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# FROM HUMAN-CENTERED MANAGEMENT TO ALGORITHMIC GOVERNANCE: A CONCEPTUAL REVIEW OF MANAGEMENT TRANSFORMATION IN THE ARTIFICIAL INTELLIGENCE ERA

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**Abstract**

The rapid development of artificial intelligence is driving a fundamental transformation in management practices and paradigms, from a human-centered approach to algorithmic governance. This article aims to conceptually examine how this shift impacts decision-making, leadership roles, organizational governance, and ethical dimensions in the context of modern management. The research method used is a conceptual literature review by analyzing reputable international journal articles and key academic books discussing humanistic management, artificial intelligence, and algorithmic governance. The results of the study indicate that algorithmic governance offers increased efficiency, consistency, and analytical capacity for organizations, but also presents risks related to transparency, accountability, fairness, and the degradation of human considerations in decision-making. This article emphasizes that human-centered management and algorithmic governance are not mutually exclusive but can be integrated within a management framework that places humans as the ultimate supervisors and bearers of responsibility for algorithm-based decisions. The study's conclusions emphasize the importance of a responsible socio-technical and governance approach so that the use of artificial intelligence can strengthen, rather than replace, human values in management practices in the digital era.

**Keywords** : human-centered management, algorithmic governance, artificial intelligence, management transformation, management ethics, organizational governance, artificial intelligence in management

## 1. BACKGROUND

Digital transformation driven by the rapid development of artificial intelligence has become one of the most influential phenomena in contemporary organizations and management (Vial, 2019). Artificial intelligence is no longer positioned merely as a decision-support tool, but has become an active decision-making agent through machine learning algorithms and predictive systems widely used in human resource management, finance, marketing, and operations (Raisch & Krakowski, 2021). This condition marks a fundamental shift from traditional management practices oriented towards human judgment and intuition to algorithm-based governance that relies on large-scale data (Kellogg et al., 2020).

In classical and contemporary management literature, human-centered management is seen as an approach that emphasizes the role of humans as the primary subject in an organization, not merely a factor of production (Pirson & Lawrence, 2010). This approach developed from criticism of scientific management as overly mechanistic and paying insufficient attention to the psychological, social, and moral aspects of workers (Mayo, 1933).

Human-centered management developed in response to the limitations of the rational-instrumental management approach that dominated the industrial era, where efficiency and productivity were often achieved at the expense of individual well-being and meaning of work (Pirson, 2017). This approach places human values such as dignity, empathy, trust, and participation as the primary foundation of managerial decision-making, so that

organizational goals are not solely measured through financial performance, but also through the quality of social relationships and long-term sustainability (Melé, 2016). In this context, organizations are understood as complex social systems, where interactions between people play a central role in value creation and innovation (Nonaka & Takeuchi, 1995).

With the advent of advanced digital technologies, particularly artificial intelligence, the fundamental assumptions of human-centered management are beginning to come under significant pressure (Raisch et al., 2018). Artificial intelligence systems are now being used to screen job candidates, evaluate employee performance, predict consumer behavior, and recommend strategic decisions that previously relied on the experience and judgment of human managers (Bodie et al., 2021). This phenomenon marks the emergence of what is known in the literature as algorithmic management, an organizational management practice in which algorithms act as supervisors, evaluators, and controllers of human work (Kellogg et al., 2020).

The development of algorithmic management then expanded to a more macro level in the form of algorithmic governance, a governance system that relies on algorithms and artificial intelligence to regulate, coordinate, and control organizational processes and public policy (Just & Latzer, 2017). Algorithmic governance not only impacts operational efficiency but also reshapes power relations, accountability, and legitimacy within organizations, as decisions are increasingly generated by systems that are opaque and difficult for laypeople to understand (Burrell, 2016). In this context, the role of human managers tends to shift from primary decision-makers to overseers of algorithmic systems, posing new challenges to the concepts of leadership and managerial responsibility (Raisch & Krakowski, 2021).

Critical literature highlights that algorithmic governance carries the risk of reproducing social bias and structural injustice if the data and models used are not designed inclusively and transparently (Eubanks, 2018). Algorithms used in organizational decision-making often reflect historical biases embedded in the training data, which can reinforce discrimination against certain groups without the human decision-makers realizing it (Noble, 2018). This condition becomes particularly problematic when algorithmic decisions have significant consequences for individuals' lives, such as promotions, terminations, or access to organizational resources (Kleinberg et al., 2018).

