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Crisis and Reconstruction of the "Abstract Person" Presupposition in the Digital Age

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Abstract: Traditional legal systems have established formal equality and universal regulation by constructing collective abstract concepts such as the "abstract legal person" and the "average consumer," forming the cornerstone of modern rule of law. However, personalized algorithms in the platform economy, powered by big data and artificial intelligence, can precisely deconstruct these abstract notions, enabling micro-targeting and differential treatment of each specific, real individual. This "algorithmic deconstruction" leads to the systemic failure of legal rules predicated on uniformity when confronting the differentiated practices of algorithms. Using "big data-enabled price discrimination" (or "big data killing") as a starting point, and drawing on the classic jurisprudential debate between fairness and efficiency, this article analyzes three major dilemmas facing traditional legal presuppositions: the collapse of formal equality, the breakdown of attribution logic, and the failure of regulatory tools. Ultimately, this article argues for a paradigm shift from "formal equality" to "algorithmic justice," proposing the reconstruction of legal authority in the digital age through the introduction of algorithm transparency, reconfigured liability, and the principle of substantive fairness.

1. Introduction

As Pound noted, "The law must be stable, but it cannot stand still"[1]. The rapid development of digital technology is currently subjecting the law to an unprecedented transformation. To manage social complexity, traditional law created a series of sophisticated "legal fictions", among which the most representative are the "abstract person" and the "average consumer"[2]. These concepts abstract vastly different concrete individuals into standard units possessing average rationality, attentiveness, and capability, thereby providing the logical premise and technical foundation for formal fairness under the principle of equality before the law.

However, the rise of platform algorithms is fundamentally shaking this legal edifice. Algorithms, through massive data, create user profiles, no longer treating people as equal subjects of rights but rather as collections of analyzable, predictable, and manipulable behavioral data. As Qiang Shigong pointed out, the premise of fairness is "equality before the law" and "equal opportunity"[3]. Yet, under the guise of "the same platform, the same service," algorithms artificially and covertly create countless "one-to-one" differentiated transactional situations, rendering the traditional prerequisite for price discrimination and legal comparison "identical conditions" obsolete. This article aims to explore how, when technological forces can easily dismantle the universality and formality of law, we can uphold and reshape the spirit of equality and rationality established by the Enlightenment in the digital age.

2. The Cornerstone of Traditional Law

The modern legal system is built upon the legacy of Enlightenment thought, with its core being formal rationality and universal applicability. Equality of rights focuses not on equality of outcome, but on fairness of starting point. It emphasizes that "everyone starts from the same line, "excluding inherent differences and ensuring every citizen can equally enjoy rights conferred by law, such as the right to education and the right to vote. Simultaneously, the equality of legal personality ensures everyone possesses equal status when exercising rights, irrespective of social standing. This is the conceptual basis upon which law achieves universal applicability through formal fairness by ignoring concrete differences, allowing the "abstract person" and "average consumer" to exist. The modern legal system constructs its operational foundation through the subtle technique of "legal personification," where the "abstract person" and the "average consumer" are two key and complementary legal constructs.

The universal logic of the "abstract person" forms the bedrock of formal equality in modern law. Law deliberately abstracts individuals from their specific identities, statuses, and wealth, molding them into a standardized image possessing average rationality and free will [4]. In contract law, this is the rational decision-maker who reads terms carefully; in tort law, this is the prudent person who foresees risks and takes reasonable measures. This fictional figure is the technical prerequisite for achieving "equality before the law." It ensures the predictability and uniform application of legal rules and significantly enhances judicial efficiency.

However, when this logic of formal equality is applied to areas with significant power disparities, its limitations become apparent. Consequently, law developed the "average consumer" concept as a supplementary and corrective measure, providing tilted protection [5]. As scholar Qiang Shigong distinguishes among various conceptions of fairness, the evolution from pursuing formal fairness through "equal opportunity" to achieving substantive fairness through "distributive justice" precisely relies on the law's ability to shift from the universal "abstract person" to an identifiable, comparable "ordinary person" standard in specific contexts. This demonstrates the self-adjustment of legal fiction techniques to achieve deeper justice. In summary, traditional law, through this art of abstraction, successfully ignored concrete human differences and constructed a stable, predictable normative world.

3. The Disruption by Algorithms

The emergence of platform algorithms turns the concrete differences ignored by law into a core resource for business models. The operational logic of algorithms constitutes a thorough deconstruction of the "abstract person."

