

Is Managerial Authority Still Human?

Algorithmic Management and the Reconfiguration of Authority

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The integration of algorithmic systems into organizational processes is reshaping not only how work is coordinated but also the foundations of managerial authority. Research on algorithmic management has largely concentrated on labor control, surveillance, and worker outcomes. Yet, it has paid less attention to the ways in which these systems transform authority as an institutional feature of organizations. This article develops a conceptual framework that explains how authority shifts across sociotechnical systems that include managerial actors, data infrastructures, and computational models. It draws on organization theory and sociotechnical perspectives to argue that managerial authority does not reside solely in formal roles but takes shape through ongoing interactions with algorithmic systems. Authority, in this view, emerges through practice rather than remaining fixed within hierarchical structures. The paper proposes a typology of hybrid managerial authority regimes, each defined by a different balance between managerial discretion and algorithmic decision-making. It also distinguishes algorithmic authority from algorithmic control, showing that algorithmic outputs can function as legitimate bases for decision-making rather than serving only as tools of monitoring or enforcement. These arguments contribute to research on digital organizing and AI governance, especially in relation to the evolution of authority, legitimacy, and accountability in organizations that rely on algorithmic systems. The analysis also calls into question established assumptions about hierarchical authority in contexts where governance increasingly operates through computational infrastructures.

Keywords: algorithmic management, managerial authority, algorithmic governance, sociotechnical systems, digital organizations

INTRODUCTION

The integration of computational systems into organizational processes is reshaping how work is coordinated, monitored, and evaluated. Across sectors, algorithmic models now mediate core managerial functions, including task allocation, performance assessment, scheduling, and decision support. Although algorithmic management first emerged in the context of digital labor platforms, comparable practices are increasingly visible in more traditional organizational settings, where predictive analytics, artificial intelligence, and data-driven dashboards play a growing role in structuring managerial oversight and guiding employee behavior (Kellogg, Valentine, & Christin, 2020; Möhlmann & Zalmanson, 2017). What

is taking shape is not simply a more data-rich form of management, but a shift toward modes of governance in which computational systems participate directly in organizing work rather than remaining tools in the hands of managers.

Several researchers examined the consequences of this shift for worker autonomy, surveillance, and labor control. Studies of platform-mediated work, for example, show how algorithmic evaluation systems intensify performance monitoring, accelerate work rhythms, and generate new forms of discipline as well as resistance (Rosenblat & Stark, 2016; Wood et al., 2019). Parallel developments have been documented within organizational contexts, where algorithmic systems shape worker visibility, influence incentive structures, and mediate interactions between employees and managers (Kellogg et al., 2020). These contributions have been critical in clarifying the behavioral and experiential effects of algorithmic control. At the same time, they leave a central question insufficiently explored: what happens to managerial authority itself when core managerial functions are increasingly delegated to algorithmic systems?

This question matters because classical organization theory treats managerial authority as anchored in hierarchical roles, formal legitimacy, and identifiable decision-makers (Weber, 1978). Authority has typically been associated with discretion, supervision, and the capacity to coordinate and evaluate work within recognized organizational structures (Barnard, 1938; Simon, 1947). Algorithmic management unsettles these assumptions. As evaluative and decision-making functions become distributed across data infrastructures and computational models, authority no longer appears to reside solely in individuals or formal roles. Instead, it may be experienced as embedded in metrics, rankings, and system-generated recommendations, which raises important questions about how authority is constituted and recognized as legitimate in digitally mediated work environments.

The delegation of managerial functions to algorithmic systems therefore signals more than an extension of existing control mechanisms. It points to a reconfiguration of authority itself. Algorithmic systems shape how authority is enacted, limit managerial discretion in some domains, and can render authority structures less visible or more opaque (Faraj, Pachidi, & Sayegh, 2018; Leonardi, 2021). The result is a set of hybrid governance arrangements in which hierarchical and algorithmic forms of authority coexist and interact. These arrangements introduce new forms of ambiguity: accountability becomes more difficult to trace, responsibility more diffuse, and the interpretation of organizational directives more contingent (Murray, Rhymer, & Sirmon, 2021). Despite these developments, organization theory has yet to offer a systematic account of how managerial authority is reconfigured under conditions of algorithmic management.

