MANAGEMENT, ARTIFICIAL INTELLIGENCE, AND EXISTENTIAL RISK: THE ROLE OF CRITICAL PERSPECTIVES FOR THE FUTURE OF HUMANITY

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Abstract

The recent surge in Artificial Intelligence (AI) has reignited debates on existential risks. However, in the context of management and organizations, this discussion has been notably absent, despite the significant risk that the traditional management style could influence risks associated with the production and implementation of AI within and by organizations, due to its prioritization of economic interests, efficiency, and productivity. Therefore, the aim of this paper is to argue how critical management and organizational theories, such as Critical Management Studies (CMS), Critical Organizational Studies (COS), and Radical Humanistic Management (RHM), can play a pivotal role in critically understanding and addressing alternatives to these risks. In summary, these critical theories can contribute by influencing the formulation of public policies, changes in management education, and specific research programs to prevent existential risks.

Keywords

Organization studies, Critical management studies, Radical humanistic management, Transhumanism, Posthumanism, Existential risk of organizations, Existential risk of companies.

Resumen

El reciente auge en inteligencia artificial (IA) ha desencadenado que se retomen debates sobre riesgos existenciales. Sin embargo, en el contexto de la administración y organizaciones, esta discusión ha estado notablemente ausente, pese a que existe un gran riesgo de que el estilo de administración tradicional pueda influir en riesgos asociados con la producción e implementación de IA en y desde las organizaciones, debido a la prioridad que éste da a los intereses económicos y de eficiencia y productividad. Por tal motivo, el objetivo del presente trabajo es el de argumentar cómo las corrientes críticas de la administración y de la organización, como los Estudios Críticos de la Administración (ECA), los Estudios Críticos Organizacionales (ECO) y la Gestión Humanística Radical (GHR), pueden desempeñar un papel fundamental en comprender críticamente y abordar alternativas ante estos riesgos. En síntesis, estas corrientes críticas pueden contribuir a través de su incidencia en la formulación de políticas públicas, cambios en la formación en administración y programas de investigación específicos para prevenir riesgos existenciales.

Keywords

Estudios organizacionales, Estudios críticos de la administración, Gestión humanista radical, Transhumanismo, Posthumanismo, Riesgo existencial de organizaciones, Riesgo existencial de empresas.

Introduction

The recent emergence of new models of artificial intelligence (hereinafter, AI) has had a profound impact on society, leading to extensive debate about its risks. This debate has given rise to the consideration of various contributions in multidisciplinary and philosophical analysis, including the discussion of existential risks associated with AI. This approach examines potential AI risks that could lead to a collapse or even the extinction of humanity. However, despite its relevance to the future of humanity, and as argued in this document, the discussion of existential risks of AI within the context of management and organizations, along with their critical currents, has been notably absent.

This document is derived from reflections following previous work (Pineda-Henao, 2022), where existential risks related to management and organizations were identified as issues requiring urgent attention. These risks are analyzed from the perspectives of critical social thought currents that explore the impact of transhumanism and posthumanism on management and organizations. The importance of addressing these risks lies in the increasing production and application of AI within organizations, which could lead to existential risks, especially in a context where the traditional management approach, prioritizing productive and economic values over human dignity and social and environmental well-being, could be vulnerable to these risks.

The primary objective of this writing is to argue how critical currents in the field of management and organizations play a fundamental role in critiquing and proposing alternatives to the prevailing management style to prevent and mitigate potential existential risks associated with the production and application of AI. Given the lack of research addressing existential risks related to

management and organizations, this document also seeks to persuade about the importance of addressing this issue, highlighting critical connections between both fields of study, especially from the perspectives of currents such as Critical Management Studies (CMS), Critical Organizational Studies (COS), and Radical Humanistic Management (RHM).

From a methodological perspective, a qualitative synthesis (Seers, 2012; Thomas & Harden, 2008) of documentary sources is employed in two thematic areas: 1) existential risks related to AI, and 2) contributions of critical currents in the field of management and organizations. Based on these documentary sources, an exploratory documentary review is conducted involving a process of critical analysis, argumentation, and hermeneutic interpretation. Therefore, the document's structure is organized as follows: firstly, a theoretical framework is presented, establishing assumptions related to existential risk and AI. Next, in the second section, the discussion is addressed, divided into two parts: a) the consideration of AI as a significant existential risk connected to management and organizations through the production and application of AI; b) the argumentation on the contribution of critical currents in management and organizations to prevent and mitigate existential risks associated with the production and application of AI through critique of the traditional management approach.

Theoretical Framework

To address this reflection adequately, it is imperative to establish a solid understanding of several key concepts. In this section, we will proceed to detail the necessary theoretical foundation for a comprehensive appreciation of the subject at hand. Firstly, we will outline the fundamental characteristics of existential risk, exploring its various stances, foundations, and criticisms. Secondly, we will analyze

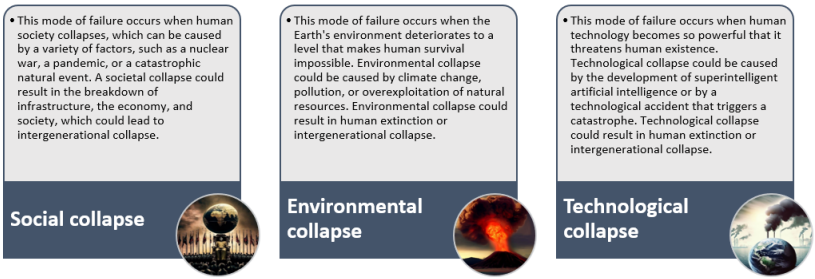
the emergence of artificial intelligence as an innovative technological tool that complements human capabilities. Finally, in the third segment, we will examine the role of artificial intelligence in the context of contemporary existential risks.

