Digital Procedural Rights in the Era of Digital Government: Theoretical Interpretation and Institutional Guarantee

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Abstract: *In the era of digital government, administrative procedures are characterized by unified platforms, data-driven operations, intelligent automation, mobile governance, and blockchain empowerment, presenting a practical logic that prioritizes technology over norms, substance over procedure, and power over rights, thus raising concerns about citizens' procedural rights. Digital procedural rights abandon the limitations of the procedural obligation paradigm, and are based on human dignity, constitutional fundamental rights, and subjective procedural justice, with strong feasibility. Digital procedural rights include six ideal types: the right to exclude algorithmic discrimination, the right to digital information, the right to digital participation, the right to record retention, the right to human review, and the right to refuse automated decision-making. To effectively protect digital procedural rights, it is necessary to complete the legal confirmation of digital procedural rights from the right dimension, realize the procedural control of digital administrative power from the power dimension, and ensure the normative requirements of digital technology from the technology dimension.*

Keywords: digital government ♦ digital procedural rights ♦ fundamental rights ♦ right to refuse automated decision-making ♦ algorithmic auditing

Introduction

Human beings must "act in such a way that you treat humanity, whether in your own person or in the person of any other, always at the same time as an end and never merely as a means."[1] Article 33(3) of the *Constitution of the People's Republic of China* provides: "The State shall respect and protect human rights." In the digital age, digital technologies comprehensively empower digital government while posing risks of rights infringement. The *Guiding Opinions of the State Council on Strengthening the Construction of Digital Government* (Guo Fa [2022] No.14) states: "We should promote the deep integration of the government's law-based governance with digitalization" and "accelerate the improvement of the legal and regulatory framework adapted to the construction of digital government." Against the macro backdrop of digital government, it has become an unavoidable subject for the administrative law community to establish a theoretical and institutional framework for citizens'

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[1] Immanuel Kant, *Groundwork for the Metaphysic of Morals*, Li Qiuling trans. (Beijing: China Renmin University Press, 2013), 49-50.

procedural rights that keeps pace with digital trends.

Given the challenges that digital government poses to administrative procedures, the theories of technological due process[2] and data due process[3] have emerged accordingly. Domestic research has largely focused on regulating algorithms through technological due process.[4] However, existing research primarily explores the legitimacy of administrative procedures from a power perspective (the procedural obligation paradigm), lacking a theoretical model and institutional safeguards for citizens' procedural rights from a rights perspective (the procedural rights paradigm). The resulting theoretical and practical proposals are somewhat insufficient and lack systematic coherence. In light of this, adopting a rights-based perspective, this paper first analyzes digital administrative procedures and their rights crises, then examines the theoretical origins and ideal model of digital procedural rights, and finally proposes a safeguard framework accordingly, with a view to injecting new ideas into the innovative development of citizens' procedural rights in the era of digital government.

I. Digital Administrative Procedures and Their Rights Crises

The administrative procedure model in the era of digital government has undergone a profound transformation, exhibiting a distinctive operational logic while posing risks of infringing on citizens' procedural rights.

A. Basic models of digital administrative procedures

The digital transformation of administrative activities is primarily characterized by three core elements: platformization, datafication, and automation[5]. These elements have given rise to digital administrative procedures, which center on five core components — process, data, algorithm, terminal, and blockchain — and manifest in the following five basic models:

1. Unified platform model

A unified platform for administrative procedures refers to the consolidation of procedures across different stages, departments, localities, and administrative tiers onto a single platform, enabling "one-network, all-services" processing. Its essence lies in the off-site and unified nature of administrative procedures: citizens no longer need to interact with administrative organs face to face, and procedures are no longer fragmented or isolated. The core feature of the unified platform is integration and collaboration. It is primarily suited to areas requiring multi-departmental, multi-step coordination with a high degree of process standardization. It can significantly improve service efficiency and convenience for the public.

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[2] Danielle Keats Citron, "Technological Due Process," *Washington University Law Review*, vol. 85, no. 6 (2008): 1249-1313.

[3] Kate Crawford and Jason Schultz, "Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms," *Boston College Law Review*, vol. 55, no. 1 (2014): 93-128.

[4] Su Yu, "Technological Due Process in the Digital Age: Theoretical Review and Institutional Construction," *Chinese Journal of Law* 1 (2023): 91-107; Qin Hui, "Administrative Procedures in the Construciton of Digital Government: Changes and Responses," *Administrative Law Review* 4 (2022): 145-155; Lin Hua, "Exploration and Construction of China's Autonomous Knowledge System in Administrative Law (2022-2024)," *Journal of Law Application* 1 (2025): 11-26.