This article addresses that gap through the development of a conceptual framework that explains how algorithmic management transforms the structure, sources, and legitimacy of managerial authority in contemporary organizations. It reconceptualizes authority as a sociotechnical accomplishment distributed across human actors and computational infrastructures, rather than as a property of formal roles alone. It also develops a typology of hybrid authority regimes that captures different configurations of hierarchical and algorithmic governance, and examines the legitimacy tensions and sensemaking challenges that arise as workers navigate these arrangements. The analysis is guided by the following question: how does algorithmic management transform the structure, sources, and legitimacy of managerial authority in contemporary organizations? Addressing this question contributes to ongoing debates on the future of management and the governance of AI-enabled organizations, while also prompting a reconsideration of foundational assumptions about hierarchy and authority in contexts where governance increasingly operates through code.

ALGORITHMIC MANAGEMENT IN CONTEMPORARY ORGANIZATIONS

Defining Algorithmic Management

Algorithmic management can be defined as the delegation of managerial functions to computational systems that collect data, evaluate performance, allocate tasks, and shape worker behavior through automated or semi-automated processes. In contrast to earlier forms of decision support, these systems do not simply assist managers; they take part directly in coordinating work and structuring organizational control (Kellogg, Valentine, & Christin, 2020; Raisch & Krakowski, 2021). Early studies of digital labor

platforms highlighted how algorithms assume functions traditionally associated with supervisors, including monitoring, evaluation, and discipline, often through opaque metrics and real-time feedback mechanisms (Lee et al., 2015; Rosenblat & Stark, 2016). More recent work characterizes algorithmic management as a distinct mode of governance marked by continuous data capture, automated evaluation, and ongoing behavioral optimization (Möhlmann & Zalmanson, 2017; Wood et al., 2019).

This form of management differs in important ways from earlier generations of automation. Traditional information systems tended to augment managerial discretion, leaving decision authority largely intact. Algorithmic systems, by contrast, embed decision rules, predictive models, and evaluative criteria that shape both managerial choices and worker conduct (Kellogg et al., 2020). Managerial oversight thus unfolds through sociotechnical arrangements that combine human supervision with algorithmic monitoring and data-driven decision processes.

From Platform Work to Mainstream Organizational Contexts

Initial research on algorithmic management focused on gig economy platforms such as ride-hailing services and online labor markets, where algorithms govern task allocation, performance evaluation, and compensation (Rosenblat & Stark, 2016; Wood et al., 2019). This focus is now shifting. Evidence suggests that algorithmic management has moved beyond platform-based work and is becoming embedded in a wide range of organizational settings. Predictive scheduling in retail, performance analytics in call centers, and data-driven evaluation tools in professional services all illustrate how algorithmic governance is entering more conventional employment relationships (Kellogg et al., 2020).

This expansion reflects broader developments in digital transformation and organizational datafication. Advances in machine learning, cloud computing, and sensor technologies make it possible to generate fine-grained performance data and integrate it into operational decision processes (Faraj, Pachidi, & Sayegh, 2018). Dashboards, recommendation systems, and predictive analytics increasingly shape managerial coordination and influence employee behavior across diverse contexts. Algorithmic management, in this sense, forms part of a wider shift toward digitally mediated organizing in which computational systems occupy a central role in governance and coordination.

Algorithmic Management as Organizational Infrastructure

As algorithmic systems become embedded in everyday organizational processes, their role extends beyond discrete tools. They form part of the infrastructure through which work is organized. Digital infrastructures structure visibility, define what can be measured, and shape how performance is interpreted, thereby influencing both managerial decision-making and worker conduct (Leonardi, 2021). Continuous data capture and automated evaluation produce persistent representations of performance that guide oversight and inform organizational action (Kellogg et al., 2020).

This infrastructural dimension becomes especially visible in environments characterized by real-time monitoring and extensive data integration. Algorithms mediate interactions between workers and managers, establish evaluative benchmarks, and generate recommendations that affect task prioritization and resource allocation. These systems can enhance coordination, but they also alter the conditions under which managerial discretion is exercised. Decision processes may become partially standardized or constrained by system-generated outputs, while workers may orient their behavior toward optimizing algorithmically defined metrics rather than responding directly to managerial expectations (Möhlmann & Zalmanson, 2017).

