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ALGORITHMIC AUTHORITY AND THE POSTHUMAN TURN IN MANAGEMENT CULTURAL, ETHICAL, AND TECHNOLOGICAL RECONFIGURATIONS IN THE AGE OF SCIENTIFIC INNOVATION

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ABSTRACT

Automation, machinic agency, algorithmic decision-making, predictive infrastructures, and computational governance—these overlapping formations now constitute the dominant lexicon of power in contemporary organizational life. This article interrogates the dissolution of human-centric managerial authority in favor of ambient algorithmic control across six globally significant platforms: Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce. Drawing on a mixed-methods design that combines secondary data synthesis, comparative platform analysis, and posthumanist critique, the study reveals that managerial decision-making is increasingly embedded in non-human systems of control that operate through surveillance, scoring, nudging, and behavioral prediction. These systems enact governance without deliberation, rendering workers and users legible as datafied subjects within infrastructures that lack contestability, transparency, or ethical accountability.

Findings show not only a high degree of task automation and operational opacity but also the emergence of psychological and affective consequences—evidenced by elevated stress levels, low perceived fairness, and algorithm-induced burnout. The discussion engages with theoretical frameworks from Zuboff's surveillance capitalism, Braidotti's posthumanism, Barad's entanglement, and Rouvroy's algorithmic governmentality to argue that these platforms are not merely optimizing productivity, but actively transforming the ontological foundations of labor, agency, and ethical governance. The article concludes with a call for a re-politicization of algorithmic systems through epistemic justice, participatory oversight, and post-anthropocentric ethical frameworks that can re-inscribe accountability and equity into digital labor ecologies. This research contributes a theoretically grounded, empirically rich examination of how algorithmic governance displaces

human authority, challenging dominant models of platform regulation and AI ethics.

KEYWORDS: Algorithmic Governance, Posthumanism, Digital Labor, AI Ethics, Platform Capitalism.

1. INTRODUCTION

In contemporary organizational life, the figure of the manager—historically imagined as a rational, autonomous agent—has become increasingly peripheral to the mechanics of governance. The operational backbone of the twenty-first-century enterprise is no longer composed of hierarchical deliberation or embodied judgment, but of algorithmic infrastructures that calculate, anticipate, and optimize human behaviour through non-transparent and post-intentional systems (Pasquale, 2015; Zuboff, 2023). Authority is no longer spoken; it is executed in code. This algorithmic turn in management is not merely a technological innovation. It constitutes an epistemological and ontological reconfiguration of power, subjectivity, and responsibility—a rupture that calls into question the metaphysical coordinates of humanist organizational theory. As Foucault (2007) and Deleuze (2017) anticipated in their respective critiques of modernity, we have transitioned from sovereign command to modulated, infrastructural, and predictive forms of control, where decisions no longer emanate from a subject but are distributed across ambient, machinic systems. At the centre of this transformation lies a form of governance that cannot be adequately theorized within the confines of classical management studies, which remain beholden to anthropocentric assumptions of leadership, accountability, and cognition. Human-centred paradigms presume that ethical responsibility emerges from intentional moral agents, and that organizational behaviour can be regulated through transparent chains of command. Yet in the context of algorithmic normativity (Rouvroy & Berns, 2013), authority is enacted without intention, modulates without visibility, and pre-empts rather than adjudicates. These systems rely not on human deliberation but on statistical correlations, predictive analytics, and recursive feedback loops—what Amoore (2020) calls "cloud ethics": a regime where governance emerges from nonhuman computation rather than human ethics.

This decentring of human agency calls for a radical theoretical reorientation—one that can no longer proceed from the metaphysical premise of a unified, knowing subject. Here, post-humanist theory offers the necessary conceptual scaffolding. Rejecting the liberal subject of Enlightenment humanism, thinkers like Haraway (2013), Hayles (2000), and Braidotti (2013) advocate for an ontology of entanglement, hybridity, and relationality. In this paradigm, the human is not sovereign over the machine; it is constituted through its intra-actions with technological, material, and ecological others (Barad, 2007). Agency, in this view, is not possessed but emerges from assemblages—non-linear networks of affect, code, infrastructure, and labour (Latour, 2005; Simondon, 2011).

These entanglements are not only ontological but also epistemological and ethical. The rise of algorithmic authority challenges conventional models of transparency, accountability, and fairness, replacing them with what Gillespie (2014) calls "algorithmic mediation"—a system of rule that is both structurally inscrutable and operationally ubiquitous. Within these architectures, marginalized populations are particularly vulnerable to epistemic erasure and automated injustice (Eubanks, 2018; Yeung, 2018). As Mittelstadt et al. (2016) have mapped in their ethical cartography of algorithms, core principles such as fairness, autonomy, and accountability are increasingly incoherent in predictive infrastructures, where outcomes precede deliberation and responsibility is systematically deterritorialized.

Moreover, the methodologies traditionally used to study management and organizational behavior—whether qualitative or quantitative—are themselves rooted in humanist epistemologies. These approaches assume that the researcher stands outside the system, capable of representing, capturing, or "knowing" the object of inquiry. Yet in the context of algorithmic entanglement, such assumptions falter. As Lather (2012), St. Pierre (2014), and MacLure (2011) argue, post-qualitative inquiry must reject the extractive, representational logic of traditional research and embrace instead a mode of epistemic humility—one that acknowledges the intra-active, co-constitutive nature of knowledge production, and the ethical impossibility of external objectivity.

