THE ALGORITHMIC PANOPTICON: DECONSTRUCTING GIG WORKER SURVEILLANCE AND SOCIAL INSECURITY UNDER THE CODE ON SOCIAL SECURITY, 2020

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ABSTRACT

The contemporary platform economy relies on a structural fiction: characterising gig workers as independent, autonomous micro-entrepreneurs rather than dependent labor. This socio-legal article deconstructs the mechanisms of algorithmic management—continuous biometric surveillance, opaque rating architectures, and automated deactivations—that establish a modern panopticon across India's delivery and ride-hailing sectors. Examining the Code on Social Security, 2020, this paper argues that while Sections 2(35) and 2(60) formally recognize "gig" and "platform" workers, Chapter IX provides a hollow welfare architecture devoid of enforceable rights against arbitrary digital discipline. By delegating welfare funding to an ambiguous aggregator cess without guaranteeing statutory minimum wages, occupational safety, or collective bargaining, the Code legitimatizes precarious labor. Evaluating this regulatory framework against constitutional guarantees under Articles 14, 21, and 23, the article demonstrates how algorithmic de-platforming violates procedural due process and personal dignity. Drawing comparative insights from the European Union's Platform Work Directive and the sub-national intervention of the Rajasthan Platform Based Gig Workers Act, 2023, this paper proposes a normative tripartite reform: statutory mandates for algorithmic transparency, a justiciable right against automated livelihood termination, and an institutionalized model of digital collective bargaining.

Keywords: Platform Labor, Algorithmic Management, Code on Social Security 2020, Article 21, Surveillance Capitalism, Rajasthan Gig Workers Act.

I. Introduction: The Disguised Employment Relation in Platform Capitalism

The digital platform economy has fundamentally disrupted labor relations by decoupling capital accumulation from physical supervisory structures. In place of human managers and localized factory floors, platform aggregators deploy algorithmic management—systems governed by machine-learning models, spatial tracking, and probabilistic optimization—to organize, direct, and discipline labor at scale.[1]

Within this economic architecture, platforms perpetuate a persistent legal fiction: designating workers as "delivery partners," "driver-partners," or "independent contractors." This contractual terminology misrepresents the relationship simply to escape the statutory obligations traditionally imposed on employers by common law and labor welfare acts.[2]

In India, this friction has reached a critical junction with the passage of the Code on Social Security, 2020.[3] While heralded as a progressive step for explicitly incorporating "gig workers" and "platform workers" into national legislation, the Code introduces a fragmented statutory compromise. It grants nominal welfare eligibility while entrenching workers within a precarious status, isolated from traditional industrial protections such as mandated minimum wages, overtime caps, worker representation, and statutory dispute resolution mechanisms.[4]

Consequently, platform aggregators wield near-total control over working conditions, pricing, and labor allocation, while disclaiming the duties of an employer.

This paper provides an interdisciplinary socio-legal critique of algorithmic labor in India. It examines how automated surveillance systems subjugate workers to constant monitoring, how the Code on Social Security fails to protect against algorithmic control, and how constitutional safeguards—particularly Articles 14, 21, and 23—require a legal framework that treats algorithmic transparency and procedural fairness as core rights of contemporary labor.

[1] Alex Rosenblat & Luke Stark, *Algorithmic Labor and Information Asymmetries: How Uber Technologies Exercises Control over Drivers*, 10 Int'l J. Comm. 3758, 3760–3764 (2016).
[2] Jeremias Prassl, *Humans as a Service: The Promise and Perils of Work in the Gig Economy* 34–52 (Oxford Univ. Press 2018).
[3] The Code on Social Security, 2020, No. 36, Acts of Parliament, 2020 (India).
[4] Babu Mathew et al., *The Social Security Code, 2020: A Critical Review*, 55(44) Econ. & Pol. Wkly. 14, 15–18 (2020).

II. Algorithmic Despotism: Surveillance, Automated Metrics, and the Illusion of Autonomy

A. The Fissured Workplace and Surveillance Capitalism

Classical labor sociology, drawing from David Weil's theory of the "fissured workplace," observes that modern corporations shed direct operational employment while retaining strict control over operational standards and profit margins.[5] Big tech platforms lock this division into place by constantly tracking and monitoring workers through digital means.[6]

Far from enjoying entrepreneurial flexibility, gig workers are subjected to continuous behavioral tracking:

1. **Pervasive Telematics:** Aggregator applications continuously monitor GPS coordinates, instantaneous vehicular acceleration, idle durations, and customer route deviations.

2. **Dynamic Time-Compression:** Machine-learning allocation systems adjust delivery windows using algorithmic dispatch models, forcing workers to navigate urban traffic under penalty of algorithmic demotion.

3. **Biometric Verification Audits:** Random, in-app facial recognition prompts require workers to confirm identity mid-shift, functioning as an intrusive digital time-clock that operates without privacy protections.