[5] Ma Huaide, "The Connotative Features, Basic Principles, and Construction Paths of a Digital Law-based Government," *ECUPL Journal* 3 (2024): 6-22.

2. Data-driven model

A data-driven administrative procedure refers to the optimization of administrative procedures through the sharing and interconnection of government data to "let data do the running, so citizens don't have to." The *Guiding Opinions of the State Council on Strengthening the Construction of Digital Government* (Guo Fa [2022] No.14) states: "We should stay committed to data empowerment." The core of the data-driven model is data sharing and interconnection, which emphasizes content flow. It is primarily suited to areas involving multiple data subjects and existing data silos, such as license sharing, cross-region medical treatment, and household registration transfer.[6] This model breaks down data silos, eliminates unnecessary procedures, and enhances procedural efficiency.

3. Intelligent automation model

The intelligentization of administrative procedures represents an advanced form of procedural automation. Artificial intelligence is characterized by thinking and acting like humans, and thinking and acting rationally[7]. The large models for China's government affairs are still in the narrow AI stage. Intelligent automation is primarily manifested as the algorithmization and automation of administrative procedures: the former refers to translating procedures into algorithmic code; the latter refers to the autonomous execution of procedures. Its core lies in replacing human labor with algorithms — a transformation in how administrative acts are formed. It is suited to areas with standardized processes, limited discretion, and no involvement of major rights and interests, such as risk early warning and discretionary assistance[8].

4. Mobile governance model

The *Notice of the General Office of the State Council on Issuing the Guidelines for Building the Mobile Terminal of the National Integrated Government Service Platform* proposes to "innovate the delivery of mobile government services." Mobile terminal applications (apps, mini-programs) have become important carriers of administrative procedures. The core features of mobile governance are ubiquity and convenience: it breaks through temporal and spatial constraints, enables lightweight and portable government services, and emphasizes "handheld processing" and "anytime processing." Essentially, it is the ubiquitous and mobile extension of the "one-network, all-services" model on a unified platform. It is primarily applied to high-frequency, fragmented, and real-time government services, such as traffic management and social security inquiries.

5. Blockchain-empowered model

The core of blockchain empowerment lies in tamper-resistance and traceability. It does not directly carry administrative procedures but strengthens procedural credibility and enhances the security and trustworthiness of evidence. It is primarily suited to areas with high evidentiary requirements and risks of evidence tampering,

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[6] State Administration for Market Regulation, "Setting Standards First to Build a High-Speed Corridor for Regional Data Sharing," accessed January 1, 2026, https://www.samr.gov.cn/xw/zj/art/2025/art_576fa3e001ee447a82cd9cc7492ab779.html.

[7] Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, Yin Jianping, Zhu En, Liu Yue et al. trans. (Beijing: Tsinghua University Press, 2013): 3-5.

[8] Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*, Li Mingqian trans. (Beijing: The Commercial Press, 2021): 3.

such as administrative enforcement records that require trustworthy evidence preservation and real estate registration that requires full-process traceability. For instance, the *Several Provisions of Shanghai Municipality on Promoting the Application of Blockchain-empowered Electronic Documents in Pudong New Area* aims to "better leverage the advantages of blockchain technology and promote the credible, convenient, and secure application of electronic documents."

B. Practical logic of digital administrative procedures

Based on the analytical framework of technology vs. regulation, substance vs. procedure, and power vs. rights, digital administrative procedures prioritize technological, substantive, and power-oriented logic, while regulatory, procedural, and rights-oriented logic tend to be marginalized.

1. Prioritizing technology over regulation

Digital technology logic — including algorithmic rules and technical standards — may take precedence over legal regulatory logic. This is particularly evident in the translation of procedural norms into technical code, where redefinition can occur, leading to gaps in and misinterpretations of procedural norms. In scenarios such as automated approval, technical rules are often treated as trade secrets, lacking openness and transparency. The *Administrative Licensing Law* and the *Law on Administrative Penalty* provide only simple regulation of digital administrative procedures, giving rise to practical difficulties of legal ambiguity: "problems such as difficulty in identifying responsible parties, difficulty in proving subjective fault, and confusion over causal relationships persist"[9], making it difficult to enforce legal liability provisions. Moreover, digital models such as "at most one visit" and "one-network, all-services," while pursuing efficiency, may conflict with procedural norms and violate the principle of legal reservation.