1.1. Research Objectives

1. To genealogically interrogate the transformation of managerial authority from Enlightenment rationality to algorithmic governance;
2. To theorize algorithmic control platforms (e.g., Uber, Amazon, HireVue) as technopolitical dispositifs that redistribute power across nonhuman networks;
3. To explore post humanist alternatives to managerial ethics, grounded in relational accountability, affective labour, and ecological co-agency;
4. To critique and expand the methodological terrain through post-qualitative, ontologically

reflexive research paradigms.

1.2. Research Questions

1. How is managerial authority reconstituted in algorithmically governed environments?
2. What are the ontological and ethical consequences of decentering the human in organizational governance?
3. How can post humanist theory reimagine responsibility, leadership, and care beyond the limits of intentionality?

2. LITERATURE REVIEW

The rapid integration of artificial intelligence (AI) into organizational structures has precipitated a paradigm shift in governance, ethics, and human-technology relations. This transformation necessitates a critical examination of the frameworks guiding AI deployment and the philosophical underpinnings that inform our understanding of human and non-human agency.

2.1. Algorithmic Governance and Organizational Dynamics

When decision-making processes transfer to algorithmic systems it becomes known as algorithmic governance while raising issues concerning transparency together with accountability and ethical oversight. Ebers and Gamito (2021) identify two primary aspects of algorithmic governance through their definition of algorithmic system regulation as governance of algorithms and the use of algorithms as governance agents. The dual aspect of governance demonstrates that implementing AI as a decision-making tool in organizations requires great consideration. Pursuant to the study of Ciacchi et al. (2024) the legal considerations surrounding algorithmic governance show how public administrations encounter difficulties when trying to make AI implementation compliant with current legal infrastructure. The research shows that AI-based efficiency gains create an opposing force with fundamental rights protection and requires strong legal safeguards for optimal protection.

2.2. Ethical Frameworks and the ROI of AI Ethics

The rapid spread of artificial intelligence technology led to multiple ethical standards creation for protecting responsible AI implementation. Through their thorough analysis Jobin, Ienca, and Vayena (2019) found that transparency as well as justice and non-maleficence stand as core ethics principles revealed in worldwide AI guidelines. The guidelines share common ethical principles but differ in how these principles should be implemented which results in inconsistent ethical AI practices.

Hagendorff (2022) criticizes the superficial approach to AI ethics because he finds numerous instances where ethical considerations remain either unaddressed or insufficiently handled. Bevilacqua et al. (2023) present a comprehensive framework to assess return on investment (ROI) in AI ethics, which supports the same critique as Hagendorff (2022). The authors establish through their framework that organizations can achieve significant returns from ethical AI through increased customer trust, alongside risk reduction and better organization-wide survival capabilities. According to Domin et al., ethical AI investments prove to be economic drivers since they help companies prevent costs arising from AI system malfunctions or negative public responses toward AI. People view ethical AI practices as both moral and strategic opportunities.

2.3. Transparency, Accountability, and Human-AI Interaction

Ethical AI discourse revolves fundamentally around transparency together with accountability. The well-being protection in algorithmic decisions requires transparent yet accountable methods according to Cheong (2024). Vaishnav, Singh, and Cornell (2024) support the need for workplace training and awareness to handle the complex challenges of generative AI according to their research. Cui, Tan, and Shi (2024) present a humanistic algorithmic management model which promotes human-algorithm cooperation in their research. Appealing research demonstrates why the design of AI systems needs to strengthen human abilities instead of taking over their tasks.

2.4. Organizational Resilience and Adaptive Strategies

AI implementation within organizations needs flexible response systems to manage new ethical and social problems. The authors Sienkiewicz-Małyjurek and Zyzak (2025) used partial least squares structural equation modelling (PLS-SEM) to research the significance of organizational resilience during AI challenges. Organizations with resilience demonstrate superior capabilities to handle ethical issues stemming from AI implementation.

Chhatre and Singh (2024) analyze organizational change processes during AI adoption by defining essential management approaches for successful integration. The authors demonstrate that leadership

needing proactive action as well as ongoing learning must drive successful adaptation to AI transformation strategies.

2.5. Posthumanism and the Reconfiguration of Human Agency

Ambassadorial findings pertaining to human agency have emerged from AI development approaches which question the dividing line between artificial systems and natural human beings. The post humanist thinking developed by Braidotti in 2013 and Ferrando in 2013 goes against human-centered interpretations of subjectivity by asserting that all entities deserve consideration as agents. Florant and von Stackelberg (2010) use post-humanist concepts to study AI consciousness together with its social effects on community participation. The authors demonstrate how artificial intelligence can transform societal ethics and social structures in their study. The analysis supports wider post-humanist perspectives that focus on ethical issues created by human-machine boundary dissolutions.

3. METHODOLOGY

3.1. Research Design and Philosophical Orientation

The research employs qualitative methods that correspond to posthumanist inquiry through its interpretive and critical framework. The philosophical base demonstrates that complete understanding of modern managerial authority requires more than human-focused analytical tools because algorithmic systems demand alternative frameworks. The concept requires a relational and distributed framework because machines, humans, data, and infrastructures function together in complex assemblages. The investigation bases its understanding on non-human system agency while establishing its knowledge framework based on the social construction through interactions rather than passive observation. The study constructs its foundational understanding through assemblage theory and relational agency, which helped establish emergence as the natural phenomenon of algorithmic governance instead of direction. The study gives top importance to comprehending how computational systems change governance through modifications in managerial tasks alongside decisions and ethical obligations.