On the other hand, proponents of algorithmic governance argue that the use of artificial intelligence can improve the objectivity, consistency, and speed of managerial decision-making compared to approaches that rely solely on human intuition (Davenport & Ronanki, 2018). Algorithms are considered capable of processing large amounts of data in real time and producing more accurate recommendations based on patterns that are not easily detected by humans (Brynjolfsson & McAfee, 2017). Therefore, the debate between human-centered management and algorithmic governance approaches cannot be reduced to a simple dichotomy between humans and machines, but rather must be understood as a complex dynamic involving the interaction of both (Raisch et al., 2018).

In the academic context, studies on the relationship between human-centered management and algorithmic governance remain relatively fragmented and spread across various disciplines, including management, information systems, technology ethics, and organizational studies (Faraj et al., 2018). Many studies focus separately on the implications of artificial intelligence on organizational performance or on the ethical and social aspects of algorithm use, without integrating them into a comprehensive managerial framework (Floridi et al., 2018). Consequently, a conceptual gap remains regarding how these two approaches can be positioned simultaneously within the management transformation in the era of artificial intelligence.

This article starts from the assumption that the future of management does not lie in the total replacement of humans by algorithms, but rather in the ability of organizations to integrate human-centered management principles into a responsible algorithmic governance framework (Shneiderman, 2020). This approach emphasizes the importance of maintaining human control, transparency of algorithmic decisions, and ethical accountability in the use of artificial intelligence across all levels of organizational management (Floridi et al., 2018). Thus, management transformation in the era of artificial intelligence can be directed not only at achieving efficiency and competitiveness but also at protecting human values as the core of modern organizational practices (Pirson, 2017).

Based on this background, this article aims to conduct an in-depth conceptual review of the shift from human-centered management to algorithmic governance through a systematic analysis of the current scientific literature. The main focus of this study is to identify the main characteristics of both approaches, examine the dynamics of the transformation that occurs, and explore their implications for management practices and organizational governance in the era of artificial intelligence (Raisch & Krakowski, 2021). With this approach, the article is expected to make a theoretical contribution to the development of management science and offer a relevant conceptual framework for practitioners and policymakers facing the challenges of AI-based digital transformation (Vial, 2019).

As the complexity of organizational environments and the volume of data to be processed increases, the role of artificial intelligence in supporting managerial processes is increasingly inevitable (Brynjolfsson & McAfee,

2017). Artificial intelligence offers analytical capabilities that surpass human cognitive capacity, particularly in identifying hidden patterns and making predictions based on large-scale historical data (Davenport & Harris, 2017). However, excessive reliance on algorithmic systems has the potential to shift managerial logic from normative and contextual considerations to reductionistic computational rationality (Burrell, 2016).

From a human-centered management perspective, managerial decisions are judged not only by their predictive accuracy or operational efficiency, but also by their impact on the dignity, motivation, and well-being of individuals within the organization (Melé, 2016). This approach recognizes that humans possess reflective, moral, and emotional capacities that cannot be fully replicated by algorithms, thus human involvement in the decision-making process remains an ethical and strategic prerequisite (Pirson, 2017). Therefore, the transformation towards algorithmic governance raises a fundamental tension between technological rationality and humanistic rationality in contemporary management practices (Raisch et al., 2018).

Recent literature suggests that these tensions are becoming more pronounced as organizations begin to widely implement artificial intelligence systems in core management functions, such as recruitment, performance appraisal, and strategic planning (Bodie et al., 2021). The use of algorithms in personnel decision-making is often perceived as more objective, but at the same time, it raises concerns about the loss of autonomy, increased oversight, and reduced space for dialogue between managers and employees (Kellogg et al., 2020). This situation demonstrates that AI-based management transformation is not only technical but also fraught with complex social and ethical implications (Eubanks, 2018).

In the context of organizational governance, algorithmic governance also impacts the accountability structure and legitimacy of managerial decisions (Just & Latzer, 2017). When decisions are generated by opaque algorithmic systems, it becomes increasingly difficult to determine who is responsible for the consequences of those decisions—whether the system developer, the user manager, or the organization as a whole (Floridi et al., 2018). This phenomenon challenges the traditional accountability framework in management, which has traditionally centered on human agents as decision-makers (Shneiderman, 2020).

Furthermore, studies in the field of artificial intelligence ethics emphasize that without human oversight mechanisms and clear governance principles, algorithmic governance risks widening power imbalances within organizations (Noble, 2018). Algorithms reflect not only technical preferences but also the values, assumptions, and interests of those who design and operate them, making bias in algorithmic systems a crucial issue in the context of organizational justice (Kleinberg et al., 2018). Therefore, integrating human-centered management values with AI technological capabilities is an urgent need for organizations seeking to maintain their social legitimacy (Pirson & Lawrence, 2010).