Existential Risk

Existential risk is a concept that refers to risks with the potential to threaten the future of humanity as a whole (Bostrom, 2002). These risks are so significant that even if the probabilities of their occurrence are low, the consequences would be catastrophic (Bostrom, 2017). Existential risk is not limited to the risk of human extinction but encompasses three other modes of failure that could lead to intergenerational collapse and equally significant losses in expected value, as seen in . In this sense, it is essential to consider the notion of maxipok, which, according to Bostrom's theorization, argues that the morally correct action is the one that maximizes the probability of avoiding an existential catastrophe.

This concept is derived from an idea proposed by Ortega y Gasset, who asserted that humans are maxipok beings. That is, beings who are always seeking perfection but never attain it (1914). According to the Spanish philosopher, humans are inherently dissatisfied, always wanting more, always striving to be better. This is because humans are rational beings, and reason always leads them to pursue perfection (Ortega y Gasset, 1914).

Figure 1 Three Modes of Existential Failure



Own elaboration based on Bostrom (2017, p. 12)

The relevance of mitigating existential risks is evident when considering the impersonal and global perspective of humanity as a whole. According to the notion of maxipok, actions that have the highest probability of avoiding an existential catastrophe should be taken, even if those actions come at a significant cost. In this regard, the prevention of existential risks is framed as a global priority to safeguard the future of humanity (Bostrom, 2013).

Existential risk is defined as the risk of human extinction or the collapse of civilization, implying the threat to humanity's continued existence or the permanent and drastic destruction of its potential for desirable future development (Torres, 2023). This risk can result from various sources, including threats of natural origin, such as asteroid or comet impacts, as well as human-made threats stemming from advanced technological activities.

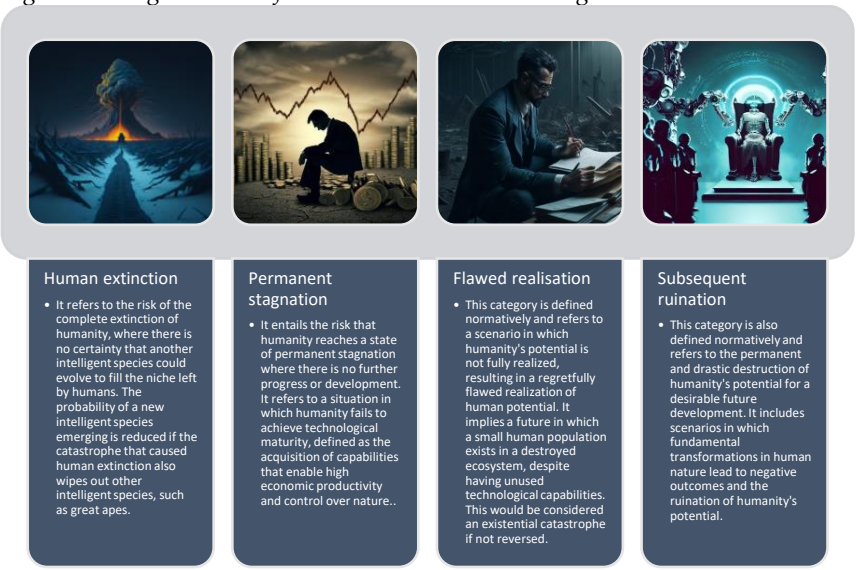
It is important to note that the definition of existential risk may vary depending on the context and the intended audience. Torres (2023) suggests that defining existential risks as risks of human extinction or civilization collapse is effective when communicating with the general public, while defining existential risks as a significant loss of expected value may be more suitable for establishing existential risk studies as a legitimate field of scientific and philosophical research.

Existential risks, regardless of their specific definition, possess characteristics that set them apart from common risks. These risks have exceptionally high expected values, meaning that even a slight reduction in the net existential risk can have enormous consequences. Additionally, managing existential risks is complicated by the lack of historical precedents, making the application of conventional risk management methods challenging (Bostrom, 2017; Kaku, 2014; Rees, 2004).

Existential risks can be categorized into four main categories (see Figure 2): a) human extinction, b) permanent stagnation, c) flawed realization, and d) subsequent ruination (Bostrom, 2013). In each of these categories, the primary risks stem from human activities. For example, advanced technological threats, such as artificial intelligence, biotechnology, and nanotechnology, can generate significant existential risks.