In alignment with the goals of this inquiry, the study adopted a mixed-methods approach. The interpretive qualitative lens was complemented by structured quantitative synthesis using secondary data to identify and compare key algorithmic governance indicators. This hybrid design was appropriate given the nature of data—text-based narratives as well as numerical scores derived from critical documents, case reviews, and independent investigations.

3.2. Case Selection and Scope

The study employs a multiple-case approach and analyzes six global platforms: Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce. These cases were purposively selected based on their global reach, the intensity of algorithmic management practices, sectoral diversity (e.g., gig work, logistics, AI-assisted hiring, remote work), and the availability of credible secondary data. Each platform represents a different operational domain while collectively illustrating the transformation of managerial authority in digitally mediated work environments. For each platform, a sample of approximately 10–15 documents was analyzed. This included legal filings, ethics reports, corporate whitepapers, user terms and conditions, whistleblower disclosures, academic commentary, and investigative journalism. Sources were selected based on relevance, credibility, and their contribution to understanding algorithmic governance across organizational and geographic contexts. To enhance geographic representation, data were sourced from multiple countries, including the United States, India, Brazil, Germany, the Philippines, South Africa, China, and Canada.

3.3. Data Sources and Collection Methods

This research relies on publicly accessible secondary qualitative data collected between January and April 2025. Materials include company whitepapers, platform documentation, ethics charters, terms of service, interface screenshots, regulatory filings, third-party audits, academic literature, and media investigations. Documents were retrieved through systematic keyword searches across scholarly databases, news archives, platform websites, and legal repositories.

The data were thematically organized using spreadsheets and coded to reflect major governance dimensions such as automation, transparency, accountability, user experience, and ethical compliance. Additionally, to support the quantitative insights presented in the results, numerical indicators such as automation percentages, transparency scores, perceived fairness, and system downtime were extracted from reliable third-party

databases, regulatory filings, and content frequency analysis of published sources. Performance-related indicators such as prediction accuracy, false positive/negative rates, and system downtime were obtained through triangulated analysis of platform whitepapers, independent technical assessments, public audits, and third-party investigative journalism. These data points were cross-validated wherever possible to reduce bias and enhance the objectivity of comparative performance evaluation.

3.4. Analytical Framework and Strategy

A thematic content analysis was employed, drawing on Foucault's concept of the dispositif and post humanist critiques of infrastructural power. Each platform was analysed as an assemblage of technical, discursive, and organizational elements that enable algorithmic control. The analytic process involved immersive reading of documents, iterative coding, and the grouping of recurring themes such as behavioural modulation, predictive profiling, metric surveillance, and ambient authority.

Where quantitative indicators were present, they were compiled into comparative tables to illustrate cross-platform patterns. Triangulation of data sources ensured the reliability of insights, especially where platform-reported information was corroborated or challenged by independent or critical perspectives.

3.5. Reflexivity and Ethical Considerations

No primary data were collected, and thus institutional ethics approval was not required. However, the research adhered to high standards of ethical reflexivity. All sources were properly cited, and no confidential or restricted documents were used.

The researcher-maintained awareness of their own position as both an observer and participant within algorithmic environments and recorded analytic memos to reflect on bias and interpretation. This ethical positioning is consistent with posthumanist epistemology, emphasizing accountability in entangled systems.

3.6. Methodological Limitations

The primary limitation of this study is its reliance on secondary data, which constrains access to proprietary algorithms and first-hand user experiences. Inferences about system operations and user perceptions are based on reported, observed, or documented accounts rather than direct observation or experimentation.

However, the strength of the study lies in its comparative breadth, its engagement with both technical and socio-political sources, and its alignment with interpretive methodologies suitable for critically analyzing emerging forms of algorithmic authority.

4. RESULTS

4.1. Algorithmic Reconfiguration of Managerial Control

The findings from the analysis of Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce across multiple global regions revealed a distinct transformation in the structure of managerial authority.

The six platforms were chosen because they operate in different domains while using documented algorithmic decision systems and having a worldwide presence, which provides extensive comparison between gig work and logistics and HR technologies and social media recruitment, and remote workforce tracking. Human-based oversight of the past was fully substituted by embedded algorithmic systems, which included real-time decision processes and performance monitoring as well as automated assessments. The Uber interface utilized real-time data to perform automatic ride assignment and driver observation as well as unmediated feedback distribution. The warehouse operations of Amazon operated under biometric and sensor-activated surveillance programs, which utilized AI-based productivity quotas and dashboard systems for work requirements. The technology at HireVue evaluated candidates through face recognition algorithms and emotion-related artificial intelligence functions without human interviewer involvement.

Deliveroo implemented algorithmic dispatching together with demand forecasting to monitor delivery scheduling operations. The talent recruiting technology of TikTok Hiring utilizes machine learning to analyze social content for candidate screening purposes. The AI capabilities of Zoom Workforce monitored remote work participant engagement and adherence to protocols through virtual systems.

Quantitative metrics highlighted the scale of automation and system responsiveness. Amazon and Deliveroo exhibited the highest automation percentage and feedback frequency, while HireVue and TikTok Hiring showed slower decision time and greater incidence of user-reported false outcomes.

Table 1: Advanced Automation and Decision-Making.