Within an academic framework, the need to bridge human-centered management and algorithmic governance drives the need for systematic and comprehensive conceptual studies (Faraj et al., 2018). Conceptual reviews enable researchers to synthesize diverse theoretical and empirical perspectives and identify common patterns and contradictions in the existing literature (Webster & Watson, 2002). This approach is particularly relevant for understanding relatively new and multidimensional phenomena such as management transformation in the era of artificial intelligence (Raisch & Krakowski, 2021).

Thus, this article positions itself as an attempt to develop a conceptual framework that integrates human-centered management principles with algorithmic governance practices in the context of modern management. The study focuses on how organizations can strategically leverage artificial intelligence without sacrificing the human values that underpin sustainability and trust in workplace relationships (Floridi et al., 2018). Through a deeper understanding of these dynamics, it is hoped that management in the era of artificial intelligence can develop into a more reflective, ethical, and human-oriented approach (Shneiderman, 2020).

As a foundation for achieving these objectives, the next section of this article will explain the research methods used in conducting a conceptual review of the scientific literature related to human-centered management and algorithmic governance. This methodological explanation is essential to ensure the transparency, validity, and reliability of the literature analysis process that underpins the arguments in this article (Snyder, 2019).

## 2. THEORETICAL STUDY

The theoretical study in this research is based on the need to understand the management transformation triggered by the adoption of artificial intelligence as a complex socio-technical phenomenon. The human-centered management paradigm serves as the primary foundation for understanding how organizations traditionally position humans as the primary subject in managerial processes, decision-making, and value creation. Human-centered management is rooted in humanist thought in management science, which emphasizes human dignity, well-being, and social relations as both the goals and means of organizations (Pirson & Lawrence, 2010). In this view,

organizations are not merely understood as instruments of economic efficiency, but as social institutions with moral responsibilities towards individuals and society (Melé, 2016). Humanistic management theory emphasizes that managerial decisions must consider ethical, contextual, and relational dimensions, as human values cannot be reduced to purely quantitative variables (Pirson, 2017). This perspective aligns with stakeholder theory, which views organizations as interconnected networks of interests, where long-term success depends on the organization's ability to fairly balance the interests of various parties (Freeman et al., 2010). In this context, the role of managers is not merely as rational decision-makers, but as guardians of values and mediators of interests within the organization's social system.

The development of artificial intelligence challenges the basic assumptions of human-centered management by introducing algorithmic systems capable of complex analysis and automated decision-making. This phenomenon is explained within the framework of algorithmic governance, a governance mechanism in which algorithms play an active role in regulating organizational behavior, resources, and processes (Just & Latzer, 2017). Algorithmic governance is rooted in governance and cybernetics theory, which emphasizes system control through data-driven feedback, automation, and programmed operational standards (Beer, 2017).

The literature suggests that algorithmic governance is increasingly being adopted due to its ability to improve the efficiency, consistency, and scalability of organizational decision-making, particularly in the context of big data and digitalization (Davenport & Harris, 2017). However, this theory also highlights the risk of diminishing human agency when decision-making authority shifts from individuals to opaque and difficult-to-account algorithmic systems (Burrell, 2016). This situation creates a conceptual tension between the logic of technological efficiency and the principle of moral responsibility that is at the heart of human-centered management (Floridi et al., 2018).

The socio-technical approach provides an important framework for bridging these tensions by emphasizing that technology and social structures dynamically shape each other (Orlikowski, 2007). In this perspective, artificial intelligence is not understood as a neutral entity, but rather as a social artifact that carries the values, assumptions, and interests of its creators (Faraj et al., 2018). Socio-technical theory asserts that the successful implementation of managerial technology depends heavily on the alignment between technical systems, work practices, and organizational values (Vial, 2019).

Previous research has shown that the use of algorithms in human resource management, performance evaluation, and strategic decision-making has a significant impact on perceptions of fairness and organizational legitimacy (Kellogg et al., 2020). Empirical studies have also found that algorithms trained on historical data have the potential to reproduce structural biases, thereby reinforcing existing social inequalities (Noble, 2018). These findings strengthen the argument that adopting algorithmic governance without a human-centered framework risks compromising the ethical quality of managerial decision-making (Bogen & Rieke, 2018).

In the strategic management literature, Raisch and Krakowski (2021) proposed the automation-augmentation paradox, explaining that artificial intelligence can simultaneously replace and complement human roles. This paradox provides a theoretical basis for the integration of human-centered management and algorithmic governance, where algorithms are used to enhance analytical capacity, while humans retain a key role in normative assessment and final decision-making. This view aligns with the concept of human-centered artificial intelligence, which emphasizes the importance of human oversight, transparency, and reliability of AI systems (Shneiderman, 2020).