The term existential risk is related to the notion of global catastrophic risk, although they are not necessarily equivalent (Bostrom & Cirkovic, 2008). While existential risk focuses on threats that could lead to the premature extinction of intelligent life on Earth or the permanent and drastic destruction of its potential for desirable future development, global catastrophic risk refers to threats that could cause catastrophic damage on a global scale without necessarily leading to the extinction of humanity (Bostrom & Cirkovic, 2008; Russell & Norvig, 2010).

Figure 1 Categorization of Existential Risks According to Bostrom



Own elaboration based on Bostrom (2013, p. 19)

The importance of addressing existential risks is so significant that their prioritized treatment and inclusion in national and international agendas and policies are subjects of debate. International organizations like the United Nations and various national governments consider the need to address existential risks as part of their efforts to ensure the long-term security and well-being of humanity (Boyd & Wilson, 2020). Despite the importance of addressing existential risks, stemming from Bostrom's theory, some authors raise concerns about these issues.

Højme's work highlights criticism of Bostrom's concern about existential risks, emphasizing internal contradictions in transhumanist thinking and invalid premises (2019). For this author, transhumanism, in its attempt to transcend human nature and reach post humanity, returns to myth and neglects real-life concerns. This discrepancy

undermines transhumanism's supposed concern for all of humanity (Højme, 2019).

In general, Højme's criticism focuses on the selection process. According to him, in the face of existential risks, the selection process may favor certain individuals or groups. Likewise, amidst the critique, the challenge of determining which values should take priority for the original intelligent life on Earth is recognized, suggesting that even superintelligence might not be able to provide the answer (Højme, 2019). Recent debates on existential risk have focused on specific risk sources rather than the complex interaction of failures or risks that cannot be clearly specified (Manheim, 2020). Manheim proposes an analysis of the expanded view of vulnerable worlds, as it leads to conclusions that are different or even contrary to those suggested by Bostrom (2020).

The expanded view of vulnerable worlds, as proposed by Manheim (2020), challenges Bostrom's vulnerable world hypothesis (2002). While Bostrom argues that specific technological advancements inherently lead to devastation or the extinction of civilization, Manheim suggests that fragility, i.e., a system's susceptibility to damage or failure resulting from the complexity of certain systems, can be an inevitable source of catastrophic or existential risk.

This expanded view, as it leads to conclusions that are different or even contrary to those suggested by Bostrom (2002, 2013, 2017), has significant implications for addressing existential risks. Manheim suggests that, instead of focusing on identifying specific technologies as the primary sources of risk, the emphasis should be on addressing systemic fragility (2020). That is, the propensity of a complex system to suffer catastrophic failures. This implies recognizing that all systems, even the most complex ones, are susceptible to catastrophic failures (Taleb, 2016).

In summary, existential risk is a fundamentally important and debated concept characterized by its potential to threaten the continuity of humanity as a whole. Two notable approaches have significantly contributed to this debate. On one hand, Bostrom's perspective (2002, 2013, 2017) emphasizes the need to prioritize the mitigation of existential risks, underscoring their magnitude and the importance of taking measures to prevent them. On the other hand, Højme's (2019) and Manheim's (2020) views relativize existential risk, highlighting internal contradictions in transhumanist thinking and invalid premises underlying this concern. Both perspectives hold elements of validity and provide a comprehensive spectrum of considerations for understanding and managing existential risk.

Artificial intelligence

The evolutionary history of humanity has been permeated by technology (Pérez de Paz & Londoño-Cardozo, 2021). Some authors consider technology as a compensator for the evolutionary deficiencies of humans (Pérez de Paz, 2016). Since ancient times, the use of technology, such as fire or sharp stones for cutting, played a crucial role in the development of civilization (Londoño-Cardozo & Pérez de Paz, 2021; Melnyk et al., 2019; Pérez de Paz & Londoño-Cardozo, 2021). In more recent history, the role of technology can be traced through the so-called industrial and technological revolutions.

The history of industrial revolutions dates back to the 18th century, with the First Industrial Revolution, marked by the transition from manual to mechanized production. Key inventions include James Watt's steam engine, which powered the textile industry, and Richard Arkwright's mechanized spinning frame (Kemp, 1979). This revolution transformed the economy and society, leading to urbanization and industrial growth (Villani, 2009).

The Second Industrial Revolution, in the late 19th century, was driven by advances in electricity, steel, and oil. Notable inventions included Alexander Graham Bell's telephone and Thomas Edison's light bulb (Xu et al., 2018). The Third Industrial Revolution, in the 20th century, focused on electronics and automation, with the creation of the personal computer (Rifkin, 2011; Roel, 1998; Xu et al., 2018).

The current Fourth Industrial Revolution is characterized by the convergence of digital technologies, biotechnology, and artificial intelligence (Garrell & Guilera, 2019; Vaidya et al., 2018; Xu et al., 2018). AI plays a vital role, driving process automation, machine learning, and intelligent decision-making. Innovations such as autonomous vehicles, advanced robotics, and AI in healthcare are examples of how AI is reshaping the economy and society today, consolidating its role as a transformative force in the Fourth Industrial Revolution (Alvarado Rojas, 2015; Flechoso, 2021).