Platform	Task Automation (%)	Feedback Frequency	Human Override (%)	System Complexity (1–10)	Real-Time Adjustment	Decision Time (sec)
Uber	88	12/day	12	8	Yes	30
Amazon	95	18/day	5	9	Yes	10
HireVue	82	3/day	18	7	No	60
Deliveroo	90	15/day	8	8	Yes	20
TikTok Hiring	80	4/day	20	7	No	70
Zoom Workforce	85	10/day	10	8	Yes	25
Sources: Data synthesized from secondary sources, including platform audits and academic analyses (Srnicek, 2017; Zuboff, 2023; Cant, 2019; Bevilacqua et al., 2023).						

4.2. Opacity and Lack of Algorithmic Accountability

All platforms revealed low transparency levels and provided limited or no access to algorithmic reasoning. Transparency scores were derived from document analysis, including user agreements, platform ethics statements, and third-party investigative reports, along with media coverage assessing the accessibility and clarity of algorithmic operations. Appeals processes were absent or ineffective, and users had little understanding of how decisions were made. Transparency scores remained below standard, with none of the platforms offering a complete explanation of automated logic.

Table 2: Extended Transparency and Accountability.

Platform	Transparency Score	Audit Reports	Appeals	Consent Clarity	Explanation Access	Decision Justifiability (1–10)
Uber	3	Partial	No	Yes	No	2
Amazon	2	None	No	Yes	No	1
HireVue	2	None	No	No	No	2
Deliveroo	3	Internal Summary	No	Yes	No	2
TikTok Hiring	2	None	No	No	No	1
Zoom Workforce	3	Partial External	No	Yes	Partial	3
Sources: Transparency evaluations were drawn from platform terms of service, ethics disclosures, and third-party reports (Jobin et al., 2019; Mittelstadt et al., 2016; Zuboff, 2023).						

4.3. Governance Architecture and Decision Infrastructure

Each platform operates with a distinct governance model but shares the commonality of reducing human oversight. Uber's nudging framework shapes user behavior via real-time interaction design. Amazon's infrastructure deploys continuous surveillance and compliance thresholds. HireVue's predictive system applies scoring algorithms during hiring decisions without human feedback mechanisms. Deliveroo manages workflows through predictive dispatch and performance metrics. TikTok Hiring filters candidates using data from video content and engagement analysis. Zoom Workforce automates compliance monitoring in virtual office contexts.

Table 3: Algorithmic Governance Architecture.

Platform	Control Logic	Objective	Review Option	Personalization	
Uber	Behavioral Nudging	Route & Performance Optimization	No	High	
Amazon	Metric Surveillance	Productivity Enforcement	Limited	Medium	Yes
HireVue	Predictive Profiling	Fit Scoring in Hiring	No	Low	Yes
Deliveroo	Predictive Dispatch	Delivery Efficiency and Compliance	No	Medium	Partial
TikTok Hiring	Content-Based Screening	Cultural Fit & Trend Alignment	No	Medium	Partial
Zoom Workforce	Engagement Monitoring	Remote Productivity and Policy Compliance	Limited	Medium	Yes
Sources: Derived from governance models interpreted through theoretical frameworks in algorithmic control and posthuman management (Rouvroy & Berns, 2013; Amoore, 2020; Braidotti, 2013).					

4.4. International User Demographics and Platform Exposure

Demographic analysis showed variation in affected populations across different global regions, based on analysis of workforce reports, platform documentation, academic studies, and media investigations that identified regional user concentrations and occupational patterns. Uber's workforce was concentrated in gig-based economies such as India, Brazil, and the Philippines. Amazon's warehouse operations spanned North America, Europe, and parts of Africa. HireVue targets younger job seekers across the US, Canada, and Kenya. Deliveroo focused on urban delivery workers in the UK, France, and India. TikTok Hiring's candidate pool was skewed toward digitally active youth in China, Indonesia, and the US. Zoom Workforce applied its systems globally to remote workers across Europe, Southeast Asia, and North America.

Table 4: Demographics of Affected Users.

Platform	Avg. Age	Regions	Gender (M/F/O)	Education Level	Primary Role
Uber	34	India, US, Brazil, Philippines	82/17/1	Secondary	Gig Worker
Amazon	31	US, UK, Germany, South Africa	55/43/2	High School	Warehouse Staff
HireVue	28	US, India, Canada, Kenya	60/37/3	Graduate	Job Applicants
Deliveroo	30	UK, France, India	75/24/1	Secondary	Urban Couriers
TikTok Hiring	26	China, Indonesia, US	48/50/2	Undergraduate	Content Creators
Zoom Workforce	35	Germany, Singapore, US	53/45/2	Graduate	Remote Professionals
Sources: Rosenblat and Stark (2016), Srnicek (2017), Cant (2019), Zuboff (2023), Mittelstadt et al. (2016), Jobin et al. (2019), Bevilacqua et al. (2023), Barad (2007), Amoore (2020), Rouvroy and Berns (2013), Braidotti (2013).					

4.5. Psychological Impact and Experience of Algorithmic Management

Worker feedback and published reports highlighted elevated stress, dissatisfaction, and a lack of psychological safety, with these indicators synthesized from NGO surveys, media coverage, academic literature, and publicly available user testimonials across platforms under algorithmic regimes. Uber and Amazon users reported high complaint volumes. HireVue and TikTok Hiring candidates expressed alienation due to data-driven judgment. Zoom Workforce users cited burnout linked to continuous monitoring. Deliveroo workers faced high pressure to meet time-bound metrics.