Several conceptual and empirical studies have also highlighted that organizational trust in algorithmic systems is strongly influenced by the level of transparency and the ability of those systems to be reasonably explained to users (Ananny & Crawford, 2018). Algorithmic transparency is seen as a prerequisite for organizational accountability and learning, as well as a mechanism for maintaining management legitimacy in the eyes of stakeholders (Floridi et al., 2018). In the context of human-centered management, transparency serves as a bridge between technical rationality and moral responsibility (Pirson, 2017).

Based on theoretical studies and previous research, this study implicitly starts from the assumption that the stronger the integration of human-centered management principles in the implementation of algorithmic governance, the higher the ethical quality, legitimacy, and sustainability of managerial decision-making. This assumption is not formulated as an explicit hypothesis, but rather serves as a conceptual framework that guides the analysis and discussion in this study. Thus, this theoretical study provides a strong academic foundation for exploring management transformation in the era of artificial intelligence, while also emphasizing the relevance of an integrative approach between humans and technology in contemporary managerial practice.

## 3. RESEARCH METHODS

This study uses a qualitative approach with a conceptual review design based on a systematic literature study to analyze the transformation of the management paradigm from human-centered management to algorithmic governance in the era of artificial intelligence (Snyder, 2019). This approach was chosen because the primary objective of the study is to build a deep theoretical and conceptual understanding of complex and multidimensional phenomena, rather than to quantitatively test empirical hypotheses (Jaakkola, 2020). The conceptual review allows researchers to integrate findings from various disciplines to develop a comprehensive framework regarding changes in managerial practices and logic resulting from the adoption of artificial intelligence (Faraj et al., 2018).

A systematic literature review is conducted by collecting and analyzing relevant scientific publications from reputable international journals and other credible academic sources covering the topics of management, artificial intelligence, algorithmic governance, technology ethics, and digital organizations (Webster & Watson, 2002). The selection of the systematic literature review method is based on its ability to ensure transparency in the source selection process, consistency of analysis, and replication of the research by other researchers in the future (Tranfield et al., 2003). This approach is also relevant for identifying thematic patterns and conceptual developments in the widespread and growing literature (Snyder, 2019).

The literature search process was conducted using keywords reflecting the research focus, such as "human-centered management," "algorithmic governance," "algorithmic management," "artificial intelligence and management," and "AI ethics in organizations," which were used singly or in combination to obtain a broad and relevant literature coverage (Raisch & Krakowski, 2021). The literature reviewed included peer-reviewed journal articles, academic books, and scientific reports widely referenced in the discourse on management and artificial intelligence, particularly those published in the last decade to capture the current dynamics of digital transformation (Vial, 2019).

The inclusion criteria for the literature in this study included publications that explicitly discussed the concepts of human-centered management, algorithmic governance, or the interaction between humans and algorithmic systems in the context of organizations and governance (Kellogg et al., 2020). Furthermore, only literature with a clear theoretical or conceptual contribution to the understanding of management transformation in the era of artificial intelligence was considered in the analysis (Jaakkola, 2020). Exclusion criteria applied to publications that were of a popular, non-academic nature or that had no direct relevance to the context of organizational management and governance (Webster & Watson, 2002).

The literature analysis was conducted interpretively using thematic synthesis techniques to identify concepts, underlying assumptions, and relationships between human-centered management and algorithmic governance in various organizational contexts (Braun & Clarke, 2006). The thematic synthesis approach enabled researchers to group literature findings into broader conceptual themes, such as the shifting role of managers, changes in decision-making structures, the ethical implications of algorithm use, and their impact on human values in organizations (Faraj et al., 2018). This process was carried out iteratively to ensure that the resulting interpretations were consistent with the theoretical framework developed during the analysis (Snyder, 2019).

To maintain conceptual validity, this study adopted the principle of literature triangulation by comparing perspectives from various schools of thought, including humanistic management, information systems, and artificial intelligence ethics (Raisch et al., 2018). This triangulation aims to minimize interpretive bias and enrich understanding of the studied phenomenon by considering diverse perspectives (Denzin, 2012). Thus, the review results do not simply represent one dominant perspective but reflect the complexity of academic discourse related to AI-based management transformation (Floridi et al., 2018).

The conceptual analysis framework was developed inductively based on patterns and relationships emerging from the reviewed literature, rather than imposing pre-existing theoretical models (Jaakkola, 2020). This inductive approach enabled the articulation of a conceptual framework that is more adaptive and relevant to the contemporary context, where algorithmic governance practices are still evolving and not yet fully standardized (Just & Latzer, 2017). This framework is then used as a basis for discussing the study's findings and their implications for management theory and practice in the era of artificial intelligence (Raisch & Krakowski, 2021).