Artificial intelligence emerges as a field of study and development within computer science with the purpose of creating intelligent agents, i.e., systems capable of reasoning, learning, and acting autonomously (Russell & Norvig, 2010), also referred to as agency technologies (Londoño-Cardozo & Pérez de Paz, 2021; Pérez de Paz et al., 2021; Pérez de Paz & Londoño-Cardozo, 2021). Over the past few decades, AI has experienced significant and accelerated advancement, leaving a significant impact on society, permeating various areas of everyday life and industry (Collins et al., 2021). he fundamental basis of AI lies in machine learning, a technique that allows systems to learn from data without the need for explicit programming (Jordan & Mitchell, 2015; J. B. O. Mitchell, 2014). In this regard, machine learning is divided into two main categories: supervised learning and unsupervised learning, each with its own specific applications and peculiarities.

Supervised learning is one of the main branches of machine learning, where systems are fed with a set of previously labeled data.

In this configuration, each data point in the set is associated with a label denoting its corresponding category or class (T. M. Mitchell, 1997). The goal of a supervised learning system is to learn to relate the inherent features of the data to the associated labels. Through exposure to this labeled dataset, AI adjusts its internal models and algorithms to accurately predict the labels of new, unknown data. Supervised learning is widely applied in classification and regression tasks, from email spam detection to medical image classification or real estate price prediction (Mosqueira-Rey et al., 2023).

The most recent example of the use of supervised learning AI, at the time of writing this document, is the release of Now and Then, the latest song made publicly available by the British band The Beatles. Using Melodyne, the quality of John Lennon's vocals recorded in 1970 was improved and cleaned up. Subsequently, another supervised learning AI, called Deepfake, helped remove noise and distortion and restore Lennon's voice to its original state.

On the other hand, unsupervised learning is characterized by the absence of labels in the dataset used for AI training. In this context, the system must learn to identify patterns and structures inherent in the data without receiving external guidance. Unsupervised learning is used for tasks such as data clustering or dimensionality reduction (S. L. Anderson & Anderson, 2011; T. M. Mitchell, 1997; Mosqueira-Rey et al., 2023). For example, in data clustering, AI can automatically discover categories or groups of similar data within a set, without the need for prior labels to define those categories. In dimensionality reduction, AI seeks to simplify the data representation without significant loss of information.

In addition to supervised and unsupervised learning, there are other learning approaches used in the field of AI, such as reinforcement learning and evolutionary learning (Vinod, 2023). Reinforcement learning focuses on sequential decision-making, where an agent

interacts with its environment and receives rewards or penalties based on the actions it takes. Through feedback from the environment, the agent learns to make decisions that maximize its reward over time. This approach is used in applications such as gaming, robotics, and process control (T. M. Mitchell, 1997). Evolutionary learning, on the other hand, is inspired by the principles of biological evolution to optimize solutions. Genetic algorithms, simulating natural selection and reproduction, are used to find optimal solutions in complex problems and vast search spaces.

AI as the Primary Existential Risk of Today

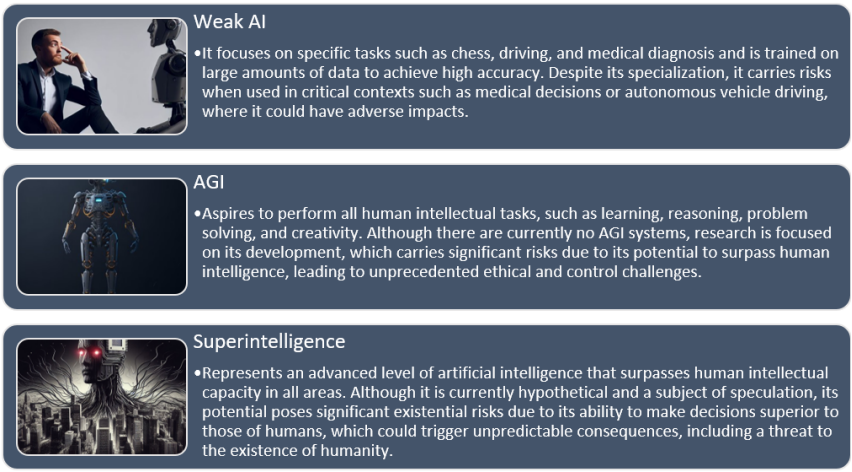
To address the issue of AI as the primary existential risk of today, it is essential to consider both its growing significance and the associated risks of its development and deployment. AI is a constantly evolving technology that adds an additional layer of complexity to the existential risk equation. In the perspectives of Bostrom (2002, 2013, 2017) and the insights provided by Højme (2019) and Manheim (2020), he importance of carefully examining the safety and responsibility in the creation and application of AI systems is recognized, given its undeniable impact on humanity.

The increasing relevance of AI in this context adds an additional level of complexity. AI is a constantly evolving technology that poses significant challenges in terms of existential risk. The perspectives of Bostrom (2002, 2013, 2017), Højme (2019), and Manheim (2020) become particularly relevant in the context of AI. Safety and responsibility in the development and implementation of AI systems become crucial issues due to the undeniable impact of this technology on humanity.

To better understand the existential risks associated with artificial intelligence, it is essential to divide AI into three main categories: a) Narrow AI or Weak AI (Russell & Norvig, 2010), b) Artificial General Intelligence or AGI (Kurzweil, 2014), and c) Strong AI or

Superintelligence (Bostrom, 2017). These categories may represent an evolutionary order of AI types, each with its own implications and characteristics (see Figur).