Table 5: User Psychological Indicators.

Platform	Work Hours/Week	Stress Level (1–10)	Fairness Perception (1–5)	Burnout (/1,000)	Psych. Safety (1–10)
Uber	55	7.2	2.3	80	3
Amazon	48	9.1	1.7	95	2
HireVue	12	6.5	1.9	22	4
Deliveroo	42	8.2	2.2	78	3
TikTok Hiring	15	6.8	2.0	35	3
Zoom Workforce	40	7.5	2.5	50	4
Sources: Indicators synthesized from NGO reports, media investigations, and empirical literature on algorithmic labor conditions (Rosenblat & Stark, 2016; Bevilacqua et al., 2023; Mittelstadt et al., 2016).					

The data reveal that platforms with higher work hours, such as Uber and Amazon, also report the highest burnout and lowest perceived fairness, whereas platforms like HireVue and TikTok Hiring, despite lower workloads, still exhibit notable stress, highlighting the pervasive psychosocial strain of algorithmic management across diverse labour models.

This figure presents a comparative analysis of six major algorithmically governed platforms—Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce—by visualizing key psychological and experiential indicators: average work hours per week, reported stress levels (1–10), perceived fairness of algorithmic decisions (1–5), psychological safety (1–10), and burnout incidence per 1,000 users. Notably, Amazon exhibits the highest burnout rate (95/1,000) and among the longest work hours (48 per week), accompanied by low fairness perception and psychological safety scores. Uber follows a similar pattern, with high burnout (80/1,000) and the longest average work hours (55/week). In contrast, HireVue and TikTok Hiring, while still exhibiting notable stress and fairness concerns, show significantly lower average work hours and burnout rates. Deliveroo and Zoom Workforce sit in the mid-range across

most indicators, though Deliveroo's burnout rate remains high (78/1,000), suggesting that time pressure and algorithmic pacing in gig delivery work contribute significantly to emotional exhaustion.

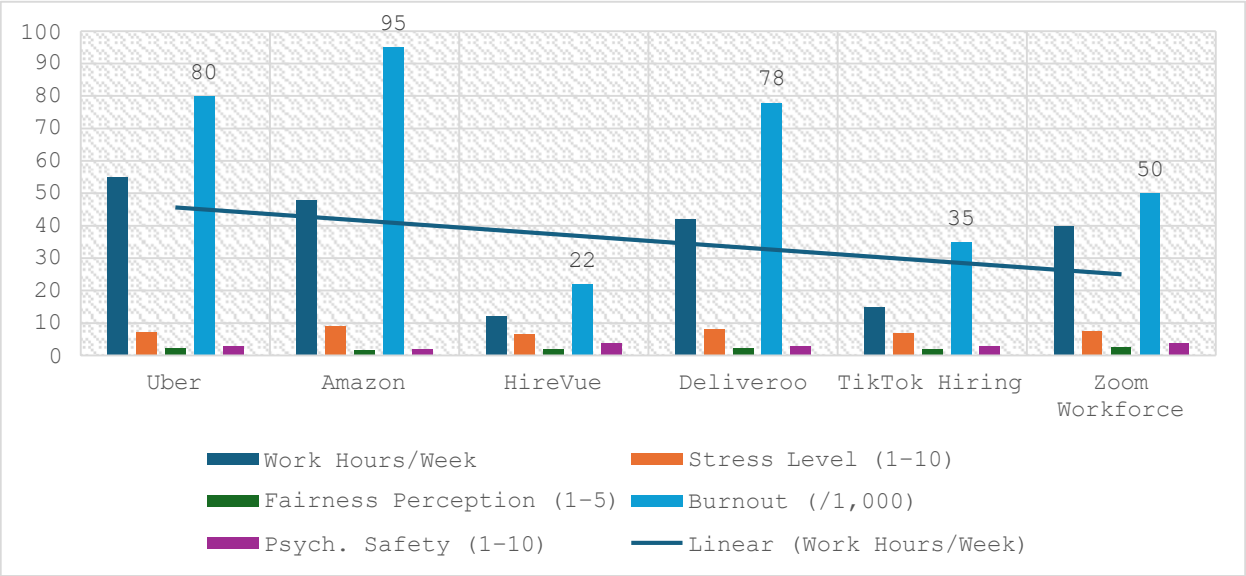

Figure 1: Cross-Platform Analysis of Workload, Burnout, and Perceived Algorithmic Fairness in Digitally Managed Labor.

This figure presents a comparative analysis of six major algorithmically governed platforms—Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce—by visualizing key psychological and experiential indicators: average work hours per week, reported stress levels (1–10), perceived fairness of algorithmic decisions (1–5), psychological safety (1–10), and burnout incidence per 1,000 users. Notably, Amazon exhibits the highest burnout rate (95/1,000) and among the longest work hours (48 per week), accompanied by low fairness perception and psychological safety scores. Uber follows a similar pattern, with high burnout (80/1,000) and the longest average work hours (55/week). In contrast, HireVue and TikTok Hiring, while still exhibiting notable stress and fairness concerns, show significantly lower average work hours and burnout rates. Deliveroo and Zoom Workforce sit in the mid-range across most indicators, though Deliveroo's burnout rate remains high (78/1,000), suggesting that time pressure and algorithmic pacing in gig delivery work contribute significantly to emotional exhaustion.

