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Algorithmic Glass Ceilings Evaluating: Gender Neutrality in India's Automated Workplaces

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ABSTRACT

The integration of algorithmic systems into employment decision-making has reconfigured the normative foundations of workplace governance in India. While Artificial Intelligence (AI) is frequently portrayed as a neutral and efficiency-enhancing tool, its deployment in recruitment and evaluation reveals a structural paradox: algorithmic systems often replicate and entrench historical gender inequalities embedded in labor markets. This article conceptualizes this phenomenon as the “neutrality paradox” and argues that India’s existing constitutional and statutory frameworks remain inadequate to address the opacity and proxy-based nature of algorithmic discrimination. Drawing on Indian Supreme Court jurisprudence and comparative regulatory developments, the article advances an “accountability-by-design” framework grounded in substantive equality, explainability, and institutional oversight.

Keywords: *algorithmic bias, discrimination, artificial intelligence, gender, automation, constitutionality*

I. INTRODUCTION: THE MYTH OF ALGORITHMIC NEUTRALITY –

The increasing reliance on algorithmic systems in India’s corporate sector marks a decisive shift from human discretion to data-driven governance in employment relations. Organizations now deploy AI-enabled Applicant Tracking Systems, predictive analytics, and automated performance management tools with the expectation that such technologies will eliminate human bias and enhance efficiency.² Yet, this expectation rests on a deeply flawed premise that computational systems are inherently neutral. In reality, algorithms are neither autonomous nor objective; they are shaped by historical data, institutional priorities, and embedded assumptions about merit and productivity.³

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² Sejal Chandak, *Continuing Discrimination in the Times of Technology: Women, Work, Algorithms and Law in India*, 19 Indian Journal of Law and Technology 53 (2024).

³ Varda Khan, *Artificial Intelligence and Gender Bias: Analyzing Algorithmic Discrimination in Language Models*, 1 Journal of Gender, Power, and Social Transformation 31 (2024).

The Indian labour market, characterized by persistent gender disparities in hiring, promotion, and retention, provides a fertile ground for examining the limitations of this assumption. When machine learning systems are trained on datasets reflecting male-dominated professional hierarchies, they internalize these patterns and reproduce them as predictive norms.⁴ As Chandak demonstrates, algorithmic hiring tools often encode gendered expectations by privileging characteristics statistically associated with male career trajectories, thereby transforming historical discrimination into a form of automated rationality.⁵ The resulting “neutrality paradox” lies in the fact that systems designed to eliminate bias instead perpetuate it, albeit in less visible and more technologically mediated forms.

This paradox is further exacerbated by the use of proxy variables. Even in the absence of explicit gender identifiers, algorithms rely on correlated attributes such as employment gaps, mobility constraints, or educational pathways that function as indirect markers of gender.⁶ In the Indian context, these proxies frequently map onto socially entrenched roles, including caregiving responsibilities and maternity-related interruptions, thereby producing systematically adverse outcomes for women.⁷ As Monko and Mjahidi observe, such discrimination is embedded within the statistical architecture of decision-making, rendering it both opaque and resistant to traditional legal scrutiny.⁸

II. ALGORITHMIC BIAS AND DISCRIMINATION

The emergence of algorithmic decision-making does not represent a departure from existing patterns of discrimination but rather their transformation into new modalities of governance. Bias in AI systems arises from what may be termed “data inheritances”, the transmission of historical inequalities into predictive models.⁹ When past hiring practices have favored men, algorithms trained on such data learn to associate male-coded attributes with success, thereby institutionalizing bias under the guise of efficiency.¹⁰

This transformation is particularly significant because it alters the evidentiary and conceptual

⁴ Dharish David, B. Rajeshwari & Timhna S., *Algorithmic Bias and Discrimination in India: A Looming Crisis*, 11 *Journal of Development Policy and Practice* 81 (2025).

⁵ Chandak, *supra* Note 2.

⁶ Reena Roy et al., *A Socio-Legal Perspective on Gender-Based Discrimination in Machine Learning Algorithm*, in *Cyber Intelligence and Information Retrieval: Proceedings of CIIR 2023*, Volume 2, 435 (2024).

⁷ Vyanjna Saini, *Judicial Approaches to Gender Discrimination in the Workplace*, 2 *Motherhood International Journal of Research & Innovation* 50 (2025).

⁸ Gloriana J. Monko & Mohamedi M. Mjahidi, *From Bias to Balance: Navigating Gender Inclusion in AI*, in *Artificial Intelligence* (Elmer P. Dadios & Andries Engelbrecht eds., 2024).

⁹ P.R. Biju & O. Gayathri, *Analysis of Data Policies, Structural Oppression and AI Algorithms in India*, 10 *International Journal of Public Law and Policy* 449 (2024).