B. Customer Ratings as Privatized Disciplinary Tribunals

A core operational mechanism of platform control is the outsourcing of managerial discipline to customer-facing numerical ratings.[7] Aggregator algorithms interpret sub-threshold customer scores (e.g., falling below 4.7 on a 5-point scale) not as feedback, but as actionable breaches that trigger automated penalties.

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[5] David Weil, *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It* 15–27 (Harvard Univ. Press 2014).
[6] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* 337–345 (PublicAffairs 2019).
[7] Valerio De Stefano, *The Rise of the 'Just-in-Time Workforce': On-Demand Work, Crowdwork, and Labour Protection in the 'Gig-Economy'*, 37(6) Comp. Lab. L. & Pol'y J. 471, 478–482 (2016).

These metrics operate as privatized disciplinary systems characterized by:

- **Subjective and Discriminatory Biases:** Consumer ratings frequently reflect racial, caste, gender, linguistic, or socioeconomic biases, which the algorithm ingests as objective metrics of worker incompetence.[8]

- **Information Asymmetry:** Workers are deprived of specific reasons, access to customer complaints, or meaningful opportunities to challenge ratings before algorithmic penalties take effect.

- **Economic Coercion through Gamification:** Platforms structure income around opaque incentive schemes—such as "surge pricing," acceptance streaks, and tier-based priority access. These features encourage excessive driving and delivery hours, replicating the exploitative piece-rate systems criticized in historical labor jurisprudence.[9]

C. Automated Deactivation: The Algorithmic Death Sentence

The ultimate manifestation of algorithmic management is automated deactivation. An algorithm, evaluating aggregated performance data, customer complaints, or low acceptance rates, can instantaneously sever a worker's access to the platform without human intervention.

In the gig economy, deactivation ends a worker's livelihood without prior notice, a formal charge sheet, or an impartial hearing. This practice operates outside basic principles of natural justice (*audi alteram partem*), subordinating economic survival to automated processing.

III. Statutory Lacunae in the Code on Social Security, 2020: The Mirage of Welfare

A. The Dual Definition Paradox: Sections 2(35) and 2(60)

The Code on Social Security, 2020 formally recognizes non-traditional work arrangements by defining both "gig worker" and "platform worker":

[8] Ifeoma Ajunwa et al., *Limitless Worker Surveillance*, 105(3) Cal. L. Rev. 735, 742–748 (2017).
[9] Aditi Surie & Koduganti Jyothi, *Does Platform Work Fit into Existing Paradigms of Informality?*, 54(47) Econ. & Pol. Wkly. 17, 18–20 (2019).

- **Section 2(35)** defines a *gig worker* as "a person who performs work or participates in a work arrangement and earns from such activities outside of a traditional employer-employee relationship."[10]

- **Section 2(60)** defines *platform work* as "a work arrangement outside of a traditional employer-employee relationship in which organisations or individuals use an online platform to access other organisations or individuals to solve specific problems or to provide specific services..."[11]

While these definitions recognize the reality of digital platform work, their explicit exclusion of a "traditional employer-employee relationship" creates a statutory wall. By defining these workers exclusively through this negative framing, the Code ensures that platform workers cannot rely on the protective frameworks established in the Industrial Relations Code, 2020, or the Occupational Safety, Health and Working Conditions Code, 2020.[12] The platform worker is left in an administrative category: not quite an independent enterprise, but statutorily denied the basic rights of an employee.

B. Chapter IX and the Illusory Social Security Fund

Chapter IX of the Code governs social security for unorganized workers, gig workers, and platform workers. Under **Section 114**, the Central Government is empowered to frame welfare schemes covering life and disability cover, health and maternity benefits, old age protection, and crèche facilities.[13]

However, the financing model set out in Section 114 reveals severe structural weaknesses:

1. **Discretionary Aggregator Cess:** Section 114(4) provides that schemes may be funded through contributions from aggregators at rates between 1% to 2% of their annual turnover, capped at 5% of the aggregate amount paid or payable to gig and platform workers.[14] Because the provision uses the directory term "may" rather than the

[10] The Code on Social Security, 2020, § 2(35), No. 36, Acts of Parliament, 2020 (India).
[11] The Code on Social Security, 2020, § 2(60), No. 36, Acts of Parliament, 2020 (India).
[12] The Industrial Relations Code, 2020, § 2(zr), No. 35, Acts of Parliament, 2020 (India); *see also* The Occupational Safety, Health and Working Conditions Code, 2020, No. 37, Acts of Parliament, 2020 (India).
[13] The Code on Social Security, 2020, § 114(1), No. 36, Acts of Parliament, 2020 (India).
[14] The Code on Social Security, 2020, § 114(4), No. 36, Acts of Parliament, 2020 (India).

mandatory "shall," the funding mechanism remains vulnerable to lobbying, administrative delays, and under-collection.