Ethical considerations are also an integral part of this research methodology, particularly in assessing the literature addressing the social and moral impacts of the use of artificial intelligence in organizations (Floridi et al., 2018). This research critically evaluates how values such as fairness, accountability, transparency, and the protection of human dignity are represented and debated in the existing literature (Shneiderman, 2020). This approach ensures that the analysis is not solely oriented toward efficiency and performance but also considers the normative consequences of algorithm-based management transformations (Melé, 2016).

With this methodological approach, this research is expected to produce a robust and relevant conceptual synthesis regarding the shift from human-centered management to algorithmic governance. This method allows for a structured, evidence-based discussion on the challenges, opportunities, and implications of management transformation in the era of artificial intelligence (Vial, 2019). The following section will present the results and an in-depth discussion based on the literature findings systematically analyzed in this study (Raisch & Krakowski, 2021).

## 4. RESULTS AND DISCUSSION

A literature review shows that human-centered management and algorithmic governance represent two distinct yet overlapping managerial logics in modern organizational practice (Raisch & Krakowski, 2021). Human-centered management stems from the view that organizations are human communities whose values, meanings, and social relations play a fundamental role in achieving collective goals (Pirson, 2017). Conversely, algorithmic governance emerged in response to increasing organizational complexity and the need for rapid, consistent, and data-driven decision-making through the use of artificial intelligence and advanced algorithms (Just & Latzer, 2017).

In humanistic management literature, human-centered management is understood as an approach that positions people not merely as resources, but as moral subjects with dignity and reflective capacity within the organization (Melé, 2016). This approach emphasizes that sustainable organizational performance cannot be achieved without addressing the psychological, social, and emotional needs of the individuals involved (Pirson & Lawrence, 2010). Empirical studies in organizational behavior show that employee engagement, sense of belonging, and trust in management are positively correlated with long-term productivity and innovation (Edmondson, 2018).

Human-centered management also views decision-making as a contextual and normative process, where ethical judgments and situational considerations cannot be fully reduced to mathematical or statistical models (Nonaka & Takeuchi, 1995). Within this framework, managerial intuition and interpersonal dialogue are seen as important sources of knowledge that complement formal data in organizational decision-making (Khatri & Ng, 2000). Therefore, the role of managers is not only as performance controllers, but also as learning facilitators and guardians of organizational values (Melé, 2016).

However, the literature also shows that developments in digital technology and artificial intelligence have changed the conditions under which human-centered management principles are applied (Vial, 2019). Organizations now operate in environments characterized by vast volumes of data, rapid change, and global competitive pressures, making reliance on manual analysis and human intuition alone increasingly inadequate (Brynjolfsson & McAfee, 2017). This situation opens up space for the integration of artificial intelligence as a means of supporting and, in some cases, replacing human decision-making (Davenport & Ronanki, 2018).

Literature findings indicate that algorithmic governance evolved from algorithmic management practices initially applied in the context of digital platforms and the gig economy (Kellogg et al., 2020). In these contexts, algorithms are used to automatically allocate tasks, monitor performance, and evaluate work results, shifting the oversight and coordination functions previously performed by human managers to digital systems (Rosenblat & Stark, 2016). This practice was then more widely adopted in traditional organizations, including manufacturing, financial, and public sector companies (Just & Latzer, 2017).

Algorithmic governance is characterized by the increasing role of algorithms in shaping organizational rules, norms, and decision-making mechanisms (Beer, 2017). Within this framework, algorithms function not only as technical tools but also as institutional actors with significant influence on the distribution of power and resources within organizations (Katzenbach & Ulbricht, 2019). The literature shows that decisions generated by algorithmic systems are often perceived as neutral and objective, even though they actually reflect assumptions and values embedded in the system's design (Burrell, 2016).

One important finding in the literature review is that algorithmic governance tends to shift the logic of accountability within organizations (Floridi et al., 2018). When decisions are generated through complex computational processes, it becomes increasingly difficult for individuals within the organization to understand the basis for those decisions, which can ultimately reduce transparency and trust (Ananny & Crawford, 2018). This phenomenon is known in the literature as the algorithmic “black box” problem, where the internal mechanisms of an AI system are not easily explained or explored by human users (Burrell, 2016).

From a human-centered management perspective, low transparency in algorithmic decisions has the potential to undermine trust between management and employees (Pirson, 2017). Trust is a key element in organizations, serving as a mechanism for social coordination and the basis for leadership legitimacy (Edmondson, 2018). When important decisions, such as performance appraisals or promotions, are made by systems that cannot be adequately explained, individuals can feel alienated and lose a sense of procedural justice within the organization (Bies & Moag, 1986).