¹⁰ Tamanna Mahapatra, *AI and HR: Exploring the Ethical Implications of Algorithmic Hiring*, 16 *Training and Development Journal* 1 (2025).

foundations of discrimination law. Traditional legal frameworks are premised on identifiable acts, intent, or explicit classifications. Algorithmic discrimination, by contrast, operates through diffuse and indirect mechanisms, often without conscious intent or identifiable perpetrators.¹¹ As recent scholarship notes, even in the absence of explicit gender inputs, machine learning models can reconstruct gender through correlated variables, effectively bypassing legal prohibitions while preserving discriminatory outcomes.¹²

The problem is compounded by automation bias, wherein human decision-makers exhibit a tendency to defer to algorithmic outputs.¹³ Within organizational contexts, HR professionals frequently treat algorithmic rankings as authoritative, thereby insulating discriminatory outcomes from scrutiny.¹⁴ This deference not only reinforces the legitimacy of biased systems but also diffuses accountability, making it difficult to attribute responsibility for adverse decisions. The result is a form of structural opacity that challenges both regulatory intervention and judicial review.

III. CONSTITUTIONAL EQUALITY IN THE AGE OF ALGORITHMS –

Indian constitutional jurisprudence offers a rich normative framework for addressing discrimination, yet its application to algorithmic systems remains nascent. Article 14's guarantee of equality before the law has been interpreted by the Supreme Court as encompassing a substantive prohibition on arbitrariness.¹⁵ In *E.P. Royappa v. State of Tamil Nadu*¹⁶, the Court articulated the now-settled principle that arbitrariness is antithetical to equality, thereby expanding the scope of Article 14 beyond formal classification. This doctrinal shift is particularly significant in the context of algorithmic decision-making, where opacity and lack of explainability may render outcomes inherently arbitrary.

Subsequent jurisprudence has further deepened the Court's commitment to substantive equality. In *Air India v. Nergesh Meerza*¹⁷ the Court struck down service conditions that disproportionately disadvantaged air hostesses, recognizing that ostensibly neutral policies can produce discriminatory effects. Although the decision has been critiqued for its partial deference to gendered assumptions, it nonetheless marks an early recognition of indirect discrimination.

¹¹ Daniel S Cromville, *Algorithmic discrimination and equal protection law: Legal Remedies for Ai Bias in Automated Decision-Making*, 1 International Journal of Law, Policy and Scientific Research 1 (2025).

¹² *Id.*

¹³ Saroj Chhabra, Neera Batra & Deevyansh Chhabra, *Unmasking Bias in AI Based Hiring Systems: An Interdisciplinary Framework for Detection, Mitigation, and Legal Compliance*, in 2025 7th International Conference on Information Systems and Computer Networks (ISCON) 1 (2025).

¹⁴ *Id.*

¹⁵ Constitution of India, Article 14.

¹⁶ (1974) 4 S.C.C. 3.

¹⁷ (1981) 4 S.C.C. 335

This principle was more robustly articulated in *Anuj Garg v. Hotel Association of India*¹⁸, where the Court invalidated protective legislation that excluded women from certain occupations, emphasizing that state action must be assessed in light of its actual impact rather than its stated intent.

The evolution of this doctrine reached a transformative moment in *Navtej Singh Johar v. Union of India*¹⁹ where the Court foregrounded dignity, autonomy, and transformative constitutionalism as central to the interpretation of fundamental rights. The judgment's emphasis on constitutional morality over social morality provides a powerful framework for evaluating algorithmic systems that replicate societal biases. If constitutional guarantees are to remain meaningful in the digital age, they must extend to technologically mediated forms of discrimination that operate beneath the surface of formal neutrality.

Similarly, *Vishaka v. State of Rajasthan*²⁰ demonstrates the Court's willingness to develop normative frameworks in response to emerging forms of workplace harm. By recognizing sexual harassment as a violation of fundamental rights and articulating binding guidelines in the absence of legislation, the Court adopted a proactive approach to gender justice. This jurisprudential method is instructive for addressing algorithmic discrimination, which similarly occupies a regulatory gap between existing legal categories.

Despite these doctrinal advances, significant challenges remain. Fundamental rights jurisprudence in India has traditionally been oriented toward state action, raising questions about its applicability to private-sector algorithmic systems. While the horizontality of rights has gained traction in certain contexts, courts have yet to explicitly address whether algorithmic discrimination by private employers falls within constitutional scrutiny.²¹ As recent scholarship suggests, the absence of judicial engagement with algorithmic bias represents a critical gap in the evolution of equality jurisprudence.²²

Statutory frameworks offer limited supplementation. The Information Technology Act, 2000, and the Code on Wages, 2019, do not address the fairness or transparency of algorithmic decision-making, while the Digital Personal Data Protection Act, 2023, remains focused on procedural consent rather than substantive equality. The absence of a right to explanation or

¹⁸ (2008) 3 S.C.C. 1

¹⁹ (2018) 10 S.C.C. 1

²⁰ (1997) 6 S.C.C. 241

²¹ Bharath Gaikwad, *The Intersection of AI with Constitutional and Human Rights with Focus on Employment Impact*, 6 International Journal of Legal Science and Innovation 108 (2024).

