency and trust between authors, readers, reviewers, editors, and contributors and facilitates compliance with the terms of use of the relevant tool or technology.*
>
> *Authors should not list AI and AI-assisted technologies as an author or co-author, nor cite AI as an author. Authorship implies responsibilities and tasks that can only be attributed to and performed by humans."*
>
> (Retrieved from https://www.elsevier.com/about/policies-and-standards/the-use-of-generative-ai-and-ai-assisted-technologies-in-writing-for-elsevier. Accessed on February 2024)

AI risks can be mitigated by strengthening ethical principles throughout the entire research chain: authors are encouraged to contribute to management research through genuine studies that can effectively support managers in making successful decisions; journals are called on to revise their guidelines, recommending respect, honesty, correctness, transparency, and scientific integrity principles; reviewers are exhorted to perform their activities by implementing their expertise and skills rather than using AI tools that are unable to effectively assess an article; and bodies in charge of assessing research for career advancement must be equipped with the necessary tools to detect studies that are in violation of the principles of authenticity, integrity, correctness, and transparency.

The use of AI tools in management research generates affects all actors involved in the research process (authors, editors, reviewers, readers, and firms) that, in different ways, are engaged in the publication and fruition of the scientific contribution. For authors who perform the research, ethics should guide them in making decisions about which tools to use in carrying out the research activity, how to use AI and at what level of assistance (high if AI is used to write the paper; low if AI is used for the spelling check), and how to declare the use of these tools according to the ethical guidelines formulated by the editors.

Management research aims to improve corporate management through the formulation of new theoretical models that generate practical implications. It is evident that the potential abuse of AI tools by researchers negatively affects the entire research process, jeopardizing the quality of results destined for the scientific community as well as firms' management and policy makers.

In this context, ethics is thus an element that should be shared by all actors involved in the research process and, in particular, by the authors with whom this process begins. Ethical principles should represent a condition that ideally links all the above-stated players, becoming an enabler of management research advancement. A lack of respect for rules guiding virtuous behaviors is likely to compromise the quality of achieved results, with serious consequences for the entire scientific community and management in firms globally.

5. Conclusions and Main Implications

This research aimed to explore in depth the main risks of AI tools in the management research context and the related importance of behavioral ethics. In addition to the opportunities that these tools can offer, there are a number of ways they can threaten the quality of research, damaging the entire scientific community. These risks are of a direct or indirect nature, with different levels of impact and likelihood, and can potentially jeopardize the function of management research, that is, the development of new and authentic interpretative models of corporate functioning suitable for orienting executive bodies' behaviors toward best practices.

To protect the quality of research against practices in pursuit of personal interest, it is not possible to rely only on technology, as there are no fully effective tools for detecting the assistance of AI tools in scientific contributions. The fight against bad research practices using AI tools (e.g., ChatGPT) finds in ethics a relevant enabler. The quality of scientific output depends on the willingness of the researcher to perform research activity according to the ethical principles of transparency,

authenticity, scientific integrity, correctness, and intellectual honesty. In this regard, ethics is a set of values orienting the researcher toward making decisions aimed at improving the quality of research rather than personal gain. The disruptive introduction of AI tools places the researcher in front of a new challenge concerning the choice between honest and dishonest research practices, with relevant effects on the advancement of management research and on all stakeholders in these results.

Management studies aim to provide useful tools for improving corporate management, with clear practical implications. In the presence of risks identified and explained in this article, the opportunity to provide an effective contribution to the research requires the ongoing commitment of the researcher to a strong set of ethical values. All players involved in the process of writing, publishing, and assessing the research output must have effective rules and guidelines and be strongly oriented by ethical principles.

The current study underlines several implications, highlighting how the increasing relevance of ethics requires an all-round revision of the research system in which different players (e.g., authors, reviewers, editors, bodies in charge of assessment for career advancement) operate in different ways. In particular, authors are called to develop a strong commitment to ethical principles, while reviewers should reflect carefully on the tools to be used for revision and develop new approaches for detecting plagiarism and other unethical behaviors. At the same time, research institutions (e.g., universities and research centers) should include behavioral guidelines about the correct use of AI tools in their ethical codes to guide their researchers (Salvioni et al., 2014). Editors are required to revise journals' guidelines to regulate the use of AI tools, mitigating the main risks. Finally, bodies in charge of assessing the quality of research should introduce specific regulations regarding the use of AI tools in assessed studies and focus their assessment activities strictly on the qualitative aspects of papers by different authors.

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Notes

[1] For example, with reference to Italy, at the end of 2023, it has been presented to the Chamber of Deputies a proposal of regulation on the Artificial Intelligence topic, while in July 2024 the document titled "The Italian Strategy for Artificial Intelligence 2024-2026" was published to support the government in formulating national legislation and strategies related to artificial intelligence. Canada, Finland and Japan are between the top countries to set AI national strategies, followed by Australia, Denmark, France, Germany, Korea and United States.