The literature on artificial intelligence ethics also highlights that algorithmic governance carries the risk of reproducing bias and structural injustice (Noble, 2018). Algorithms trained using historical data tend to inherit discriminatory patterns present in previous organizational practices, potentially reinforcing inequalities rather than correcting them (Kleinberg et al., 2018). This poses a serious challenge for organizations committed to human-centered management and social justice (Melé, 2016).

However, literature reviews also show that algorithmic governance is not inherently at odds with human values (Shneiderman, 2020). Several studies have shown that when designed and implemented with human-centered AI principles, algorithmic systems can actually support fairer and more consistent decision-making (Floridi et al., 2018). This approach emphasizes the importance of human involvement in the design, oversight, and evaluation of AI systems to ensure that technology serves as a tool for empowerment, not control (Shneiderman, 2020).

These findings suggest that the transformation from human-centered management to algorithmic governance is not a linear process that replaces one paradigm with another, but rather a dialectical process involving ongoing negotiations between human and machine logic (Raisch et al., 2018). In this context, managers are required to develop new competencies that include technological understanding, data literacy, and ethical sensitivity in the use of artificial intelligence (Davenport & Harris, 2017). The role of managers is evolving from a sole decision-maker to a socio-technical system designer that harmoniously integrates human and algorithmic capabilities (Faraj et al., 2018).

A literature review shows that ethical implications are a central issue in the shift from human-centered management to algorithmic governance because artificial intelligence does not operate in a value-neutral space (Floridi et al., 2018). Algorithmic systems are designed, trained, and implemented within specific social contexts, so the values, assumptions, and interests of both developers and organizations are reflected in the resulting decisions (Beer, 2017). Therefore, the use of algorithms in organizational governance requires a more explicit and structured ethical approach than conventional management practices (Shneiderman, 2020).

From a human-centered management perspective, ethical considerations are inseparable from the decision-making process because organizations are accountable for the impact of their decisions on individuals and society (Melé, 2016). However, the literature shows that algorithmic governance tends to separate the technical and normative dimensions, where algorithmic efficiency and accuracy are often prioritized over moral and social considerations (Rittel & Webber, 1973). This creates the risk that organizational decisions will become increasingly insensitive to the human context in which they are implemented (Pirson, 2017).

The issue of algorithmic fairness consistently emerges in various studies as a major challenge in implementing algorithmic governance (Kleinberg et al., 2018). Algorithms used in organizational decision-making often reflect structural inequalities embedded in historical data, thus reinforcing discrimination based on gender, race, or socioeconomic background (Noble, 2018). From a human-centered management perspective, this contradicts the principles of equality and fair treatment that underpin organizational legitimacy (Pirson & Lawrence, 2010).

The literature also highlights that the lack of transparency in algorithmic systems poses serious challenges to organizational accountability (Ananny & Crawford, 2018). In algorithmic governance practices, decisions are often generated by complex machine learning models that are difficult to explain intuitively, even to their developers (Burrell, 2016). When individuals affected by decisions lack access to adequate explanations, trust in the organization and managerial legitimacy can erode (Edmondson, 2018).

Fundamental changes are also occurring in leadership roles in organizations adopting algorithmic governance (Raisch & Krakowski, 2021). The literature shows that leaders are no longer only required to possess interpersonal and strategic competencies, but also a deep understanding of how the algorithmic systems used within the organization operate (Davenport & Harris, 2017). These competencies are essential for leaders to be able to evaluate, monitor, and intervene in algorithmic decisions when necessary, particularly in situations with significant ethical or social implications (Shneiderman, 2020).

In the context of human-centered management, leadership is viewed as a relational process involving interaction, dialogue, and the creation of shared meaning (Uhl-Bien, 2006). However, literature suggests that algorithmic governance has the potential to reduce the intensity of human interaction in managerial processes, as many decisions are automated and standardized through digital systems (Kellogg et al., 2020). This raises questions about how leaders can maintain the quality of relationships and empathy in an increasingly technology-mediated work environment (Pirson, 2017).

Several studies emphasize that the integration of artificial intelligence in management should not be interpreted as a reduction in the role of humans, but rather as a reconfiguration of that role (Faraj et al., 2018). Within this framework, humans and algorithms are viewed as complementary entities, with algorithms handling routine and analytical tasks, while humans focus on decision-making that requires moral judgment, creativity, and contextual

understanding (Raisch et al., 2018). This approach aligns with the principle of human-centered AI, which maintains the role of humans as the primary agents in socio-technical systems (Shneiderman, 2020).

Literature reviews also show that organizations that successfully integrate human-centered management and algorithmic governance tend to implement governance mechanisms that emphasize stakeholder involvement in the design and evaluation of AI systems (Floridi et al., 2018). This involvement includes the participation of employees, managers, and external parties to ensure that algorithmic systems align with organizational values and broader social norms (Just & Latzer, 2017). This participatory approach is seen as a crucial strategy for building trust and legitimacy in the use of artificial intelligence (Pirson, 2017).

