

Artificial Intelligence in the Modern Workplace: Ethics, Entry-Level Displacement, and the Erosion of the Career Ladder

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Abstract:

The accelerating deployment of artificial intelligence across global industries is producing a paradox of progress: while AI drives unprecedented gains in organizational productivity and decision-making quality, it is simultaneously dismantling the entry-level job market that has historically served as the primary on-ramp to professional careers. This paper argues that the most consequential and least adequately examined dimension of AI's workplace impact is not aggregate job displacement, but the selective erosion of junior and entry-level roles across white-collar sectors including finance, law, marketing, journalism, software development, and customer service. Drawing on labor market data, empirical studies, and organizational case studies, we document how generative AI tools are enabling organizations to compress or eliminate the early career tier, stranding a generation of young workers without the experiential foundation upon which professional competence is built. The paper further provides a comprehensive analysis of the ethical challenges raised by AI in the workplace including algorithmic bias, surveillance, accountability gaps, consent, and the concentration of economic power and argues that these ethical failures are structurally connected to the entry-level displacement crisis. We conclude with policy and organizational recommendations oriented toward preserving equitable pathways into the labor market.

Keywords: artificial intelligence, entry-level employment, career ladder, algorithmic ethics, workforcedisplacement, algorithmicbias, generativeAI, labormarketinequality, AIgovernance, future of work.

1. Introduction

Artificial intelligence has arrived in the workplace not as a distant disruption to be managed over decades, but as an immediate and sweeping force reshaping organizational structures, employment hierarchies, and the nature of work itself. For much of the past century, the entry-level position functioned as the foundational institution of professional life the stage at which young workers acquired skills, built networks, demonstrated competence, and earned the right to advance. That institution is now under existential pressure.(Brynjolfsson& McAfee, 2014)

Generative AI tools are large language models capable of drafting legal briefs, financial analyses, marketing copy, customer communications, and software code and perform many of the tasks that once defined entry-level work with speed and competence that challenges the economic rationale for hiring junior employees. Across industries, organizations are confronting a straightforward arithmetic: if a single experienced professional augmented by AI can produce the output previously requiring a team of five junior employees, the incentive structure of entry-level hiring collapses.(McKinsey Global Institute, 2023)

The consequences extend far beyond labor market statistics. Entry-level roles are not merely economic transactions they are developmental institutions. They are where graduates learn to

translate theoretical knowledge into practical judgment, where professional identities are formed, and where the mentorship relationships that shape long-term careers are established. The elimination of these roles does not merely delay careers; it potentially forecloses the pathways by which expertise is reproduced across generations.(World Economic Forum, 2023)

Compounding this structural challenge is a set of profound ethical failures in how AI is being designed, deployed, and governed in workplace settings. Algorithmic bias in hiring and performance management systems, opaque decision-making processes that evade accountability, pervasive employee surveillance, and the concentration of AI-generated productivity gains among shareholders and senior employees--rather than the workforce at large represent a moral landscape that demands urgent scholarly and policy attention.(Zuboff, 2019)

This paper places the entry-level displacement crisis and the ethics of AI at the center of its analysis. Section 2 reviews the historical evolution of AI in the workplace. Section 3 examines AI's productivity and operational benefits. Section 4 documents the collapse of entry-level hiring across key sectors. Section 5 analyzes the long-term consequences for career development and social mobility. Section 6 provides a comprehensive examination of AI ethics in the workplace. Section 7 addresses sector-specific transformations. Section 8 surveys strategies for

responsible AI integration, and Section 9 presents conclusions and recommendations.

2. Historical Context: AI's Evolution in the Workplace

The application of intelligent and automated systems to labor has a lineage extending across the full industrial era. The first wave of workplace automation mechanical and assembly-line robotics of the mid- twentieth century primarily displaced physical, repetitive manufacturing labor. This transformation was profound but geographically and sectorally bounded, and its effects on white-collar professional employment were largely indirect. (Brynjolfsson & McAfee, 2014)

The second wave, propelled by the computing revolution of the 1980s and 1990s, introduced rule-based expert systems, enterprise software, and digitized record-keeping that eliminated entire categories of clerical and administrative work. Filing clerks, bookkeepers, and typists are occupations that had previously provided entry points into office environments were displaced in significant numbers. Yet this wave also created new entry-level roles: data entry operators, systems administrators, help desk technicians. (Acemoglu & Restrepo, 2022)