Figure 2 The Evolution of Artificial Intelligence



Self-elaborated based on Bostrom (2017), Kurzweil (2014) and Russell & Norvig (2010)

Despite the intrinsic complexity of existential risk and the difficulty in its precise quantification, there are concrete measures that can be taken to mitigate its impact. These actions may include the development of safe and responsible technologies, the promotion of international cooperation in managing existential risks, and public education about the challenges and implications associated with these risks. Interdisciplinary research and dialogue are fundamental components to effectively address these risks and seek effective solutions. Collaboration among governments, organizations, and civil society becomes a key element in confronting this global challenge.

However, the rapid advancement of AI is not without risks and challenges, some of which are potential, while others have already materialized in reality. One of the most serious risks associated with AI

is existential risk, which raises the possibility that AI may reach a level of power that positions it to threaten the survival of humanity. This threat is speculative but has generated growing concern in the scientific and ethical community due to the potential for AI to take actions that jeopardize the existence of the human species in a hypothetical conflict of interests.

In addition to existential risk, there are concrete and current risks related to AI. Among them, bias in AI systems poses significant concerns, as AI can inherit biases and prejudices present in the data it is trained on. This can lead to situations where AI systems inadvertently reflect the biases of their creators or society at large, resulting in discrimination and inequality. Additionally, the use of AI in the development of autonomous weapons represents a considerable risk, as the automation and autonomy of these weapons can trigger lethal conflicts without direct human intervention. Finally, loss of control, measured by the difficulty in understanding and supervising the operation of complex AI systems, raises concerns that AI may make critical decisions without adequate oversight, potentially triggering unforeseen and potentially harmful consequences in various areas of society.

AI as an existential risk associated with management and organizations

Exploratory, it is possible to highlight the strong absence of studies on existential risk from the discipline of management or organizational studies. This is despite the fact that most existential risk research tends to be multidisciplinary and involves different social actors. However, some theoretical links between existential risk and this field of study can be deduced. An example is the work of Iglesias-Márquez (2020), who, while not addressing the issue of existential risk in his work, associates the phenomenon of climate change with the production and

high energy consumption by large companies from a critical perspective on corporate climate responsibilities. Another example is provided by Bostrom (2002, 2013) when he points out the existential risk associated with a global economic collapse, in which companies can clearly play an important role.

These environmental and economic risks are important, and more thorough research could reveal others for a panoramic analysis. However, the aim of this section is to address another risk that, due to its emergence and novelty, is relevant to explore: the existential risk associated with the production and application of AI in and from organizations. This risk is certainly introduced by Bostrom (2017) in his work "Superintelligence: Paths, Dangers, Strategies." In this work, existential risks arising from the development of AGI or strong AI, or superintelligence (Bostrom, 2017), are analyzed, such as those associated with the competitive interests of companies that are in the race to create an AGI. From the clash of these competitive interests, serious implications can arise in social, economic, and political life, especially in the scenario where a company gains an absolute competitive advantage by successfully developing and taking control of AGI production, or by not controlling the evolution of AGI into superintelligence (Bostrom, 2017).

Another important point to note about this existential risk associated with AI production is the limited research on alignment between human values and AI, compared to the abundant recent research focused on increasing AI capabilities to move from narrow or weak AI to AGI (Han et al., 2022; Sutrop, 2020). If a good alignment between human values and AI is not achieved, and research focused on AI capabilities continues to increase, the result is a potential existential risk with an AGI or superintelligence misaligned with human values (Bostrom, 2017; Sutrop, 2020). To this should be added the various technical and normative difficulties, the former referring to the

technical difficulties of how to encode human values into AI, while the latter refers to what kind of values (ethical, political, etc.) should be encoded, and from what approaches, which leads to philosophical debates (Sutrop, 2020).

Regarding the application of AI, one of the existential risks that emerges is associated with employability. According to Romero Vela (2020), the inclusion of AI, and also improvements through biotechnology, can pose an existential risk to employability, which requires formulating public policies that protect employability and do not pose an existential risk, possibly linked to a social and economic collapse. In this regard, it can be noted that what is mentioned by this author is relevant with the advent of AI language models like ChatGPT, which, although AI models cannot yet perform the full range of functions that a theoretically AGI could, is already a matter of analysis regarding employability (Eloundou et al., 2023).

According to the work of Eloundou et al. (2023), where some authors belong to the same company OpenAI that developed the ChatGPT language model, research was conducted on the possible consequences of AI language models like the one used in ChatGPT, specifically in the U.S. labor market, resulting in the implementation of these AI in companies that can affect various jobs, replacing many tasks in professions that are highly automatable. Considering this, the existential risks associated with employability that can be generated by the implementation of AI with greater potential than this AI language model are latent.