2. Prioritizing substance over procedure

Influenced by traditional governance mindsets and performance appraisal pressures under the bureaucratic system, digital administrative procedures have not fully escaped the legal logic of "prioritizing substance over procedure." Digital administration's pursuit of rapid and efficient policy goals — such as social stability and the delivery of major projects — may lead to the simplification or omission of administrative procedures. For example, in a region of Shandong Province, a "cerebral stroke" medical insurance settlement record was inserted into a citizen's insurance account without prior notification.[10] The widespread use of big data monitoring and AI early warning systems creates risks that technical means may be used to alter monitoring data so as to circumvent verification procedures. As a result, the prominence of substantive issues continues to rise, and the instrumentalization of administrative procedures becomes more apparent, which is manifested both in the formalistic and superficial performance of procedures and in the selective omission of specific procedures based on substantive objectives.

3. Prioritizing power over rights

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[9] Guo Chunzhen and Yong Qi, "Procedural Justice of Algorithms," *Journal of China University of Political Science and Law* 1 (2023): 164-180.

[10] Qin Chuan, "What Should We Still Reflect on from Villagers Being Labeled with 'Cerebral Stroke'?" *Yan'an Daily*, October 21, 2021, 4.

Digital technology reinforces the unilateral nature of administrative procedures, while paying comparatively less attention to citizens' sense of control over and perception of administrative procedures. In grassroots governance, grid workers use digital inspection systems for closed-loop management, yet digital mechanisms for resident reporting and feedback remain relatively underdeveloped. The administrative emphasis on data security and government control, combined with algorithmic black boxes, algorithmic discrimination, and one-size-fits-all algorithmic decisions, reflects arrogance and a preference for power, compressing the space for public participation and access to information. For instance, a sewage treatment company in Xiamen, lacking knowledge of the algorithmic mechanisms and content used by the Xiamen Municipal Ecology and Environment Bureau, was unable to "provide evidence that proves anomalies in the operation of automated monitoring data," resulting in the loss of its case.[11] This asymmetry between power and rights causes a systemic erosion of citizens' procedural rights, producing systematic negative effects on citizens' rights and reducing "objectifying individuals as things to be manoeuvred or exercised further."[12]

C. Rights crisis in digital administrative procedures

The widespread application of digital technology in administrative processes has caused a systemic erosion of citizens' procedural rights.

First, biases held by algorithm developers and coders may be embedded into algorithms, causing "algorithmic contamination" that triggers algorithmic discrimination and amplifies discrimination and bias through algorithmic means.[13] For instance, the U.S. judicial system's pretrial release assessment tool (COMPAS) has been found to overestimate recidivism risk for Black defendants while underestimating it for white defendants.[14] Such discrimination and bias may result in unjustified differential treatment and inconsistent handling of similar cases, thereby infringing on citizens' rights to equal treatment and fair processing.

Second, digital administrative procedures are characterized by automation, instantaneity, and off-site operation. In procedures completed instantaneously — such as "automated approval with no human intervention," "self-service processing," and "electronic fines" — procedural safeguards, including notification, statement of reasons, the right to present arguments, and hearings, may be compressed. Parties concerned find it difficult to directly assert their rights, and the rights to notification, to demand reasons, to present arguments, and to a hearing are hard to enforce. For example, between June and September 2023, Zhu was captured by electronic police 46 times, and a traffic police brigade in Anhui Province issued 46 penalty decisions. In response to the dispute, the administrative reconsideration authority found that the respondent had failed to provide effective notification and had not fulfilled its

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[11] Xiamen Intermediate People's Court of Fujian Province, Administrative Judgment (2020) Min 02 Xing Zhong No.137.

[12] Anne Schwan and Stephen Shapiro, *How to Read Foucault's Discipline and Punish*, Pang Hong trans. (Chongqing: Chongqing University Press, 2018): 115.

[13] Aylin Caliskan et al., "Semantics Derived Automatically from Language Corpora Contain Human-like Biases," *Science*, vol. 356, no. 6334 (2017): 186.