Firstly, precise individual profiling leads to the demise of the legal presupposition of the "abstract person." Algorithms completely abandon the "average consumer" assumption upon which law operates. By tracking users' clickstreams, browsing duration, and purchase history, algorithms can accurately calculate each specific individual's willingness to pay and decision-making vulnerabilities [6].Thus, whether it's the impatient white-collar professional, the budget-conscious homemaker, or the time-sensitive, price-insensitive businessperson, the unified "abstract person" in the eyes of the law is completely reduced to a data-person with specific tags in the face of algorithms. While the law still sets uniform standards for the ordinary person, algorithms are already crafting personalized strategies for each unique individual.

Secondly, this artificially constructed differentiation directly nullifies the formal equality pursued by law. This leads to a profound paradox: the formal equality of law relies on a unified, comparable benchmark of "identical conditions"[7], whereas algorithms, through data mining, dynamically construct countless incomparable "differentiated situations." In "big data price discrimination, "platforms can easily use big data to implement differential pricing for users because each user's "data profile" is unique, placing them under different "transactional conditions" from the start. This cleverly evades traditional regulation of "price discrimination, "rendering the legal requirements for formal equality ineffective against the precise targeting of algorithms.

This process fundamentally distorts the "efficiency-first" principle. While economic theory recognizes "Pareto improvement" as an ideal state where no one is disadvantaged [8], "Kaldor-Hicks efficiency" as a more pragmatic standard permitting uncompensated losses when social benefits outweigh costs [9], algorithmic platforms have exploited this logic. They transform user data into production means, implementing precision exploitation through practices like "big data price discrimination." This creates a distorted efficiency model: platforms profit by systematically harming specific consumers' welfare without compensation, effectively imposing "loyalty premiums" on heavily analyzed users. Such practices not only violate the "fairness" imperative but will ultimately suppress consumption, distort resources, and undermine China's sustainable market development.

4. The Dilemma of Law

Faced with algorithmic deconstruction, the legal system built in the industrial era exhibits systemic inadequacy. Regarding the principle of liability, the fault-based liability principle relied upon by traditional tort law encounters difficulties, as it requires proving the subjective fault of the actor [10]. However, the algorithmic decision-making process is distributed and self-evolving; its true intent is hidden within complex model structures and parameter weights, making it difficult to clearly attribute to any specific engineer, data annotator, or manager. The entire chain of attribution becomes blurred and broken before the algorithmic black box [11]. Secondly, the traditional evidence rule of "he who asserts must prove faces a structural dilemma in the algorithm age. All key evidence is controlled by platforms within opaque "algorithmic black boxes," often protected as trade secrets. Individual consumers, facing a technological gap, lack the capability to obtain or challenge this evidence. Even when ordered by courts, platforms may provide filtered or overly technical explanations, making evidence examination a mere formality. This fundamental imbalance in evidentiary ability nullifies consumers' procedural rights, turning the principle of litigation fairness into a barrier to justice and revealing the systemic failure of traditional evidence rules against digital power. Furthermore, regulators are caught in a dilemma. They may either engage in superficial oversight due to technical limitations or resort to crude, one-size-fits-all interventions for fear of systemic risks, thereby stifling beneficial innovation.

Ultimately, these institutional dilemmas point to a deeper impact on legal core values. By deconstructing the "abstract person", algorithms erode the cornerstone of private law: autonomy of will. When user choices are shaped within algorithmically constructed information cocoons, they can hardly be deemed expressions of genuine will. Once people are treated as predictable data objects rather than ends in themselves, human subjectivity and dignity face an unprecedented challenge.

5. Response and Reconstruction

The law must transcend its adherence to formal equality and undergo a paradigm shift towards "algorithmic justice."

First, the objectives of legal regulation require a fundamental reorientation: moving from proving elusive "identical conditions" (conduct regulation) to directly addressing the abuse of platform algorithmic power that causes substantively unfair outcomes (power regulation) [12]. To this end, a "prohibition of algorithmic abuse" principle should be established. Pricing strategies based on exploitative or discriminatory user profiling should be directly deemed infringements of consumer rights. This principle shifts legal focus from traditional conduct to constraining platform power and bypasses complex traditional antitrust requirements like defining relevant markets. "Algorithmic abuse" manifests in two primary forms: exploitative abuse, where platforms leverage information asymmetry and technological dominance to analyze user data and capitalize on cognitive biases or inelastic demand, thereby implementing pricing strategies that extract consumer surplus; and discriminatory abuse, which involves systematically subjecting consumers to differential treatment based on non-essential attributes, such as race, gender, or inferred characteristics—thereby reinforcing and perpetuating social inequality. Establishing this principle provides clear standards for regulators and courts, declaring that such practices infringe on the right to fair trade, regardless of the platform's market dominance.