The link between these existential risks of production and application of AI with management and organizations is that productive-competitive interests, efficiency, and economic interests that usually guide administrative decision-making and organizational purposes can significantly influence these risks. Hypothetically, deducing these interests in the prevailing administrative models, they

could be aligned with latent existential risks, prioritizing economic and competitive interests over social and environmental well-being and human dignity. Therefore, as argued in the following section, in the context where prevailing management and organizational styles align with interests that do not contribute to avoiding or mitigating existential risks associated with the production and application of AI but could even exacerbate them and potentially cause them, it is necessary for critical currents in management and organization to play an important role in questioning these prevailing models and proposing alternatives.

The Shift to Critical Perspectives in Management and Organization

- General Considerations of Some Critical Perspectives

The critical currents of administration and organization refer to various schools of thought in the fields of administration and organization studies characterized by their focus on generating socially critical knowledge (Pineda-Henao, 2022). This socially critical knowledge is understood as a contribution derived from different approaches in critical social and human sciences that center their attention on social issues and injustices, as well as the corresponding struggle, which often involves agents of social change seeking to address institutional misalignments related to institutionalized practices that generate these injustices or issues (Ramírez, 2018).

The central characteristic of these traditional practices and theories lies in their orientation toward efficiency and productivity, which translates into economic gains (Aktouf, 2009; Gantman, 2017a; Misoczky, 2017; Montaño Hirose, 2013; Pineda-Henao, 2022). Therefore, the contributions of these critical currents in the fields of administration and organization involve questioning prevailing management practices and forms of organization, as well as their theoretical and disciplinary justifications. These are evident in much of

the applied and functional research in administration, as well as the traditional contributions of organizational theory and administrative theory (Aktouf, 2009; Gantman, 2017a; Misoczky, 2017; Montaño Hirose, 2013).

As a result, these critical currents aim to highlight and denounce social injustices, inhumane acts, oppression, and, in short, the negative and dark aspects of management practices and prevailing forms of organization. Furthermore, in some cases, they propose necessary alternatives for change and transformation in relation to management and prevailing modes of organization (Gonzáles-Miranda & Rojas-Rojas, 2020; Misoczky, 2017; Saavedra Mayorga, 2009; Sanabria Rangel et al., 2015).

Therefore, it is understood that many of the contributions from these critical currents of administration and organization may have both epistemological and ontological (i.e., theoretical criticism) as well as ethical and political (i.e., social criticism) purposes against management practices and theories and the forms of organization that prevail (Gonzáles-Miranda & Rojas-Rojas, 2020; Misoczky, 2017; Montaño Hirose, 2013). In these critical orientations, ethical and political objectives predominate, from which epistemological and ontological discussions can be fostered, especially when traditional theoretical frameworks of administration and organization are confronted. This is because critical criticism must be connected to the social reality that contextualizes the criticism itself, benefiting those who lack a voice and are victims of oppression or injustice by management and prevailing forms of organization (Misoczky, 2017; Montaño Hirose, 2013; Núñez Rodríguez, 2022).

In Latin America, some of the critical currents of administration and organization that have had a significant influence include Critical Management Studies (CMS), Critical Organizational Studies (COS), and Radical Humanistic Management (RHM) (Pineda-Henao, 2022).

Despite epistemological and historical elements that may blur the identity of these currents, a general perspective, and shared authors and contributions in some cases, it is possible to distinguish certain elements regarding their origin and identity, at least for analytical purposes.

In the case of CMS, its origin can be traced back to a critical thinking current that emerged from British management schools, with authors like Alvesson & Willmott (1992, 2003), among others. According to Gantman (2017a), this emergence was related to the migration of social and human sciences academics to management schools at certain universities. If one examines some of the epistemological frameworks of CMS, influences from the Frankfurt School, constructivism, and postmodernism can be identified (Saavedra Mayorga, 2009; Sanabria Rangel et al., 2015). These current addresses a wide range of topics, but its core lies in questioning the prevailing management style, emphasizing the oppression resulting from its performative, efficiency-oriented (instrumental and efficiency-driven) approach. In contrast, it promotes a critical performativity that not only criticizes traditional performativity but also has practical implications through comprehensive and reflective elements (Sanabria Rangel et al., 2015). Despite critiques of the relevance of this current (Misoczky, 2017; Misoczky et al., 2015), its influence is relevant for analyzing potential applications in current management models related to existential risks associated with AI.

On the other hand, COS refers to the critical current derived from Organizational Studies (OS)[39], whose genesis occurs through

[39] As the term OS can have various connotations, some of which are quite broad, and it can be debated whether it aligns with the same field of study that includes Organizational Theory and OCS, among other organizational approaches (Ríos Szalay, 2014; Saavedra-Mayorga & Sanabria, 2023), in this document, the critical stream within the OS is referred to as CMS.

contributions arising from the formation of the EGOS group and the journal Organization Studies in some European countries (Clegg et al., 1996; Clegg & Bailey, 2007; Sanabria Rangel et al., 2014). Although the epistemological schemes that underpin this current are similar to those of CMS (including constructivism, postmodernism, and Critical Theory), COS is characterized, despite its interdisciplinarity, by a certain sociological emphasis (Rendón Cobián & Montaño Hirose, 2004; Sanabria Rangel et al., 2014). This current includes criticisms related to power and control, identity and subjectivity at work, ideologies in organizational discourses, among other topics. In general, it highlights the intention of a broader critical understanding of the organizational phenomenon and a more radical critique of prevailing management and forms of organization (Gonzáles-Miranda, 2014; Sanabria Rangel et al., 2014).