²² P.D. Sujith & V.R. Dinkar, *Algorithmic Bias and the Right to Equality: Reimagining Constitutional Guarantees in the Age of Artificial Intelligence*, 11 IJRDO - Journal of Business Management 20 (2025).

meaningful oversight mechanisms further exacerbates the problem, leaving individuals without effective remedies against algorithmic harm.

IV. TOWARDS AN ACCOUNTABILITY-BY-DESIGN FRAMEWORK

The limitations of existing legal frameworks necessitate a reorientation toward an “accountability-by-design” paradigm, in which fairness and transparency are embedded within the architecture of algorithmic systems. Such an approach requires moving beyond procedural safeguards toward substantive standards that address the distributive consequences of technological decision-making.

Central to this framework is the adoption of ‘algorithmic impact assessments’, which would require organizations to evaluate the potential for bias prior to deploying AI systems in employment contexts.²³ These assessments should include rigorous testing for disparate impact, drawing on statistical methodologies similar to those employed in U.S. ‘Uniform Guidelines On Employee Selection Procedures (1978)’.²⁴ Additionally, continuous monitoring mechanisms are essential to ensure that systems remain aligned with evolving legal and social standards.

Equally critical is the recognition of a right to human review of automated decisions. By ensuring that individuals can challenge algorithmic outcomes before a human decision-maker, such a right would mitigate the risks associated with automation bias and restore procedural fairness.²⁵ Comparative models such as the European Union AI Act, demonstrate the feasibility of integrating such safeguards into regulatory frameworks.²⁶

Finally, addressing algorithmic bias requires attention to the conditions of technological production. Diversity within AI development teams can play a crucial role in identifying and mitigating bias at its source, while interdisciplinary collaboration between technologists, legal scholars, and social scientists can enhance the normative robustness of algorithmic systems.²⁷

²³ Aradhana R Mansingh & Valencia Moodley, *Digital Discrimination: Gender Bias in Algorithmic Recruitment Practices in the Global South*, 15 African Journal of Gender, Society and Development 12 (2026).

²⁴ 29 CFR Part 1607 -- Uniform Guidelines on Employee Selection Procedures (1978), <https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XIV/part-1607> (last visited Apr. 8, 2026).

²⁵ Art. 22 GDPR – Automated Individual Decision-Making, Including Profiling, General Data Protection Regulation (Regulation (EU) 2016/679), <https://gdpr-info.eu/art-22-gdpr/> (last visited Apr. 8, 2026).

²⁶ *High-Level Summary of the AI Act*, EU Artificial Intelligence Act, <https://artificialintelligenceact.eu/high-level-summary/> (last visited Apr. 8, 2026).

²⁷ Divya S. Khurana, Dev Parbhakar & Ravinderjeet Kaur, *Regulating Algorithmic Bias and Global Legal Approaches in Gender, Diversity, and Intersectional Equity in AI-Driven Professional Systems*, in *Imposter Syndrome and AI: Navigating Human Identity in the Age of Intelligent Machines* 391 (Laeq R. Janjua, Kozma D. Edina, & Bhupinder Singh eds., 2026).

V. CONCLUSION

The rise of algorithmic decision-making in India's workplaces represents a critical juncture in the evolution of equality law. While AI holds the promise of efficiency and objectivity, its uncritical adoption risks entrenching historical patterns of gender discrimination in new and less visible forms. The "algorithmic glass ceiling" is not merely a metaphor but a structural reality, embedded within the data and design of contemporary employment systems.

Indian constitutional jurisprudence, with its emphasis on substantive equality, dignity, and non-arbitrariness, provides a powerful foundation for addressing these challenges. However, realizing this potential requires a willingness to extend established principles into new technological domains. As *Vishaka* and *Navtej* decisions demonstrate, the Constitution is not a static document but a living instrument capable of responding to evolving forms of injustice.

Absent such intervention, the risk is that discrimination will become increasingly difficult to detect and contest, shielded by the opacity and perceived neutrality of algorithmic systems. The task before Indian law is therefore not merely to regulate technology but to ensure that its deployment aligns with the transformative vision of equality enshrined in the Constitution. In doing so, it must confront a fundamental truth: technology does not transcend social structures, it reflects and reproduces them. The challenge is to ensure that it does not do so uncritically.