Furthermore, algorithm transparency and explainability obligations must form the cornerstone of digital-age regulation[13]. This framework for algorithmic accountability consists of a three-tiered system: necessary filing and disclosure, which requires platforms to submit core algorithm documentation to regulators and implement tiered disclosure mechanisms for key algorithms such as pricing; a right to explanation, obliging platforms to clarify algorithmic decisions in accessible language upon reasonable user inquiry; and regularized third-party audits to evaluate platforms for systemic bias or discrimination. Together, these components form a closed-loop mechanism that mitigates the opacity of algorithmic black boxes while balancing innovation with the prevention of power abuse. Furthermore, to remedy the structural imbalance in consumers' ability to substantiate claims, the burden of proof in cases of alleged algorithmic discrimination should be reversed—once a consumer presents prima facie evidence of unfair treatment, the platform must demonstrate that its algorithmic decision was both fair and reasonable[14].

Ultimately, the law must realize substantive fairness. A benchmark for algorithmic "reasonableness", based on the cognition of an ordinary rational consumer, should be established. Leveraging general clauses like good faith and public order allows judicial correction of technically "compliant" but substantively unconscionable algorithmic behaviors, constructing a rights protection system fit for the algorithmic age.

6. Conclusion

The traditional legal fiction of the "abstract person," designed for the industrial age to achieve scalable formal justice, is being undermined in the digital era. Platform algorithms, by precisely deconstructing individuals, are rendering this rule system based on "uniformity" ineffective against the tide of "differentiation," creating not just a technological challenge but a jurisprudential crisis. When algorithms can precisely target every real individual, the law must move beyond guarding the "abstract person" and develop new normative tools to regulate algorithmic power and defend individual dignity. This shift from the "abstract person" to the "data-person," and from "formal equality" to "algorithmic justice, "represents not merely a technical upgrade but a profound reconstruction of legal philosophy—a necessary step for jurisprudence to regain its vitality in the digital age.

References

[1] Zhou Wangsheng. On the Value of Legal Order[J]. Jurist, 2003, (05): 33-40.
[2] Hu Yuhong. On the Construction of the "Legal Person" [J]. Chinese Legal Science, 2006, (05): 31-46.
[3] Qiang Shigong. Fairness and Efficiency from the Perspective of Jurisprudence[J]. Chinese Legal Science,1994, (04): 45-53.
[4] Hu Yuhong. The Concept of Legal Subject and Its Characteristics[J]. Chinese Journal of Law, 2008, (03): 3-18.
[5] Hu Liwen. The Modern Turn in the Legal Governance of Economic Power in the Digital Age[J]. SJTU Law Review, 2024,(04): 130-145.
[6] Zhang Linghan. The Rise, alienation, and Legal Regulation of Algorithmic Power[J]. Studies in Law and Business, 2019,36(04): 63-75.
[7] Ma Zhiguo, Zhan Ni. Legal Regulation of Private Power of Super Platforms in the Context of Digital Society[J]. Journal of Beijing University of Technology (Social Sciences Edition), 2023, 23(02): 115-131.
[8] Yao Yang. Pareto Improvement as a Principle of Distributive Justice[J]. Academic Monthly, 2016, 48(10): 44-54.
[9] Yuan Ruijing. Reshaping the Standards of Interest Measurement in Adjudicating Unfair Competition Involving Data Scraping—Starting from Personal Data Rights and Interests[J]. Legal Method, 2024, 46(01): 438-455.
[10] Xu Zulin. Debates and Analysis on the Principles of Liability Fixation in Tort Law[J]. Law Science (Journal of Northwest University of Political Science and Law), 2007,(06): 84-94.
[11] Tan Xiao, Pan Jianing. Consumer Law Regulation of "Big Data Price Discrimination"[J]. Forum of Rule of Law, 2022,(04): 19-36.
[12] Wang Yuan. Legal Regulation of Personalized Pricing Algorithms in the Intelligent Era[J]. Journal of National Prosecutors College, 2025, 33(03): 73-86.
[13] Su Yu. Technological Due Process in the Digital Age: Theoretical Examination and Institutional Construction[J]. Chinese Journal of Law, 2023, 45(01): 91-107.
[14] Li Dan. On Determining Tort Liability for Algorithmic Discrimination Against Consumers—An Empirical Study Based on Judicial Decisions[J]. Contemporary Law Review, 2023,37(06):75-85.