Lastly, RHM is a specific derivation from the broader Humanistic Management current, encompassing various approaches in Europe and Canada (Arandia & García-de-la-Torre, 2021; García-de-la-Torre et al., 2021). The Canadian derivation stands out for its radical character, as demonstrated, for example, by direct references from authors like Aktouf (1992, 2009), who propose replacing the prevailing management style with a more critical, comprehensive, and distinctively non-productivism one. This perspective also emphasizes the importance of prioritizing human dignity and environmental well-being beyond providing only scholarly models from the humanities and social sciences for analyzing organizations (Aktouf, 2009; Bédard, 2003; A. Chanlat, 1995; J.-F. Chanlat, 1994).

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These currents have been used in other works to analyze their critical relevance in the broader context of the influence of transhumanism and posthumanism on management and organizations (Pineda-Henao, 2022). The impact of transhumanism and

posthumanism on management and organizations (Gladden, 2016) can be understood as a new episode of the predominant trend in management that seeks efficiency and productivity. However, this quest for human enhancement and the promotion of post-anthropocentrism can generate various issues in organizations, some of which are related to existential risks (Pineda-Henao, 2022).

Therefore, below are some possible forms of critical action, based on their potential (Gantman, 2017b; Pineda-Henao, 2022), especially in relation to existential risks associated with the production and application of artificial intelligence (AI) in organizations. It is essential to remember that the central argument is that critical streams in management and organization play a crucial role in reflecting on and proposing changes in prevailing management to mitigate these risks. This proposed role can be broken down into three forms: 1) participation in the formulation of public policies; 2) the urgent need for greater critical and responsible education in management schools; 3) the orientation of specific research programs within critical currents, focusing on new forms of management aimed at preventing and mitigating existential risks, see Table 1.

Table 1 Potentials of Critical Currents in the Face of AI Risks

Potential Action of Critical Currents	***AI Production***	***AI Application***
Participation in the Formulation of Public Policies	Critical Contributions on Traditional Business Interests in Companies Developing AI Competitiveness	Critical Discussion Contributions Regarding the Rates and Limitations of AI Participation in Organizations

Potential Action of Critical Currents	*AI Production*	*AI Application*
	Critical Contributions on Traditional Business Interests Impacting AI Research to Prioritize Human-Value Alignment	Critical Contributions Regarding Regulations that Anticipate and Regulate the Transition from Traditional to Emerging Professions in the Face of Current AI Implementation
Need for a New Humanistic, Critical, and Responsible Education in Schools of Management	New professionals in administration to lead and make critical, humanistic, and responsible decisions about AI production.	New professionals in administration for the critical, humanistic, and responsible implementation of AI. New professionals in administration with critical, humanistic, and responsible values, less replaceable by AI.
New Research Agendas on Novel Forms of Management and Organization	Questioning and proposing alternatives to traditional management models to avoid and mitigate existential risks from AI production.	Questioning and proposing alternatives to traditional management models to avoid and mitigate existential risks related to AI applications.

In relation to the first mode of action of these critical currents concerning existential risks associated with AI in organizations, it holds significant relevance due to its normative reach. For organizations engaged in AI development, this implies the necessity of establishing normative frameworks that foster more comprehensive research into the risks and consequences of AI before its production. This includes a more profound examination of how AI aligns with human values. Additionally, these normative frameworks should lead to the promulgation of international treaties and agreements aimed at preventing or mitigating potential risky competitive advantages stemming from the production of artificial general intelligence (AGI) or superintelligence.

As for the application of AI in organizations, these normative frameworks can be focused on a critical discussion of the rates and limitations of AI's involvement in organizations. This should consider prioritizing human labor inclusion, as well as social responsibility and economic sustainability, not only for organizations but particularly in terms of reconsidering the implications and risks for human workers and society at large. This also entails the urgent need for regulations that anticipate and manage the transition of traditional and emerging professions in response to the rapid implementation of AI, including narrow AI like ChatGPT.

These normative actions could be derived from a perspective that concentrates on the practical possibilities of critical currents, rather than merely denouncing risks (Gantman, 2017b; Sanabria Rangel et al., 2015). In this regard, the critical understanding of organizational competitiveness, the role of technology in organizations, social responsibility, and economic sustainability, the instrumental and economic goals of performativity, new forms of production and employability, and the reintroduction of the discussion on human dignity in organizations contributed by Critical Management Studies

(CMS), Critical Organizational Studies (COS), and Radical Humanistic Management (RHM) would play an essential role in formulating these normative frameworks.

Regarding the second mode of action of the critical currents, which involves the urgent inclusion of more critical and responsible education in business schools, it is essential to note that one of the primary deficiencies in this regard lies in the fact that traditional management education has normalized an instrumental and productive approach to management. Furthermore, it prioritizes applied and functional research over other forms of investigation Thus, even from the perspective of disciplinary scholarship within the prevailing tradition of management, especially for the purpose of promoting reflective and critical thinking, it is crucial to strengthen research training in this field, even at the undergraduate level (Giraldo López et al., 2019; Pineda-Henao, 2018b, 2018a; Pineda-Henao et al., 2020). This underscores the importance of more critical and scientific research in these areas of study, extending beyond conventional management models and prevailing organizational concepts (Pineda-Henao, 2017, 2021; Pineda-Henao & Tello-Castrillón, 2018).