Emerging Tensions and Ambiguities in Algorithmic Governance

The infrastructural role of algorithmic management introduces a range of tensions and ambiguities. Algorithmic systems often operate with limited transparency, which creates informational asymmetries that make it difficult for workers to understand evaluative criteria and decision processes (Rosenblat & Stark, 2016; Burrell, 2016). At the same time, the apparent objectivity of algorithmic evaluation can lend legitimacy to managerial decisions while obscuring the discretionary choices embedded in system design

and data interpretation (Kellogg et al., 2020). Accountability becomes harder to trace as responsibility is distributed across managers, designers, and computational systems.

Workers do not passively accept these arrangements. Research on platform labor shows how individuals adapt strategically, reinterpret system signals, and sometimes attempt to game algorithmic evaluation mechanisms (Wood et al., 2019). Comparable dynamics are likely to emerge in organizational contexts, where employees must reconcile algorithmic directives with managerial expectations and professional norms. These patterns indicate that algorithmic management reshapes not only coordination but also social relations, interpretive processes, and power dynamics within organizations.

Despite these insights, the implications of algorithmic management for the institutional foundations of managerial authority remain underexplored. When monitoring, evaluation, and decision-making functions are distributed across sociotechnical infrastructures, the basis of authority itself becomes less clear. Understanding how authority is constituted, enacted, and perceived in such settings requires a return to foundational concepts in organization theory.

Algorithmic Authority vs Algorithmic Control

Several researchers examined algorithmic management through the lens of control, and emphasized how computational systems monitor performance, discipline workers, and structure behavioral compliance. Studies of platform labor demonstrate how algorithms coordinate tasks, evaluate performance through metrics and ratings, and enforce behavioral norms through automated feedback systems (Rosenblat & Stark, 2016; Wood et al., 2019). In this view, algorithms function primarily as mechanisms of surveillance that intensify oversight and reduce worker autonomy (Kellogg, Valentine, & Christin, 2020).

Control, however, does not fully capture how algorithmic systems reshape authority. In classical organization theory, authority refers to the legitimate right to direct action and to define the premises upon which decisions are made (Weber, 1978; Barnard, 1938; Simon, 1947). It differs from control in a crucial respect: control enforces compliance, whereas authority establishes the basis on which directives are accepted as legitimate.

Algorithmic authority emerges when outputs generated by computational systems come to be treated as legitimate guides for action. Algorithms may define evaluative criteria, generate recommendations, and structure interpretations of performance. When such outputs are perceived as objective, analytically robust, or institutionally credible, they begin to function as authoritative decision premises rather than as mere monitoring devices. Research on algorithmic governance suggests that computational systems increasingly shape how decisions are justified and accepted, especially when they are associated with narratives of data-driven rationality and technical expertise (Gillespie, 2014; Burrell, 2016).

Distinguishing between algorithmic control and algorithmic authority makes it possible to move beyond a narrow focus on surveillance and worker outcomes. In practice, both dynamics often coexist: algorithmic systems monitor behavior while also shaping the legitimacy of the decisions they produce. This dual role has important implications for how authority is distributed and enacted in contemporary organizations. It also points to the need to revisit classical conceptions of managerial authority in light of algorithmically mediated forms of organizing. The next section discusses these foundational perspectives and examines how they are challenged under conditions of algorithmic management.

MANAGERIAL AUTHORITY IN ORGANIZATION THEORY

Managerial authority occupies a central place in organization theory as the mechanism through which coordination, accountability, and collective action are sustained within formal structures. Classical accounts define authority as the legitimate right to direct the behavior of others, typically grounded in hierarchical roles and institutionalized rules. Weber's (1978) formulation of legal-rational authority captures this logic by emphasizing the impersonal and bureaucratic character of managerial power. In this view, legitimacy derives from formal procedures and role occupancy rather than from personal discretion. Barnard (1938) retains this structural orientation but introduces an important relational dimension, arguing that authority

ultimately depends on its acceptance by subordinates. Authority is not simply exercised; it must be recognized, emerging through communicative processes that align directives with organizational purpose.

Administrative theory extends these insights while shifting attention toward the role of authority in organizing decision-making. Simon (1947) treats authority as a mechanism that structures expectations and reduces cognitive complexity, allowing organizations to function under conditions of bounded rationality. Later work on organizational design elaborates how authority distributes decision rights and clarifies reporting relationships, thereby enabling coordination across differentiated units (Mintzberg, 1983). Research on organizational control reinforces this perspective, showing how authority supports the alignment of individual behavior with collective goals through a combination of behavioral supervision, output controls, and normative mechanisms (Ouchi, 1979). Across these traditions, authority remains closely tied to identifiable managerial actors who exercise discretion and assume responsibility for organizational outcomes.