2. **Lack of Defined Rights and Wage Floors:** The Code establishes no statutory minimum floor wage for platform work. Because workers spend unpaid hours logged on awaiting orders—waiting time that platforms exclude from compensable labor—their real hourly earnings frequently dip below statutory state minimum wages.[15]

3. **Absence of Dispute Resolution Machinery:** The Code establishes a National Social Security Board under Section 6(1), but denies gig workers access to the labor tribunals and industrial dispute resolution machinery available to formal sector workers.[16] A deactivated worker has no statutory forum to seek reinstatement or back wages for arbitrary termination.

IV. Constitutional Imperatives: Testing Algorithmic Arbitrariness Against Articles 14, 21, and 23

The statutory vacuum within the Code on Social Security cannot be evaluated in isolation from constitutional mandates. When platform algorithms dictate the livelihood, physical safety, and dignity of millions of workers, this exercise of economic power engages foundational constitutional protections.

A. Article 14: Non-Arbitrariness and Natural Justice

The Indian Supreme Court has established that Article 14 embodies a guarantee against arbitrariness in state action and within state-regulated private conduct impacting fundamental livelihoods.[17] In *E.P. Royappa v. State of Tamil Nadu* and *Maneka Gandhi v. Union of India*, the Court held that equality and arbitrariness are sworn enemies; wherever an action is arbitrary, Article 14 strikes it down.[18]

In the platform economy, when an individual's livelihood is terminated through automated code

[15] Fairwork India, *Fairwork India Ratings 2023: Work in the Platform Economy* 12–19 (Centre for IT and Public Policy, IIIT Bangalore 2023).
[16] The Code on Social Security, 2020, § 6(1), No. 36, Acts of Parliament, 2020 (India).
[17] *Ramana Dayaram Shetty v. International Airport Authority of India*, (1979) 3 SCC 489, paras. 10–12.
[18] *E.P. Royappa v. State of Tamil Nadu*, (1974) 4 SCC 3; *Maneka Gandhi v. Union of India*, (1978) 1 SCC 248, paras. 56–58.

based on unverified customer scores or algorithmic pattern detection, the decision lacks both procedural fairness and reasoned justification. When the state fails to stop platforms from kicking users off without warning or a chance to defend themselves, it effectively endorses unchecked corporate power. This hands-off approach directly violates the fairness guaranteed under Article 14.

B. Article 21: The Right to Livelihood and Informational Privacy

The Supreme Court has read the right to livelihood as an integral component of the right to life under Article 21. In *Olga Tellis v. Bombay Municipal Corporation*, Chief Justice Chandrachud held:

"An important facet of that right is the right to livelihood because no person can live without the means of living, that is, the means of livelihood. If the right to livelihood is not treated as a part of the constitutional right to life, the easiest way of depriving a person of his life would be to deprive him of his means of livelihood to the point of abrogation."[19]

Furthermore, in *Justice K.S. Puttaswamy (Retd.) v. Union of India*, the nine-judge bench held that informational privacy and personal autonomy are protected facets of Article 21.[20] Continuous physical surveillance via geolocation tracking, combined with unconsented telemetry monitoring and facial-recognition audits, constitutes a direct intrusion into worker privacy that fails the proportionality test established in *Puttaswamy*.

C. Article 23: Economic Coercion and "Forced Labour"

Article 23 of the Constitution prohibits "traffic in human beings and begar and other similar forms of forced labour." In *People's Union for Democratic Rights (PUDR) v. Union of India (Asiad Workers Case)*, Justice P.N. Bhagwati expanded the definition of forced labor beyond physical restraint:

"Where a person provides labour or service to another for remuneration which is less than the minimum wage, the labour or service provided by him clearly falls within the scope and ambit of the words 'forced labour' under Article 23... When a person is suffering from starvation and misery, he has no choice. He must accept whatever work comes his way, even if the

[19] *Olga Tellis & Ors. v. Bombay Municipal Corporation*, (1985) 3 SCC 545, para. 32.
[20] *Justice K.S. Puttaswamy (Retd.) v. Union of India*, (2017) 10 SCC 1, paras. 248–254.

remuneration offered is less than the minimum wage."[21]

Gig workers frequently incur debts to purchase commercial vehicles, smartphones, and fuel. When platform algorithms manipulate order frequency, lengthen unpaid wait times, and unilaterally lower delivery fees, workers are forced to work 14 to 16-hour shifts merely to service vehicle debt and platform fees. This economic vulnerability, directed through opaque algorithms, mirrors the systemic economic coercion prohibited under Article 23.

V. Sub-National Innovations and Comparative Frameworks

Recognizing the inadequacies of the federal Code on Social Security, regional and international jurisdictions have developed alternative legislative models to address platform labor.