Within this context, both the production and application of AI in organizations require a critical and responsible education that incorporates humanistic and social aspects. Furthermore, it is vital to establish a strong and profound foundation in critical currents such as CMS, COS, and RHM within curricula, along with a critical education in organizational social responsibility and ethics in management and organizations. In general, these humanistic and social education approaches, grounded in critical currents in the field of management and organization, can lead to a profound transformation in management education, contributing to the development of a new generation of administrators who can more effectively address the challenges posed by AI and existential risks.

On the other hand, concerning the application of AI, it can also have an impact in two ways. Firstly, on administrative professionals who make decisions to implement AI, based on humanistic, social, critical, responsible, and ethical training criteria, considering the risks and consequences of AI and the primacy of human dignity in organizations. Secondly, regarding employability, the education of management professionals with a solid and profound foundation in humanities, social sciences, critical currents, and social responsibility, creates a distinguishing factor for this profession, making it less susceptible to automation by AI, thereby increasing its professional value and contributing to the reduction of employment-associated risks.

As mentioned above, CMS, COS, and RHM are grounded in epistemological frameworks that specifically prioritize social criticism and draw from various references within the social sciences and humanities, with a particular emphasis on the application of these frameworks to critically understand management and organizations. Therefore, their potential within business school education is crucial in proposing ways to mitigate and prevent existential risks related to the production and application of AI, directly from within business schools. As mentioned, this is not only aligned with the scholarly mission of the discipline itself but, more importantly, it signifies a shift or transformation in management education, moving away from the traditional management style and replacing it with new forms of management that do not center on efficiency and productivity, which are evidently linked to management models that are more susceptible to existential risks.

This leads to the last point of action by the critical currents. For this purpose, it is essential to understand that both the production and application of AI in and from organizations are crucial matters concerning existential risk, as the prevailing styles of management and organization introduce factors, such as the previously mentioned

efficiency and productivity, which render their management models fragile in the face of these risks. This fragility arises from the fact that, by prioritizing the pursuit of greater efficiency and productivity, the most reasonable logical consequence is that the production and application of AI will be dominated by the economic and instrumental interests of organizations rather than the ethical and social interests of workers and society (Pineda-Henao, 2022).

Viewed from this angle, a plausible inference is that the critical currents, in their new research agendas, incorporate into their denunciations and formulations of new management forms the risks and adverse consequences of technology in organizations, particularly the issue of existential risk related to AI. These topics, while emerging from the broader framework of transhumanism and posthumanism in management and organizations, necessitate specific attention from the critical currents of CMS, COS, and RHM (Pineda-Henao, 2022). Thus, it can be argued that the concept of critical performativity encompasses the problematization of the close relationship between human labor and AI. Similarly, the discussion of human dignity in management and organizations should not only engage in philosophical debates on humanism and posthumanism but should also address the alignment of human values with AI in terms of, for instance, avoiding inhumane acts, injustices, and oppression (Pineda-Henao, 2022).

Ultimately, contemplating new forms of management and organization that mitigate and prevent existential risks in general, and particularly those related to AI, represents one of the most significant challenges for these critical currents. This implies not only adding a dimension to the conceptual discussion of new ways to conceive management and organization but also considering new forms of intervention and practical applicability, more oriented towards the constraints and limitations of AI, given the inherently critical nature of critique. Nonetheless, in terms of critical alternatives, this also

encourages thinking about new definitions of efficiency, oriented towards objectives different from productivity and profit, and emphasizing work and human dignity.

Conclusions

This work began with the observation of the limited body of knowledge linking the topic of existential risks associated with the production and application of AI to critical management and organizational theories. Despite its significance and urgency, this particular subject has not been addressed directly by scholars in this field of study. Consequently, we argued how these critical theories can play a vital role in raising awareness and preventing such risks by challenging the traditional management model, which appears vulnerable to these types of threats.

From the discussions presented, it is evident that there is a need for critical theories, such as Critical Management Studies (CMS), Critical Organizational Studies (COS), and Radical Humanistic Management (RHM), to produce more critical-social knowledge contributions that can aid in shaping public policies, reforming management education, and posing questions and alternatives concerning the traditional management model. This traditional model tends to favor interests that are misaligned with the prevention and mitigation of existential risks associated with the production and application of AI within organizations, and its dominance could have adverse consequences in this regard. In general, beyond the responsibility in using AI, it is essential to engage in discussions about the negative aspects, limitations, and necessary changes in the production and application of AI within the organizational context.

Regarding future research directions, it is recommended to explore other types of existential risks related to management and organizations, such as those associated with climate change, environmental collapse, economic, and social collapses. Organizations,

especially private enterprises, and the traditional management model play central roles in addressing these existential risk challenges. Therefore, an interdisciplinary critical analysis is essential, as prevailing political, ethical, and economic interests within businesses and this management model may be overlooking issues that threaten the future of humanity.

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