This role-centered view, however, has long been complicated by the recognition that organizational governance is mediated by material and technological arrangements. Sociotechnical research shows that information technologies shape what becomes visible, measurable, and actionable, thereby influencing how authority is enacted even when formal hierarchies remain in place (Leonardi, 2011). Technologies reorganize knowledge flows, alter temporal rhythms, and generate persistent representations of performance. In doing so, they quietly reconfigure power relations and control dynamics. Authority, from this perspective, does not reside exclusively in hierarchical roles; it takes shape through interactions between human actors and the infrastructures that support organizational coordination.

Recent advances in analytics and artificial intelligence intensify this sociotechnical mediation. Research on human–AI collaboration indicates that computational systems can guide judgment, shape decision premises, and influence action in ways that position them within, rather than outside, organizational governance processes (Faraj, Pachidi, & Sayegh, 2018; Jarrahi, 2018; El Asri et al, 2023). Algorithms now generate recommendations, evaluations, and predictions that inform managerial decisions, raising questions about the boundaries of managerial discretion and the distribution of decision authority. What follows is not simply a shift in tools, but a change in how authority itself is enacted, as decision-making becomes entangled with computational outputs.

Despite these developments, organization theory has only partially addressed their implications for the institutional foundations of managerial authority. Classical perspectives assume identifiable authority holders, relatively clear lines of accountability, and discretionary interpretation of rules. Algorithmic systems unsettle these assumptions. When evaluative criteria and decision rules are embedded within computational infrastructures, they operate alongside managerial actors. Authority may thus appear less anchored in formal roles and more closely associated with system outputs, performance metrics, and automated processes. At the same time, the perceived objectivity of algorithmic evaluation can legitimize decisions while obscuring the human choices embedded in system design and data interpretation.

We can therefore say that existing models of managerial authority are no longer sufficient for capturing governance processes in algorithmically mediated organizations. The distribution of evaluative and decision functions across data infrastructures introduces new ambiguities around responsibility, legitimacy, and discretion, while reshaping how organizational members interpret directives and attribute authority. Managerial authority is not displaced, but reconfigured. It is distributed across hybrid arrangements that combine hierarchical roles, data representations, and algorithmic outputs. Capturing this transformation requires moving beyond role-based accounts toward a framework that understands authority as a sociotechnical accomplishment.

ALGORITHMIC MANAGEMENT AS AUTHORITY RECONFIGURATION

While prior research has examined algorithmic management primarily through the lens of control and labor governance, less attention has been devoted to how algorithmic systems reconfigure the structure of managerial authority itself. Building on the distinction between algorithmic authority and algorithmic

control, this section develops a framework explaining how algorithmic management redistributes authority across sociotechnical configurations.

Authority Beyond Hierarchy: A Sociotechnical Reframing

The diffusion of algorithmic management suggests that authority in contemporary organizations cannot be understood solely as a property of hierarchical roles. Instead, it takes shape within sociotechnical configurations in which human actors, data infrastructures, and computational systems jointly participate in governance processes (Seaver, 2017; Leonardi, 2021). Algorithmic systems structure visibility, define evaluative criteria, and generate recommendations that influence both managerial decisions and worker behavior (Kellogg, Valentine, & Christin, 2020; Leonardi, 2021). As a result, authority appears less anchored in identifiable positions and more dispersed across organizational actors and technological artefacts.

This shift does not eliminate managerial authority; it alters how it is enacted. Managers continue to occupy formal roles and remain accountable for outcomes, yet their discretion is increasingly shaped by systems that structure decision premises and performance representations. Authority emerges through ongoing interaction between hierarchical roles and computational infrastructures, giving rise to hybrid governance arrangements in which the boundary between managerial judgment and system-generated direction becomes difficult to draw. Questions of responsibility, legitimacy, and interpretation become correspondingly more complex.