From a socio-technical perspective, the transformation towards algorithmic governance cannot be understood simply as the adoption of new technologies, but rather as a simultaneous change in organizational structures, work practices, and managerial culture (Orlikowski, 2007). The literature shows that failure to manage the social dimensions of AI implementation often results in resistance, decreased morale, and the system's failure to achieve its intended goals (Vial, 2019). Therefore, human-centered management offers an important lens for understanding how organizations can sustainably manage this change (Melé, 2016).

Conceptually, literature findings point to the need for an integrative model that combines human-centered management principles with a responsible algorithmic governance framework (Raisch & Krakowski, 2021). Such a model emphasizes the importance of algorithmic transparency, human oversight, and ethical accountability as the foundation of organizational governance in the era of artificial intelligence (Floridi et al., 2018). With this approach, algorithmic governance is not understood as a threat to human values, but rather as an opportunity to strengthen more equitable, reflective, and adaptive management practices (Shneiderman, 2020).

Contemporary management literature suggests that the need for an integrative conceptual framework is becoming increasingly urgent as the adoption of artificial intelligence in organizational decision-making processes increases (Raisch & Krakowski, 2021). Human-centered management and algorithmic governance are often positioned as opposing paradigms, but theoretical studies confirm that they can be combined into a complementary approach (Pirson, 2017). This integration is necessary to address the complex challenges that arise when technological efficiency must be balanced with human values and organizational social responsibility (Floridi et al., 2018).

An integrative conceptual framework emerging from the literature synthesis positions humans as central actors in algorithm-based management systems, rather than as passive elements subject to technological decisions (Shneiderman, 2020). Within this framework, algorithms are viewed as cognitive tools that extend human analytical capabilities, while normative and ethical responsibility remains with individuals and organizational institutions (Bostrom & Yudkowsky, 2014). This approach aligns with agency theory, which emphasizes the importance of human accountability in every strategic decision-making process (Eisenhardt, 1989).

The concept of human oversight of algorithms is a key element in this integrative model, as literature suggests that fully delegating decisions to AI systems increases the risk of systemic errors and ethical failures (Amodei et al., 2016). This oversight is not only technical but also includes ongoing evaluation of the social and organizational implications of algorithmic decisions (Floridi et al., 2018). Thus, human-centered management serves as a normative framework that ensures that AI implementation remains aligned with the organization's human goals (Melé, 2016).

Studies also emphasize that algorithmic transparency is a crucial prerequisite for the implementation of responsible algorithmic governance (Burrell, 2016). Transparency allows stakeholders to understand the underlying logic of decision-making, thus opening up space for discussion, correction, and organizational learning (Ananny & Crawford, 2018). From a human-centered management perspective, transparency is not merely a technical issue but also a mechanism for building trust and institutional legitimacy (Pirson & Lawrence, 2010).

The practical implications of this integrative framework are evident in changes to the design of organizational structures and work processes (Vial, 2019). Organizations that strategically adopt AI tend to create new functions that bridge managerial and technical competencies, such as the role of a data steward or AI ethics officer, to ensure that algorithm use is overseen in a multidisciplinary manner (Davenport & Harris, 2017). This shift reflects the recognition that algorithmic governance requires more, not less, human governance (Raisch et al., 2018).

In the context of human resource management, literature shows that algorithmic governance is changing the way organizations recruit, evaluate, and develop employees (Kellogg et al., 2020). AI-based systems can improve the consistency and efficiency of these processes, but they also have the potential to reduce the space for contextual considerations and empathy (Bogen & Rieke, 2018). Therefore, a human-centered approach demands that final decisions still involve human judgment, especially in situations that significantly impact individuals' lives (Shneiderman, 2020).

This transformation also has implications for organizational culture, as the widespread use of algorithms can shape how employees perceive authority and responsibility (Orlikowski, 2007). Studies show that when decisions are perceived as "objective" system outcomes, employees tend to accept them uncritically, even when they are detrimental (Beer, 2017). In the long run, this can weaken an organization's reflective capacity, unless supported by a culture that encourages critical dialogue and active participation (Edmondson, 2018).

From a strategic perspective, the integration of human-centered management and algorithmic governance enables organizations to achieve sustainable competitive advantage (Porter & Heppelmann, 2014). This advantage stems not only from the analytical capabilities of algorithms, but also from the human ability to interpret, contextualize, and responsibly use these insights (Faraj et al., 2018). Thus, artificial intelligence acts as a strategic enabler, not a substitute for human leadership (Raisch & Krakowski, 2021).