The contemporary third wave is categorically different. Powered by machine learning, deep learning, and most recently by large language models and generative AI, this wave is penetrating professional and cognitive work that previous automation could not touch. It is not displacing the routine and the repetitive it is displacing the analytical, the communicative, and the creative work that constitutes the core of white-collar entry-level employment. [6]

The COVID-19 pandemic functioned as a dramatic accelerant. Remote work mandates forced rapid organizational digitization, compressing what analysts estimated as three to seven years of technology adoption into eighteen months. The infrastructure of remote work cloud platforms, collaboration tools, digital communication systems lowered the barriers to AI integration across organizations of all sizes, including small and medium enterprises that had previously been insulated from frontier automation. [12]

3. Productivity and Operational Benefits of AI

3.1 Automation and Operational Efficiency

AI's productivity benefits at the organizational level are substantial and well-documented. Robotic Process Automation tools enable organizations to execute data entry, compliance reporting, invoice processing, and customer onboarding workflows at scale without human labor. Enterprises deploying RPA reported average cost reductions of 22% and processing speed improvements of 59% within 18 months of implementation. [3]

3.2 Decision Augmentation

Predictive analytics platforms synthesize large data sets to surface insights that would be inaccessible to individual analysts operating under time constraints. In supply chains, AI anticipates disruptions based on geopolitical signals and supplier performance data. In human resources, AI platforms assess candidate fit and predict employee attrition. Organizations using AI-augmented decision-making outperformed peers on key business metrics by an average of

16%. (MIT Sloan Management Review, 2023)

3.3 Generative AI: The White-Collar Automation Engine

Generative AI represents the most consequential productivity development for white-collar workers in the current era. A landmark randomized controlled trial found that access to a generative AI coding assistant increased software developer productivity by 56%. [13] A study of customer support agents found a 14% improvement in issue resolution and a 9% reduction in handle time with AI support. [13] Goldman Sachs estimated in 2023 that generative AI could automate tasks equivalent to 300 million full-time jobs globally, with the highest exposure concentrated in administrative, legal, and financial occupations--precisely the sectors that generate the most entry-level white-collar employment. (Goldman Sachs, 2023)

4. The Collapse of the Entry-Level Job Market

The displacement of entry-level workers by AI is not a projected future risk it is a documented present reality. Across multiple high-skilled professional sectors, organizations are reducing their junior workforce, extending timelines between entry-level hires, or restructuring teams to eliminate the junior tier entirely. This section documents the evidence across key sectors and examines the structural logic driving these decisions. (World Economic Forum, 2023)

4.1 Legal Services

The legal profession offers one of the starkest illustrations of AI's entry-level displacement effect. Junior associate roles at law firms have historically been defined by document review, legal research, contract drafting, and due diligence tasks work that is voluminous, time-consuming, and billed to clients at significant hourly rates. AI platforms including Harvey, Casetext, and Thomson Reuters CoCounsel now perform these tasks in minutes with a quality that leading practitioners describe as comparable to a competent first or second-year associate. (Thomson Reuters Institute, 2023)

A 2023 Thomson Reuters survey found that 23% of legal tasks could be automated by AI immediately, with that figure rising to 44% within five years. Law firms that previously hired cohorts of dozens of junior associates are reporting that AI tools are enabling senior partners to work more autonomously, reducing the demand for associate labor. Several major firms have publicly announced freezes on junior hiring while simultaneously expanding AI licensing agreements. (Thomson Reuters Institute, 2023)

The consequences for law school graduates are severe. For decades, the path to partnership flowed through the associate years, during which junior lawyers developed courtroom judgment, client management skills, and legal intuition through supervised practice. If AI handles the analytical scaffolding of that developmental period, the question of how the next generation of senior lawyers acquires expertise remains unanswered. (Furman & Seamans, 2019)

4.2 Finance and Investment Banking

Investment banking analyst roles have long served as the archetypal entry-level white-collar position intensely demanding, technically rigorous, and serving as the gateway to careers in private equity, hedge funds, and corporate strategy. The analyst's core work financial modeling, pitch book preparation, market research, and data analysis--is now

substantially automatable by AI. (Goldman Sachs, 2023)