Mechanisms of Algorithmic Authority Enactment

The reconfiguration of authority under algorithmic management unfolds through several interrelated processes. Algorithmic evaluation systems generate continuous representations of performance that inform oversight and guide worker conduct. Metrics, rankings, and dashboards establish benchmarks that can acquire normative force, shaping behavior even without direct managerial intervention (Möhlmann & Zalmanson, 2017). At the same time, decision rules and predictive models structure task allocation and prioritization, embedding organizational expectations within system architectures and narrowing the range of available choices.

Algorithmic influence also operates through more subtle mechanisms. Feedback loops, dynamic incentives, and forms of behavioral nudging encourage alignment with system-defined objectives, often without explicit directives. These processes extend beyond traditional supervisory control, operating continuously and frequently outside the field of direct observation. In parallel, the integration of algorithmic recommendations into decision-making introduces a form of epistemic authority. Outputs may be treated as analytically superior or more objective, shaping not only what decisions are made but how they are justified (Faraj, Pachidi, & Sayegh, 2018; Lebovitz, Lifshitz-Assaf, & Levina, 2022).

A Typology of Hybrid Managerial Authority Regimes

The diffusion of algorithmic management does not produce a uniform transformation of managerial authority. Instead, organizations exhibit heterogeneous governance arrangements in which hierarchical authority and algorithmic systems interact in different ways. To capture this variation, managerial authority can be conceptualized along two analytical dimensions: the degree of algorithmic decision authority and the level of managerial discretion in interpreting and acting upon algorithmic outputs. Algorithmic decision authority refers to the extent to which computational systems generate directives, evaluations, or recommendations that structure organizational action. Managerial discretion refers to the degree to which managers retain the capacity to interpret, modify, or override these outputs. The interaction of these dimensions produces distinct configurations of authority that shape how governance is enacted in algorithmically mediated organizations.

Table 1 summarizes the four hybrid managerial authority regimes that emerge from the interaction between algorithmic decision authority and managerial discretion.

TABLE 1
HYBRID MANAGERIAL AUTHORITY REGIMES IN ALGORITHMIC MANAGEMENT

Authority Regime	Algorithmic Decision Authority	Managerial Discretion	Primary Source of Authority	Managerial Role	Worker Orientation
Algorithm-Supported Authority	Low	High	Hierarchical authority supported by algorithmic analytics	Decision-maker using algorithms as informational support	Workers respond primarily to managerial directives
Algorithm-Augmented Authority	Moderate	Moderate	Hybrid authority emerging from interaction between managerial expertise and algorithmic recommendations	Interpreter and collaborator with algorithmic outputs	Workers balance managerial expectations and algorithmic metrics
Algorithm-Dominant Authority	High	Limited	Algorithmically defined decision premises and performance metrics	Executor and contextual interpreter of algorithmic directives	Workers orient behavior toward algorithmic evaluation metrics
Algorithm-Displaced Authority	Very High	Minimal	Authority embedded in algorithmic infrastructures that generate directives autonomously	Peripheral overseer or exception handler	Workers respond primarily to algorithmic instructions

Algorithm-supported authority describes settings in which algorithmic systems function primarily as analytical tools. They enhance visibility and inform decision-making, yet authority remains anchored in managerial roles. Algorithmic outputs shape decision premises without determining outcomes, resembling earlier forms of decision support that extend managerial cognition while preserving discretion (Simon, 1977; Leonardi, 2011).

Algorithm-augmented authority reflects a more integrated relationship between human judgment and algorithmic recommendation. Decisions emerge through iterative interaction between managerial expertise and computational outputs. Managers retain the ability to override system recommendations, but decision-making increasingly unfolds within environments structured by algorithmically generated insights (Faraj, Pachidi, & Sayegh, 2018). Authority becomes relational, distributed across human and computational actors.

Algorithm-dominant authority arises when computational systems define evaluative criteria, performance metrics, and decision pathways. Managers operate within parameters established by algorithmic systems, exercising discretion primarily in exceptional situations or when interpreting ambiguous outputs. In these contexts, algorithmic outputs acquire practical authority because they shape the standards through which decisions are assessed and justified (Kellogg, Valentine, & Christin, 2020; Möhlmann & Zalmanson, 2017).

Algorithm-displaced authority characterizes situations in which governance appears embedded in computational infrastructures themselves. Algorithmic outputs function as de facto directives, guiding

behavior with limited visible managerial intervention. Empirical studies of platform work illustrate how workers often experience coordination as an autonomous governing force, structured by real-time data processing and system-generated instructions (Rosenblat & Stark, 2016; Wood et al., 2019). Although formal authority remains organizationally situated, its enactment becomes closely associated with algorithmic systems rather than hierarchical actors.