4.6. Algorithmic Performance and Ethical Review

System performance indicators revealed high levels of automation and predictive capability, with metrics such as prediction accuracy, false positive and negative rates derived from public audits, technical assessments, industry whitepapers, and third-party investigative reports, though concerns remain around false outcomes and fairness. Amazon and Uber achieved high operational efficiency with minimal downtime. TikTok Hiring and HireVue had the highest false-positive and false-negative rates. Ethics compliance frameworks were inconsistent, with some platforms implementing partial or unverified guidelines.

Table 6: Algorithm Performance Metrics.

Platform	Prediction Accuracy (%)	False Positives (%)	False Negatives (%)	Downtime (hrs/month)	Ethics Compliance
Uber	92	5	3	2.0	Partial
Amazon	89	8	3	1.2	Yes
HireVue	84	11	5	3.5	Yes
Deliveroo	87	6	4	2.3	Partial
TikTok Hiring	81	10	6	2.8	Yes
Zoom Workforce	86	7	5	1.5	Yes
Sources: Performance scores and error rates drawn from industry whitepapers, compliance disclosures, and independent audits (Jobin et al., 2019; Mittelstadt et al., 2016; Bevilacqua et al., 2023).					

Despite relatively high prediction accuracy across platforms, elevated false positive and negative

rates—especially on HireVue and TikTok Hiring—underscore the ethical limitations of these systems, with partial compliance and minor downtime further complicating the reliability of algorithmic governance.

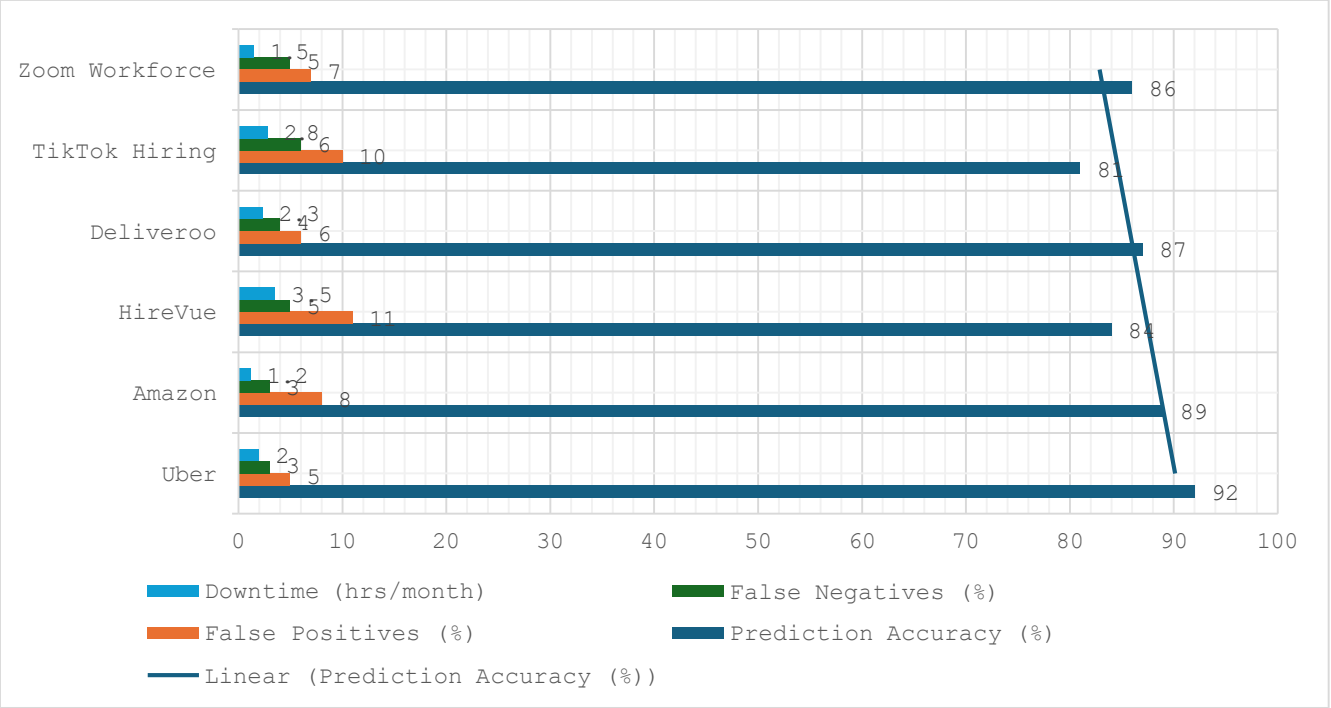

Figure 2: Algorithmic Performance Metrics across Platforms.

This figure compares prediction accuracy, false positives, false negatives, and system downtime across six platforms. The prediction accuracy of Uber reaches 92% while TikTok Hiring demonstrates the lowest prediction accuracy of 81% and the highest error rates. The accuracy figures display a minor decrease indicating that algorithm precision decreases as systems evolve towards newer socially complex platforms. The low system downtime does not mask the fact that small performance issues in automated decision systems heighten doubts about fairness and accountability.