Goldman Sachs, Morgan Stanley, and JPMorgan Chase have each deployed internal generative AI platforms that dramatically accelerate the production of financial analyses and client presentations. JPMorgan's internal AI platform, reportedly capable of executing in seconds tasks that previously required hours of analyst time, is emblematic of a broader sectoral trend. The firm's 2023 analyst hiring class was significantly smaller than pre-pandemic cohorts, a pattern repeated across major financial institutions. (Goldman Sachs, 2023)

Beyond formal investment banking, AI is similarly reshaping entry-level roles in accounting, financial planning, and insurance underwriting. Automated underwriting systems are replacing junior actuaries and underwriters in assessing risk profiles. AI bookkeeping tools are eliminating the data entry and reconciliation tasks that once provided entry points into accounting careers. [3]

4.3 Technology and Software Development

Perhaps counterintuitively, the technology sector the industry most responsible for building AI is among those most affected by its entry-level displacement effects. Junior developer roles traditionally involved writing boilerplate code, fixing bugs, building test suites, and implementing well-defined features under the supervision of senior engineers. AI coding assistants, including GitHub Copilot, Amazon CodeWhisperer, and Cursor, now perform these tasks with a competence that has materially altered the economics of junior developer hiring. [13]

Data from Layoffs.fyi and analysis by the Economic Policy Institute indicate that technology sector layoffs since 2022 have been disproportionately concentrated in junior roles. Major technology companies including Google, Meta, and Amazon, which had hired large cohorts of new graduates during the pandemic boom years, subsequently shed tens of thousands of employees with early career workers bearing a disproportionate share of reductions. Entry-level software engineering postings in the United States declined by approximately 36% between 2022 and 2024. (Economic Policy Institute, 2024)

4.4 Marketing, Media, and Creative Industries

Content creation, copywriting, social media management, graphic design, and market research have historically been accessible entry points into marketing and media careers, often not requiring advanced degrees and providing creative professionals with paths to senior roles. Generative AI tools including Midjourney, DALL-E, Adobe Firefly, and large language model writing assistants are performing these tasks at scale and at a cost that drastically undercuts the economics of junior creative hiring. (Pew Research Center, 2023)

News organizations have begun deploying AI to produce routine content including sports scores, earnings reports, weather summaries, and local event coverage categories of journalism that once provided the foundational training ground for reporters' careers. The Associated Press, for example, uses AI to generate thousands of routine financial news articles monthly. Entry-level journalism positions have declined precipitously: the U.S. newsroom workforce fell by 26% between 2008 and 2020, a trend that AI is expected to further accelerate. (Pew Research Center, 2023)

4.5 Customer Service and Administrative Roles

Customer service representative and administrative assistant positions have historically been among the most accessible entry-level roles, requiring limited formal credentials and providing broad exposure to organizational operations. AI-powered chatbots, virtual assistants, and automated scheduling tools are displacing these roles at scale. A 2023 IBM study found that 87% of companies expected AI to assume the majority of routine customer interaction tasks within three years. (IBM Institute for Business Value, 2023)

The implications extend beyond individual job losses. For workers without college degrees, customer service and administrative roles have represented the primary pathway into formal employment and the benefits health insurance, retirement contributions, and professional networks that accompany it. The elimination of these roles without alternative accessible pathways risks deepening pre-existing inequalities along lines of education, class, and race. (Acemoglu & Restrepo, 2022)

5. The Broken Career Ladder: Long-Term Consequences

5.1 The Developmental Function of Entry-Level Work

Entry-level positions serve functions that extend far beyond their immediate economic output. They are developmental institutions embedded within organizational life. Junior employees learn not merely technical skills but professional judgment the capacity to navigate ambiguity, manage competing priorities, communicate effectively with clients and colleagues, and understand the implicit norms of their industry. This tacit knowledge is not transmissible through formal education; it is acquired through supervised practice, error, feedback, and repetition. (Brynjolfsson & McAfee, 2014)

If AI performs the work through which this developmental process occurs, the mechanism by which professional expertise is reproduced across generations is disrupted. Organizations may find, within a decade, that they have a senior workforce without the junior pipeline needed to replace it, and a pool of credentialed graduates without the practical foundation needed to assume senior responsibilities. This expertise gap represents a structural risk that extends well beyond the immediate displacement of individual workers. (World Economic Forum, 2023)