A. The Rajasthan Model: Sub-National Leadership

In 2023, the Rajasthan State Legislature enacted the **Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023**, establishing India's first targeted state-level regulatory regime.[22]

The Act introduces three critical reforms:

1. **Tripartite Welfare Board:** Section 3 creates the "Rajasthan Platform Based Gig Workers Welfare Board," comprising state officials, aggregator representatives, and nominated gig worker representatives, institutionalizing worker voice in policy formulation.[23]

2. **Transaction-Level Welfare Cess:** Moving away from the ambiguous annual turnover cess of the central Code, Section 12 establishes a direct, automated welfare fee deducted on every individual customer transaction, routed into a dedicated social security fund.

3. **Statutory Grievance Redressal:** The Act guarantees workers a right to petition state authorities regarding arbitrary deactivations and non-payment of earnings, imposing fines up to ₹50,00,000 on non-compliant platforms.[24]

[21] *People's Union for Democratic Rights (PUDR) v. Union of India*, (1982) 3 SCC 235, paras. 14–16.
[22] The Rajasthan Platform Based Gig Workers (Registration and Welfare) Act, 2023, Rajasthan Act No. 18 of 2023 (India).
[23] *Id.* at § 3.
[24] *Id.* at §§ 12, 19.

B. The European Union Platform Work Directive (2024)

In March 2024, the European Parliament adopted the landmark **Directive on Improving Working Conditions in Platform Work**.[25]

The Directive introduces two vital regulatory principles:

- **Rebuttable Presumption of Employment:** Article 5 establishes a legal presumption that a platform worker is an employee if the platform directs or controls their performance, shifting the burden onto the platform to prove genuine self-employment.[26]

- **Codified Restrictions on Algorithmic Management:** Articles 7 to 10 strictly prohibit platforms from processing biometric data to predict psychological states, restrict algorithmic decisions on termination without direct human oversight, and require full algorithmic transparency regarding automated allocation metrics.[27]

VI. A Rights-Based Reassessment: The Architecture of Normative Reform

To align India's platform economy with constitutional principles, Parliament and State Legislatures must advance beyond the narrow welfare provisions of the Code on Social Security through a tripartite reform agenda:

1. **Codifying Algorithmic Transparency and Explainability:** Aggregators must be statutorily required to provide workers with plain-language disclosures explaining the parameters governing task allocation, pricing formulas, and ratings calculations. Real-time accounting of platform commissions, deductions, and incentive thresholds must be made accessible, accompanied by an absolute ban on biometric surveillance used to monitor demeanor, fatigue, or labor organizing activities.

2. **Statutory Due Process and the Prohibition of Automated Deactivation:** Parliament must amend Chapter IX of the Code on Social Security to prohibit any deactivation based solely on automated computational decisions. The law should mandate a minimum 14-day notice period containing a written statement of reasons, guarantee the right to human review by an independent compliance officer, and provide access to fast-

[25] Directive of the European Parliament and of the Council on Improving Working Conditions in Platform Work, COM(2021) 762 final (Adopted by European Parliament on Mar. 11, 2024).
[26] *Id.* at art. 5.
[27] *Id.* at arts. 7–10.

track administrative ombudsmen empowered to order immediate account reinstatement and award restitution.

3. **Digital Collective Bargaining and Guaranteed Floor Rates:** India's labor framework must explicitly extend the right to organize and engage in collective bargaining under the Trade Unions Act, 1926 to gig workers, irrespective of their contractual classification.[28] In addition, statutory wage security must be implemented through a guaranteed, time-indexed minimum floor rate that accounts for both active transit intervals and passive waiting periods, preventing aggregators from transferring operational downtime costs onto workers.

VII. Conclusion

The rapid growth of the gig economy has tested the limits of traditional Indian labor jurisprudence. By framing algorithmic surveillance and automated discipline as entrepreneurial flexibility, platform aggregators have built commercial empires on the backs of an insecure, digitally managed workforce.

The Code on Social Security, 2020 took an important step by formally naming the platform worker, but it stopped short of providing meaningful protection against algorithmic power. It promises welfare while leaving the underlying mechanics of digital labor untouched.

As it's established by constitutional precedent under Articles 14, 21, and 23, the right to earn a livelihood free from arbitrary control and intrusive surveillance is a constitutional necessity. India cannot rely on an industrial-era labor framework that leaves algorithmic management unregulated.

Drawing from the sub-national experience of Rajasthan and the EU Platform Work Directive, the Indian legal system must confront algorithmic despotism directly. By enforcing algorithmic transparency, establishing procedural safeguards against automated deactivation, and protecting collective bargaining rights, legal frameworks can steer digital innovation toward enhancing rather than undermining human dignity.

[28] The Trade Unions Act, 1926, § 2(h), No. 16, Acts of Parliament, 1926 (India).