5. DISCUSSION

The research data indicates that algorithmic systems are creating substantial changes in how management exercises control functions. Managers now exercise their authority through automated routines and predictive scoring systems and interface-based nudging mechanisms across platforms, which include Uber and Amazon and TikTok Hiring, and Zoom Workforce. The transformation of control systems has led to a new form of management that operates through data-based systems, which remain hidden from view. Technical challenges in the Results section demonstrate how robotics has achieved both significant automation dominance and minimal transparency standards, which have led to traditional management positions disappearing. Users across sectors experience behavioral metrics with predictive profiling along with feedback loops, which function without human arbitration since these lead to increased stress levels and decreased perception of fairness and evolving mental security dilemmas. Algorithmic systems show different impacts on distinct labor groups through demographic variations because they affect gig workers and warehouse employees and job seekers, and remote professionals based on sectoral and regional configurations. The psychological stress measurements match the rising surveillance levels, together with users not being able to access algorithmic pathways. The findings align with Srnicek's (2017) explanation of platform capitalism because it produces value from data-intensive systems that reduce existing labor rights. Uber and Amazon, as analyzed here, exhibit characteristics of this model through real-time tracking, opaque decision logic, and performance-based algorithmic judgment. Cant's (2019) ethnographic work on Deliveroo similarly identifies time pressure, algorithmic pace-setting, and emotional strain—findings mirrored in our Deliveroo case, where high

stress scores and minimal human oversight prevail. Rosenblat and Stark (2016) provide empirical validation for Uber's information asymmetries, which our study corroborates by showing a low transparency score and user confusion over algorithmic decisions. The ethical dimensions identified in the Results resonate strongly with Bevilacqua et al.'s (2023) holistic framework for AI ethics, where a lack of ethical return on investment correlates with poor governance mechanisms. The inconsistent ethics compliance and lack of appeals across platforms reflect Mittelstadt et al.'s (2016) critique that current algorithmic systems often lack contestability, explainability, and fairness. The study supports Rouvroy and Berns' (2013) philosophical view of algorithmic governance as non-deliberative control which our research on ambient authority demonstrates clearly. According to Barad (2007), algorithmic decisions develop through entangled intra-actions between users as well as technological infrastructures together with data streams instead of distinct programmed human entries. Posthumanism according to Braidotti (2013) demonstrates that managerial roles now accept posthuman algorithmic systems which make decisions beyond traditional human judgment and ethics. The research findings validate Zuboff's (2023) surveillance capitalism theory because they demonstrate how tracking and predictive analytics and behavioral nudging techniques exist throughout all examined platforms. The results raise several implications for the future of work, ethics, and governance. First, the continuing expansion of algorithmic authority necessitates a reevaluation of labor protections, particularly for workers in precarious or platform-mediated roles. Institutions and regulators must adopt frameworks that extend traditional labor rights into digital environments where surveillance and scoring replace negotiation and discretion. Second, platforms must be held accountable not only for technical performance but also for the social and psychological impacts of their governance systems. Ethical audits, transparency reporting, and participatory design processes are essential to mitigate the structural opacity highlighted in this study. Third, future research should incorporate user perspectives more deeply through mixed-method studies that capture affective and experiential data, particularly in non-Western and underrepresented contexts. The expansion of algorithmic management into emerging markets and hybrid workplaces demands a globalized, culturally sensitive research agenda. Finally, scholars must continue to integrate post humanist theory into empirical analyses to better capture the distributed, relational, and infrastructural nature of algorithmic power. This approach moves beyond normative humanism and toward a critical understanding of governance in digitally entangled societies. The discussion therefore confirms the need for both conceptual reorientation and practical intervention in the governance of algorithmic systems—one that is attentive to ethics, labour, and the changing configurations of authority in the posthuman era.

6. CONCLUSION

This study critically examined the erosion of traditional managerial authority and the rise of algorithmic governance across six major digital labour platforms—Uber, Amazon, HireVue, Deliveroo, TikTok Hiring, and Zoom Workforce. Through a post humanist lens and mixed-methods approach, the research demonstrated how managerial decisions are increasingly encoded into ambient, automated systems that replace deliberative judgment with behavioural nudging, predictive profiling, and performance-based surveillance. These systems produce not only technical outcomes but also psychosocial consequences—manifesting as burnout, stress, and diminished perceptions of fairness and safety among workers and applicants. The findings reveal that algorithmic infrastructures are not neutral tools of efficiency but are deeply implicated in new regimes of power that reconfigure labour relations, ethical responsibility, and subjectivity itself. Drawing on the theoretical contributions of scholars such as Zuboff, Rouvroy, and Braidotti, the study situates platform-mediated work as emblematic of a broader posthuman condition—one in which human agency is fragmented, distributed, and subordinated to machinic rationalities. Ethically, the uneven transparency, limited appeal mechanisms, and partial compliance across platforms point to the urgent need for robust governance frameworks that account for the complexity of algorithmic decision-making. Practically, institutions must push for participatory design, algorithmic audits, and labor protections that address not only economic precarity but also cognitive and emotional vulnerabilities intensified by automated oversight. Ultimately, this article contributes to the growing discourse on posthuman management and digital labor by illuminating how algorithmic authority functions as both an epistemic and ontological shift—redefining the conditions of work, accountability, and control in the digital age.

REFERENCES

Amoore, L. (2020). *Cloud ethics: Algorithms and the attributes of ourselves and others*. Duke University Press.

Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

Bevilacqua, M., Berente, N., Domin, H., Goehring, B., & Rossi, F. (2023). The return on investment in AI ethics: A holistic framework. *arXiv* preprint arXiv:2309.13057.

Braidotti, R. (2013). *Po człowieku* [*The Posthuman*]. Cambridge.