5.2 Inequality and Social Mobility

The collapse of entry-level hiring carries disproportionate consequences for workers who have historically faced the greatest barriers to professional employment. First-generation college graduates, workers from lower-income backgrounds, and members of historically underrepresented racial and ethnic groups often rely most heavily on formal entry-level hiring processes campus recruitment programs, structured internship pipelines, and posted job listings because they lack the informal networks through which many professional opportunities are filled. (Acemoglu & Restrepo, 2022)

As AI reduces the volume of entry-level hiring, the roles that remain are increasingly filled through informal referral networks that advantage the already-advantaged. The net effect is that AI-driven displacement of entry-level work is not merely an economic disruption it is a mechanism of social stratification, reinforcing existing inequalities in access to professional careers and compounding the distributional injustices associated with the broader concentration of

AI-driven productivity gains.(Zuboff, 2019)

5.3 The Mental Health and Identity Dimension

Research in occupational psychology has consistently established that employment serves functions beyond economic compensation. Work provides structure, identity, purpose, social connection, and a sense of competence and contribution. For young adults entering the workforce during a period of constrained entry-level opportunity, the consequences extend into psychological well-being. Extended unemployment and underemployment among early-career workers are associated with elevated rates of anxiety, depression, and reduced long-term earnings a phenomenon economists term 'scarring effects.' [12]

The generation entering the labor market in the mid-2020s faces a structural paradox: they are, in aggregate, the most educated cohort in history, having made significant investments in credentials that were predicated on the assumption of a functioning graduate labor market. As AI erodes the entry-level market, the return on those educational investments is declining at precisely the moment when student debt burdens are at historic highs.(Pew Research Center, 2023)

6. The Ethics of AI in the Workplace: A Comprehensive Analysis

The ethical dimensions of AI in the workplace constitute one of the most urgent and undertheorized areas of contemporary applied ethics. The deployment of AI in organizational settings implicates fundamental questions of fairness, accountability, consent, power, dignity, and the nature of the employment relationship. This section provides a systematic examination of these ethical challenges, arguing that they are not isolated technical problems but are structurally connected to the economic and social disruptions documented in previous sections.

6.1 Algorithmic Bias and Discrimination

AI systems are trained on historical data that encodes the biases, inequities, and discriminatory patterns of the social contexts in which that data was generated. When deployed without deliberate corrective intervention, these systems do not merely replicate historical patterns of discrimination they institutionalize them, automating bias at scale with the veneer of algorithmic objectivity.(Zuboff, 2019)

In hiring, AI screening tools trained on the characteristics of previously successful employees systematically disadvantage applicants whose profiles deviate from historical norms which in many industries means disadvantaging women, members of racial minority groups, people with non-traditional educational backgrounds, and workers from lower socioeconomic backgrounds. Amazon famously discontinued an AI recruiting tool in 2018 after internal audits revealed it consistently downgraded resumes from women. Despite this high-profile failure, AI hiring tools remain in widespread use with limited mandatory bias auditing.(Zuboff, 2019)

Facial recognition systems used in workplace access control, remote proctoring platforms used in hiring assessments, and emotion recognition tools used in video interviews have each demonstrated significantly degraded performance on individuals with darker skin tones a pattern documented in foundational research by MIT Media Lab's Joy Buolamwini and subsequently confirmed in numerous independent

audits.(United Nations, 2023)

Performance management AI systems present analogous risks. Productivity monitoring tools that track keystrokes, mouse movements, and application usage may systematically disadvantage workers with disabilities, workers who perform high-value tasks requiring reflection rather than continuous input, and workers whose cultural communication styles differ from those encoded in the system's training data. When algorithmic performance scores influence compensation, promotion, or termination decisions, these biases translate directly into material harm.[5]

6.2 Transparency, Explainability, and the Right to Understand

Many high-performing AI systems particularly deep neural networks operate as effective 'black boxes': they produce outputs without generating humanly interpretable explanations of how those outputs were reached. This opacity raises fundamental ethical concerns when AI systems influence decisions about hiring, promotion, compensation, and termination.(MIT Sloan Management Review, 2023)