This typology makes clear that algorithmic management does not simply automate managerial functions. It redistributes authority across different configurations, each with distinct implications for discretion, accountability, and legitimacy.

Legitimacy and Interpretive Dynamics in Hybrid Authority

The emergence of hybrid authority regimes introduces new legitimacy and interpretive challenges. Authority traditionally derives legitimacy from formal roles and institutionalized procedures; however, algorithmic governance often relies on narratives of objectivity, efficiency, and data-driven rationality to justify its influence. The perceived neutrality of algorithmic evaluation may enhance compliance while obscuring the discretionary choices embedded in system design and data selection (Pasquale, 2015; Kellogg et al., 2020). As a result, legitimacy becomes negotiated through sensemaking processes in which workers interpret the relationship between managerial directives and algorithmic outputs.

These interpretive dynamics shape patterns of compliance, resistance, and adaptation. Workers may align behavior with algorithmic metrics to secure favorable evaluations, strategically navigate system constraints, or contest decisions perceived as opaque or unfair. Managers, in turn, must reconcile their formal responsibility for outcomes with reliance on computational recommendations, navigating tensions between accountability and algorithmic guidance. Hybrid authority regimes therefore generate not only new governance structures but also evolving social dynamics that influence how authority is perceived, enacted, and contested within organizations.

Conceptualizing algorithmic management as authority reconfiguration highlights the emergence of heterogeneous governance arrangements characterized by distributed agency and interpretive ambiguity. These dynamics invite further theorization of their organizational consequences and the mechanisms through which hybrid authority shapes behavior and governance outcomes. Building on this framework, the following section develops a set of propositions that articulate the relationships between hybrid authority regimes, legitimacy processes, and patterns of organizational response.

CONSEQUENCES OF HYBRID MANAGERIAL AUTHORITY

Reframing algorithmic management as a transformation of authority has important implications for organizational governance. Hybrid authority regimes reshape not only who governs work but also how authority is interpreted, legitimized, and enacted in practice. The coexistence of hierarchical and algorithmic forms of authority introduces ambiguity and redistributes responsibility across sociotechnical arrangements. Rather than producing uniform outcomes, these configurations generate variation in how authority is experienced and responded to within organizations. This section develops a set of propositions that specify the consequences of hybrid managerial authority for legitimacy, worker behavior, and managerial roles.

Authority and Legitimacy Formation

Authority depends not only on formal structures but also on its perceived legitimacy (Suchman, 1995). Under hybrid regimes, legitimacy becomes more complex as algorithmic outputs enter evaluative and decision processes. Algorithmic systems often draw legitimacy from claims of objectivity, neutrality, and analytical rigor, which can encourage acceptance even when their inner workings remain opaque (Gillespie, 2014; Kellogg, Valentine, & Christin, 2020; Glikson & Woolley, 2020). At the same time, opacity and perceived arbitrariness can undermine trust, particularly when system-generated outcomes conflict with professional judgment or lived experience.

Legitimacy in this context is not given; it is negotiated. In settings where managerial authority remains dominant, algorithmic inputs may reinforce legitimacy by providing analytical support for decisions. Where algorithmic systems play a more central role, legitimacy may hinge on the perceived credibility of data-driven processes, sometimes at the expense of transparency and accountability. What matters is how organizational members interpret the relationship between hierarchical directives and algorithmic outputs.

Proposition 1: *The greater the perceived objectivity of algorithmic evaluation, the more likely hybrid authority regimes are to secure compliance through legitimacy narratives.*

Proposition 2: *Algorithmic opacity increases legitimacy tensions by complicating responsibility attribution and interpretive clarity.*

Worker Interpretation, Compliance, and Resistance

Hybrid authority regimes also reshape worker sensemaking and behavioral responses. Algorithmic governance introduces ambiguity regarding the locus of authority, requiring workers to interpret whether directives originate from managerial judgment, system outputs, or their interaction. Sensemaking research suggests that such ambiguity intensifies interpretive effort and may influence patterns of compliance and resistance (Weick, Sutcliffe, & Obstfeld, 2005). Workers may respond by aligning behavior with algorithmically defined metrics, strategically navigating system constraints, or contesting decisions perceived as unfair or opaque.