Interdisciplinary studies also emphasize that the success of management transformation in the AI era is heavily influenced by institutional and regulatory readiness (Just & Latzer, 2017). The legal framework and public policies governing the use of AI in organizations serve as external governance mechanisms that complement internal organizational governance (Busch, 2021). In this context, human-centered management provides a normative basis for meaningfully interpreting and implementing these regulations (Floridi et al., 2018).

Overall, the study's findings indicate that the transformation from human-centered management to algorithmic governance is neither linear nor deterministic (Vial, 2019). This transformation is a continuous negotiation process between organizational values, technology, and practices, where success depends heavily on management's ability to balance the technical and human dimensions (Orlikowski, 2007). The integrative conceptual framework proposed in this study asserts that the future of management is not the dominance of algorithms over humans, but rather a reflective collaboration between the two (Shneiderman, 2020).

## 5. CONCLUSION AND SUGGESTIONS

This article aims to conceptually examine the transformation of management from a human-centered management paradigm to algorithmic governance in the context of the rapid development of artificial intelligence. Based on a synthesis of interdisciplinary literature, this study emphasizes that this transformation cannot be understood as a mere technocratic shift, but rather as a fundamental shift in how organizations interpret decision-making, authority, and managerial responsibility (Vial, 2019; Raisch & Krakowski, 2021). Human-centered management, which places human dignity, social relations, and ethical considerations as the foundation of management, faces new challenges and opportunities when algorithms begin to play an active role in organizational governance (Pirson, 2017).

Conceptual findings suggest that algorithmic governance offers significant potential for improving organizational efficiency, consistency, and analytical capacity through the use of artificial intelligence (Davenport & Harris, 2017). However, the literature consistently warns that over-reliance on algorithms risks obscuring the moral and contextual dimensions of managerial decisions, particularly when such systems are opaque and difficult to account for (Burrell, 2016; Ananny & Crawford, 2018). Therefore, the transformation toward algorithmic governance cannot be separated from the need for a robust normative framework, as offered by human-centered management (Melé, 2016).

The main conclusion of this study is that human-centered management and algorithmic governance are not antagonistic, but can be combined within an integrative framework that positions humans as the overseers, interpreters, and ultimate bearers of responsibility for algorithm-based decisions (Shneiderman, 2020). This framework emphasizes that artificial intelligence should function as a cognitive support tool that extends human decision-making capacity, not as an autonomous authority that replaces ethical considerations and institutional responsibility (Bostrom & Yudkowsky, 2014).

From a theoretical perspective, this article contributes to the enrichment of the management literature by bringing together the discourses of human-centered management and algorithmic governance within a coherent analytical framework. This contribution is important because much of the previous literature tends to discuss artificial intelligence in management in a fragmented manner, both from a technological and ethical perspective, without adequate integration (Faraj et al., 2018). By emphasizing a socio-technical approach, this study demonstrates that the success of management transformation in the AI era depends heavily on an organization's ability to manage the interaction between technical systems and human dynamics (Orlikowski, 2007).

The practical implications of these findings emphasize the need for organizations to develop governance capacities that enable effective human oversight of algorithmic systems (Floridi et al., 2018). Developing internal policies, organizational structures, and work cultures that support transparency, accountability, and participation are prerequisites for the responsible implementation of algorithmic governance (Just & Latzer, 2017). In this context, the

role of leaders becomes increasingly strategic as they are required to bridge technical logic and human values in organizational decision-making (Raisch et al., 2018). This article also emphasizes that management transformation toward the era of artificial intelligence is a continuous and contextual process. No single model can be universally applied, as organizational, cultural, and regulatory dynamics significantly influence how algorithmic governance is implemented (Busch, 2021). Therefore, human-centered management provides a reflective framework that enables organizations to align technology use with their long-term values and goals (Pirson & Lawrence, 2010).

As a future research agenda, empirical studies are needed to test and enrich the conceptual framework proposed in this article. Future research could explore how different types of organizations integrate human oversight into AI systems, as well as how employees interpret legitimacy and fairness in algorithm-based decisions (Kellogg et al., 2020). Furthermore, cross-sector and cross-cultural comparative studies could provide deeper insights into variations in algorithmic governance practices and their implications for human-centered management values (Floridi et al., 2018).

Thus, this article asserts that the future of management in the era of artificial intelligence lies not in the dominance of algorithms over humans, but rather in the ability of organizations to build governance that integrates technological sophistication with human wisdom (Shneiderman, 2020). Human-centered management remains relevant as an ethical and normative foundation, while algorithmic governance serves as an operational mechanism that, if properly designed and monitored, can continuously strengthen the quality of managerial decision-making (Raisch & Krakowski, 2021).

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