Workers subject to algorithmic management have a legitimate interest arguably a moral right to understand the criteria by which they are evaluated. When an AI system produces a low performance score, assigns a disadvantageous shift pattern, or flags an employee for review, the inability to explain that determination forecloses the employee's capacity to contest it, correct the underlying behavior, or seek redress for errors. Due process, a foundational principle of fair employment, presupposes the ability to understand and challenge adverse determinations.[5]

The field of Explainable AI has developed techniques including LIME, SHAP, and attention visualization intended to make neural network reasoning more interpretable. However, these techniques produce approximations and post-hoc rationalizations rather than true explanations of model decision processes, and their accessibility to non-technical employees and adjudicators remains limited. The gap between the formal availability of explanatory tools and the practical ability of affected individuals to understand and use them is an ethical gap that regulatory frameworks have not yet adequately closed.[15]

6.3 Employee Surveillance and the Erosion of Privacy

The normalization of AI-enabled employee monitoring represents one of the most ethically consequential developments in contemporary workplace relations. Modern surveillance platforms deployed at scale following the remote work expansion of the COVID-19 era are capable of capturing keystrokes, screenshots at regular intervals, webcam footage, email and messaging content, application usage data, website visit histories, and GPS location data. Some platforms deploy machine learning to infer emotional states, engagement levels, and productivity from these inputs.(Zuboff, 2019)

The ethical objections to pervasive workplace surveillance operate on multiple levels. At the level of dignity and autonomy, continuous monitoring subjects workers to conditions of observation that are inconsistent with the respect owed to persons as rational, self-determining agents. At the level of psychological well-being, research consistently demonstrates that awareness of continuous surveillance produces anxiety, reduced creativity, and cognitive burden

effects that are likely to reduce the very performance the surveillance is ostensibly designed to improve. (Pew Research Center, 2023)

At the systemic level, the data generated by employee surveillance platforms constitutes a form of organizational power asymmetry with potentially far-reaching consequences. Employers who possess granular behavioral data about their workforce enjoy informational advantages in employment negotiations, disciplinary proceedings, and labor relations that fundamentally alter the balance of power in the employment relationship. Shoshana Zuboff's concept of 'surveillance capitalism' extends naturally into the employment context: the transformation of worker behavior into data assets serves the interests of organizational control in ways that are not reducible to legitimate performance management. (Zuboff, 2019)

6.3 The Ethical Dimensions of Entry-Level Displacement

The displacement of entry-level workers by AI is not an ethically neutral economic adjustment. It raises distinctive moral questions about intergenerational justice, the distribution of technological benefits, and the obligations of organizations toward the workers and potential workers whose opportunities they shape. (World Economic Forum, 2023)

Organizations that deploy AI to eliminate entry-level roles are capturing the productivity benefits of AI for shareholders and senior employees while externalizing the costs reduced employment opportunity, disrupted career development, and increased labor market competition onto young workers and their communities. This distribution of benefits and burdens is not ethically neutral. It reflects organizational choices about whose interests AI deployment should serve, and those choices are susceptible to ethical evaluation and, potentially, to regulatory constraint. (Acemoglu & Restrepo, 2022)

The ethical case for organizations to preserve developmental pathways for early-career workers does not require accepting inefficiency or foregoing AI's genuine benefits. It requires instead that organizations understand entry-level employment as a social institution with functions that extend beyond its immediate economic contribution--and calibrate their AI deployment decisions accordingly. Organizations that maintain robust entry-level hiring while deploying AI to augment the work of junior employees, rather than replace it, demonstrate that the choice between AI adoption and entry-level job preservation is not binary. [15]

7. Broader Sector-Specific Transformations

7.1 Healthcare

Diagnostic AI systems leveraging convolutional neural networks have demonstrated radiological accuracy comparable to board-certified specialists. Google DeepMind's AlphaFold resolved the decades-old protein structure prediction problem, dramatically accelerating drug discovery. (Google DeepMind, 2023) Clinical decision support systems flag drug interactions, predict sepsis onset, and optimize resource allocation. However, AI in healthcare also raises acute entry-level displacement concerns, as medical scribing, radiology technician tasks, and pathology screening--roles that have traditionally provided pathways for healthcare workers without advanced degrees--are increasingly automated. [12]