Empirical studies of platform work demonstrate that individuals frequently engage in adaptive behaviors, including gaming evaluation metrics or developing informal strategies to manage algorithmic visibility (Wood et al., 2019). Similar dynamics may emerge in organizational contexts characterized by algorithm-dominant authority, where behavioral alignment with metrics becomes a central mechanism of compliance. However, interpretive ambiguity may also create opportunities for resistance, particularly when workers perceive misalignment between algorithmic directives and professional judgment.

Proposition 3: *Hybrid authority regimes characterized by ambiguous authority sources increase worker sensemaking and interpretive effort.*

Proposition 4: *Algorithm-dominant authority regimes are more likely to generate strategic adaptation and gaming behaviors than algorithm-supported regimes.*

Managerial Role Transformation and Accountability

Hybrid authority regimes have significant implications for managerial roles and identity. As computational systems structure evaluative and decision processes, managerial discretion may become constrained or reframed, shifting the managerial role from primary decision-maker to interpreter, mediator, and accountability bearer. Human–AI collaboration research suggests that managers increasingly operate within algorithmically defined decision environments, balancing reliance on computational recommendations with responsibility for organizational outcomes (Beane, 2019; Faraj et al., 2018; Jarrahi, 2018). This dynamic introduces tensions between formal accountability and distributed agency.

Managers must therefore navigate dual expectations: to trust algorithmic insights while retaining responsibility for decisions influenced by system outputs. In algorithm-augmented regimes, this may produce collaborative decision-making practices that combine human judgment with computational analysis. In more algorithm-dominant regimes, however, managerial authority may appear diminished even as accountability remains intact, creating potential role strain and legitimacy challenges. These dynamics highlight the need to conceptualize managerial authority not as displaced but as transformed through evolving sociotechnical responsibilities.

Proposition 5: *Hybrid authority regimes shift managerial roles toward interpretive and mediating functions rather than direct supervisory control.*

Proposition 6: *The greater the reliance on algorithmic decision support, the more pronounced the tension between managerial accountability and discretionary authority.*

IMPLICATIONS FOR THEORY AND PRACTICE

Implications for Organization Theory

Conceptualizing algorithmic management as authority reconfiguration extends foundational understandings of managerial authority within organization theory. Classical perspectives have largely treated authority as anchored in hierarchical roles and formalized decision rights (Weber, 1978; Simon, 1947). While sociotechnical scholarship has highlighted the mediating influence of technology on organizational processes, authority itself has remained implicitly human-centered. The framework developed in this article suggests that contemporary governance cannot be adequately captured through role-based conceptions alone. Instead, authority increasingly emerges from sociotechnical configurations in which hierarchical actors, data infrastructures, and computational systems collectively shape decision premises and behavioral expectations.

This reframing contributes to ongoing debates on digital organizing by positioning authority as an infrastructural accomplishment rather than a static attribute of managerial roles. Digital infrastructures do not simply support coordination; they structure visibility, define evaluative criteria, and influence interpretive processes, thereby participating in the enactment of governance (Leonardi, 2011). By introducing the notion of hybrid authority regimes, the framework highlights how governance arrangements vary in the relative influence of hierarchical and algorithmic elements, offering a lens for understanding heterogeneity across digitally mediated organizations. More broadly, the argument invites organization scholars to reconsider authority as a dynamic and relational phenomenon shaped by evolving sociotechnical assemblages.

Implications for Managerial Roles and Organizational Design

Shifts in the structure of authority carry important consequences for managerial roles and organizational design. As computational systems become more deeply embedded in evaluative and decision processes, managers increasingly operate within environments characterized by distributed agency and partial automation. The role of the manager is no longer defined primarily by direct supervision. Instead, it involves interpreting algorithmic outputs, mediating between system-generated recommendations and contextual knowledge, and exercising judgment in situations where data-driven signals are incomplete or contested. Managerial expertise, under these conditions, expands to include the ability to evaluate, contextualize, and, when necessary, challenge algorithmic recommendations. Hybrid decision-making thus becomes a core organizational capability.