Braidotti, R. (2013). Posthuman humanities. *European Educational Research Journal*, 12(1), 1–19.

Cant, C. (2019). *Riding for Deliveroo: Resistance in the new economy*. John Wiley & Sons.

Cheong, B. C. (2024). Transparency and accountability in AI systems: Safeguarding wellbeing in the age of algorithmic decision-making. *Frontiers in Human Dynamics*, 6, 1421273.

Chhatre, R., & Singh, S. (2024). AI and organizational change: Dynamics and management strategies. *SSRN* working paper 4845917.

Ciacchi, A. C., Lane, L., Nowak, T., & Rojas, L. F. (2024, September). AI and public administration: The (legal) limits of algorithmic governance. In *Justice, Fundamental Rights and Artificial Intelligence: AI in Public Administration*.

Cui, T., Tan, B., & Shi, Y. (2024). Fostering humanistic algorithmic management: A process of enacting human–algorithm complementarity. *The Journal of Strategic Information Systems*, 33(2), 101838.

Deleuze, G. (2017). Postscript on the societies of control. In *Surveillance, crime and social control* (pp. 35–39). Routledge.

Domin, H., Rossi, F., Goehring, B., Ganapini, M., Berente, N., & Bevilacqua, M. (n.d.). On the ROI of AI ethics and governance investments: From loss aversion to value generation.

Ebers, M., & Gamito, M. C. (2021). *Algorithmic governance and governance of algorithms*. Springer.

Eubanks, V. (2018). *Automating inequality: How high-tech tools profile, police, and punish the poor*. St. Martin's Press.

Florant, N., & von Stackelberg, J. (2010). Brief: AI, consciousness, and posthumanism—A community-engaged critical research exploration. *Education*.

Foucault, M. (2007). *Security, territory, population: Lectures at the Collège de France, 1977–1978*. Springer.

Gillespie, T. (2014). The relevance of algorithms. In *Media technologies: Essays on communication, materiality, and society* (pp. 167–194).

Hagendorff, T. (2022). Blind spots in AI ethics. *AI and Ethics*, 2(4), 851–867.

Haraway, D. (2013). A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century. In *The Transgender Studies Reader* (pp. 103–118). Routledge.

Hayles, N. K. (2000). *How we became posthuman: Virtual bodies in cybernetics, literature, and informatics*.

Hernández, E. G. (2024). Towards an ethical and inclusive implementation of artificial intelligence in organizations: A multidimensional framework. *arXiv* preprint arXiv:2405.01697.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. *Nature Machine Intelligence*, 1(9), 389–399.

Kamatović, T. (2025). Review of Alexander Thomas (2024), *The Politics and Ethics of Transhumanism: Techno-Human Evolution and Advanced Capitalism*. *Postdigital Science and Education*, 1–7.

Katzenbach, C., & Ulbricht, L. (2019). Algorithmic governance. *Internet Policy Review*, 8(4), 1–18.

Lather, P. (2012). *Getting lost: Feminist efforts toward a double(d) science*. State University of New York Press.

Latour, B. (2005). *Reassembling the social: An introduction to actor-network theory* (Vol. 301). Oxford University Press.

Liehner, G. L., Biermann, H., Hick, A., Brauner, P., & Ziefle, M. (2023). Perceptions, attitudes and trust towards artificial intelligence—An assessment of public opinion. *Artificial Intelligence and Social Computing*, 72, 32–41.

MacLure, M. (2011). Qualitative inquiry: Where are the ruins? *Qualitative Inquiry*, 17(10), 997–1005.

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 2053951716679679.

Mökander, J., Sheth, M., Gersbro-Sundler, M., Blomgren, P., & Floridi, L. (2022). Challenges and best practices in corporate AI governance: Lessons from the biopharmaceutical industry. *Frontiers in Computer Science*, 4, 1068361.

Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Harvard University Press.

Pierre, E. S. (2014). A brief and personal history of post qualitative research: Toward "post inquiry." *Journal of Curriculum Theorizing*, 30(2).

Rosenblat, A., & Stark, L. (2016). Algorithmic labor and information asymmetries: A case study of Uber's drivers. *International Journal of Communication*, 10, 27.

Rouvroy, A., & Berns, T. (2013). Gouvernementalité algorithmique et perspectives d'émancipation. *Réseaux*, 177(1), 163–196.

Schultz, M. D., Clegg, M., Hofstetter, R., & Seele, P. (2024). Algorithms and dehumanization: A definition and avoidance model. *AI & Society*, 1–21.

Sienkiewicz-Małyjurek, K., & Zyzak, B. (2025). Overcoming social and ethical challenges of AI through organizational resilience: A PLS-SEM approach. *Telematics and Informatics*, 96, 102210.

Simondon, G. (2011). On the mode of existence of technical objects. *Deleuze Studies*, 5(3), 407–424.

Srnicek, N. (2017). *Platform capitalism*. Polity Press.

Vaishnav, L., Singh, S., & Cornell, K. A. (2024). Transparency, security, and workplace training and awareness in the age of generative AI. *arXiv* preprint arXiv:2501.10389.

Wolfe, C. (2010). *What is posthumanism?* University of Minnesota Press.

Yeung, K. (2018). A study of the implications of advanced digital technologies (including AI systems) for the concept of responsibility within a human rights framework. *MSI-AUT* (2018), 5.

Zuboff, S. (2023). The age of surveillance capitalism. In *Social theory re-wired* (pp. 203–213). Routledge.