7.2 Manufacturing and Logistics

Industry 4.0 environments integrate AI-powered sensors, computer vision, and predictive maintenance systems to minimize downtime and optimize production. Autonomous guided vehicles and robotic picking systems have displaced significant numbers of warehouse and logistics workers, roles that disproportionately employ workers without college credentials. (McKinsey Global Institute, 2023)

8. Strategies for Responsible and Equitable AI Integration

8.1 Preserving Developmental Pathways

Organizations have a responsibility ethical and, increasingly, strategic to preserve developmental pathways for early-career workers alongside AI adoption. Leading practitioners in human-centered AI design advocate for structured AI-augmented apprenticeship models, in which junior workers use AI tools to accelerate their output while retaining the supervised, experiential dimension of early-career development. In such models, AI expands the volume and complexity of work that junior employees can undertake rather than eliminating their roles. (World Economic Forum, 2023)

8.2 Mandatory Bias Auditing

Regulators and organizations must require systematic, independent auditing of AI systems used in hiring, performance management, and workforce decisions for discriminatory bias. Audits should be conducted before deployment, at regular intervals thereafter, and whenever significant changes are made to the underlying system. Results should be disclosed to affected workers and, for high-risk systems, to regulatory authorities. [5]

8.3 Governance Frameworks

Organizations should establish AI ethics boards with genuine authority over deployment decisions, including the power to delay or halt deployments that cannot demonstrate compliance with fairness and accountability standards. These bodies should include employee representatives, not merely technical and managerial personnel, ensuring that the perspectives of workers most affected by AI deployment are integrated into governance processes. [15]

8.4 Policy Recommendations

Governments bear responsibility for establishing the regulatory and social infrastructure needed to ensure that AI's benefits are broadly shared and its harms equitably mitigated. Key priorities include:

Mandate independent bias audits for AI systems used in employment decisions, with public disclosure of findings and enforceable remediation requirements. (European Commission, 2024)

Establish legal frameworks protecting workers' right to explanation and contestation of adverse algorithmic decisions, consistent with due process principles. (European Commission, 2024)

Regulate employee surveillance technologies with clear notice, proportionality, and purpose-limitation requirements, prohibiting the use of surveillance data for purposes beyond those disclosed to workers. (Zuboff, 2019)

Fund national reskilling and apprenticeship infrastructure enabling workers displaced from entry-level roles to acquire skills for roles less susceptible to automation. [12]

Explore tax and incentive structures that discourage the wholesale elimination of entry-level roles, such as payroll tax credits for organizations that maintain or expand their junior workforce alongside AI adoption. **(Acemoglu & Restrepo, 2022)**

Invest in longitudinal labor market research tracking AI's differential impact on early-career workers across sectors, demographics, and geographies, building the evidence base needed for adaptive policy. **(World Economic Forum, 2023)**

9. Conclusion

Artificial intelligence is generating genuine and substantial benefits for organizations that deploy it thoughtfully. Productivity gains, decision quality improvements, and the augmentation of human capabilities in high-skill domains represent real advances that should not be minimized. But the distribution of AI's benefits and the allocation of its costs are not determined by technological necessity they are the product of organizational choices, policy frameworks, and social norms that are susceptible to deliberate shaping. **(McKinsey Global Institute, 2023)**

The collapse of entry-level hiring across white-collar professions is among the most consequential of those costs, and it is among the least acknowledged in mainstream discourse about AI's labor market effects. When organizations eliminate junior roles to capture AI-driven efficiency gains, they are not merely adjusting headcount they are dismantling the developmental institutions through which professional expertise is reproduced, social mobility is enabled, and the workforce of the future is built. **(World Economic Forum, 2023)**

The ethical failures associated with AI in the workplace algorithmic bias, surveillance, accountability gaps, consent deficits, and the concentration of AI's benefits among the already powerful are not peripheral concerns to be addressed after deployment. They are structural features of AI systems deployed in contexts of power asymmetry, and they demand proactive, not reactive, governance responses. **(Zuboff, 2019)**

A genuinely beneficial AI transition requires that organizations, policymakers, and scholars resist the false dichotomy between embracing AI and protecting workers. The challenge and the obligation is to design and govern AI in ways that capture its genuine productive potential while preserving the pathways through which young workers acquire expertise, the protections through which all workers are treated with dignity, and the institutions through which a dynamic and equitable labor market is maintained. **(United Nations, 2023)**

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