At the same time, these developments complicate long-standing assumptions about accountability and discretion. Although algorithmic systems may shape or constrain decision processes, managers typically retain formal responsibility for outcomes. This creates a tension between distributed agency and concentrated accountability that organizational structures must address. Designing for hybrid authority requires more than technological integration; it calls for governance mechanisms that support transparency, enable oversight, and provide clear pathways for escalation when algorithmic outputs conflict with contextual considerations. Effective management in AI-enabled organizations therefore depends not only on the sophistication of computational systems but also on the institutional arrangements that sustain meaningful human oversight and interpretive engagement.

Implications for AI Governance and Responsible Management

The emergence of hybrid authority regimes also sheds light on broader challenges associated with AI governance in organizational contexts. Much of the existing discourse on responsible AI focuses on fairness, transparency, and ethical design. While these concerns remain essential, the analysis developed in this paper suggests that governance challenges also arise from the redistribution of authority across sociotechnical configurations. When algorithmic systems participate directly in evaluation and decision-

making, questions of responsibility, legitimacy, and accountability become more difficult to resolve, particularly in situations where system outputs acquire normative force without clear mechanisms for interpretation or contestation.

From this perspective, authority clarity becomes a central dimension of responsible management. Governing AI effectively requires more than technically robust and ethically aligned systems; it also depends on organizational arrangements that specify how algorithmic outputs are interpreted, challenged, and integrated into decision processes. Transparency initiatives, for example, are unlikely to enhance legitimacy on their own unless they are accompanied by practices that enable organizational actors to make sense of and engage with algorithmic recommendations. Responsible AI governance can therefore be understood as a sociotechnical accomplishment, one that depends on aligning technological capabilities with institutional structures of authority, accountability, and trust.

CONCLUSION

This paper addresses a question that sits at the intersection of organization theory and the growing literature on algorithmic management: is managerial authority still human in organizations where governance increasingly operates through computational systems? The analysis has argued that this question cannot be answered by simply assessing the extent to which algorithms support or replace managerial functions. Rather, it requires a reconceptualization of authority itself.

Drawing on organization theory and sociotechnical perspectives, the paper has shown that managerial authority is no longer adequately understood as a property anchored solely in hierarchical roles and formal decision rights. Instead, authority emerges through sociotechnical configurations in which human actors, data infrastructures, and computational systems jointly shape decision premises, evaluative criteria, and patterns of organizational action. In this sense, authority becomes an infrastructural accomplishment—one that is enacted through ongoing interactions between managerial roles and algorithmic systems rather than exercised exclusively by identifiable actors.

The framework developed in this article advances this reconceptualization in three ways. First, it distinguishes between algorithmic control and algorithmic authority, clarifying how computational systems may function not only as mechanisms of monitoring but also as legitimate sources of decision guidance. Second, it introduces a typology of hybrid managerial authority regimes, demonstrating that the transformation of authority under algorithmic management is not uniform but varies across configurations defined by the interplay between managerial discretion and algorithmic decision authority. Third, it articulates the consequences of these hybrid regimes for legitimacy formation, worker interpretation, and managerial roles, highlighting how authority becomes negotiated, distributed, and at times contested within algorithmically mediated organizations.

These contributions point to a broader shift in how organizational governance is constituted. Algorithmic management does not simply extend existing forms of control; it reconfigures the distribution of authority across human and computational elements. As authority becomes embedded in metrics, models, and system-generated outputs, the boundaries between decision-making, evaluation, and control become increasingly blurred. This shift introduces new ambiguities around accountability and legitimacy, while also reshaping how organizational actors interpret directives and attribute authority.

The analysis also opens several avenues for future research. Empirical studies are needed to examine how hybrid authority regimes operate across different organizational contexts and to explore how variations in algorithmic design, transparency, and institutional setting influence patterns of legitimacy and resistance. Further work could investigate how authority is negotiated in situations where algorithmic outputs conflict with professional expertise or organizational values, as well as how governance mechanisms evolve to address the tensions between distributed agency and concentrated accountability. Comparative research across industries and institutional environments may also shed light on how broader socio-technical conditions shape the enactment of hybrid authority.

At a broader level, the findings suggest that the question is not whether managerial authority remains human, but how it is transformed when it becomes entangled with computational infrastructures. Authority

persists, but it no longer resides solely in hierarchical positions; it is enacted through systems that both enable and constrain organizational action. Recognizing this shift is essential for understanding the future of management, the governance of AI-enabled organizations, and the evolving relationship between humans and machines in organizational life.

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