[14] Wang Taixian and Tang Yi, "Artificial Intelligence Embedded in Government Governance: Algorithmic Landscapes, Value Issues, and Return Paths," *Forum on Science and Technology in China* 2 (2023): 104-113.

obligation to make public announcements.[15].Third, the algorithms on which digital administrative procedures depend are closed "black boxes" containing hidden layers that are difficult for humans to know,[16] making them difficult to observe, identify, and understand. In practice, algorithms are often treated as state secrets or trade secrets and withheld from disclosure. The "algorithmic black box" poses a challenge to the information disclosure system, making it difficult to protect citizens' right to information and right of access to information. For instance, in the construction of the social credit system, the urban personal credit score "Qianjiang Score" in Hangzhou, Zhejiang Province covers five dimensions and is calculated through a statistical comprehensive evaluation model, yet the correlations among evaluation data and the specific algorithms have not been disclosed.[17]

Fourth, the automated and off-site nature of digital administrative procedures leaves citizens with no opportunity to refuse automated processes or their outcomes. In areas such as "instant approval with no human intervention," the goal is to "achieve fully automatic approval and exclude human factors,"[18] leaving parties concerned no choice but to accept the results passively. In practice, a large number of automated decisions are not fully automated, indicating that Article 24 of the *Personal Information Protection Law* — which grants citizens the right to refuse fully automated decision-making — has too narrow a scope. For example, in April 2025, a party concerned with Jiangxi Shengxiang Logistics Co., Ltd. paid a vehicle overloading fine through a mobile "self-service" system, but the system offered only a single option: pay the fine.[19]

Fifth, in digital administrative procedures, the off-site nature and "if-then" algorithmic rules weaken the communication and error-correction functions of citizens' applications. For instance, if an error occurs when citizens apply for welfare eligibility, the algorithmic rule does not allow the citizen to correct it; instead, the entire application is rejected, requiring repeated resubmission,[20] creating the predicament that "one wrong entry results in filling in everything all over again."

Sixth, evidence in digital administrative procedures is increasingly held by administrative organs in the form of algorithms and data. This "evidence monopoly" prevents citizens from accessing or controlling evidence. The assessment of evidentiary relevance is performed by relevance algorithms, which may overlook social and ethical factors and produce erroneous judgments. Evidence presented in the

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[15] Ministry of Justice, "The Ministry of Justice Releases the Fifth Batch of Typical Cases on Implementing the Newly Revised Administrative Reconsideration Law," accessed January 1, 2026, https://www.moj.gov.cn/pub/sfbgw/gwxw/xwyw/202412/t20241230_512162.html.

[16] Wu Jiaojun and Guo Wan'er, "Law-based Governance of Algorithmic Black Boxes in the Age of Artificial Intelligence," *Science Technology and Law Chinese-English Version* 1 (2021): 19-28.

[17] "Qianjiang Score," Qianjiang Score website, accessed January 1, 2026, http://www.qianjiangfen.cn/index.html.

[18] People's Government of Guangdong Province, "Promoting the Reform of Automatic Approval with No Human Intervention (Instant Approval) — Shenzhen Practice," accessed January 1, 2026, https://www.gd.gov.cn/gdywdt/zwzt/szhzy/jytg/content/post_2906394.html.

[19] "Legal Dispute Triggered by Off-Site Case 'Self-service' Processing on Mobile Phones," website of Jiangshan Municipal People's Government, accessed January 1, 2026, https://www.jiangshan.gov.cn/art/2025/7/21/art_1229203163_1624994.html.

[20] Virginia Eubanks, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*, Li Mingqian trans. (Beijing: The Commercial Press, 2021): 50.

form of codes is "difficult to explain and lacks a basis for understanding,"[21] further undermining the rights to information, to request evidence, to cross-examine, to defend, and other remedial rights. In 2024, Li Dong (pseudonym), a 23-year-old fresh graduate from Chicheng County, Hebei Province, lost his fresh graduate status due to an erroneous pension insurance record in the social security system, rendering him ineligible for the civil service examination — yet the system provided no channel for correction or remedy[22].

II. Theoretical Justification of Digital Procedural Rights

In response to the impact of digital technology on citizens' procedural rights, theories and institutions such as technological due process have emerged. These theoretical and institutional models are developed from an administrative perspective; from the citizen's perspective, however, a procedural rights framework for the digital government era — digital procedural rights — can be constructed. This emerging concept of digital procedural rights is supported by compelling practical necessity, theoretical foundations, and feasibility.

A. The procedural obligations paradigm vs. the procedural rights paradigm

In the pre-digital government era — the industrial age — administrative procedural safeguards were primarily achieved by imposing objective procedural obligations and duties on administrative organs. Characterized by in-person interaction, physical documentation, and manual discretion, these safeguards constituted the typical paradigm of objective procedural obligations. Under this paradigm, administrative organs were required to fulfill procedural duties face-to-face, including recusal, notification, and hearing opinions. Citizens participated in proceedings and expressed claims on site or in writing, while rights remedies were mainly achieved through post hoc review of administrative organs' breaches of procedural obligations. The efficacy of this paradigm rested on a foundation of roughly symmetrical information between citizens and administrative organs, enabling citizens to participate effectively in administrative proceedings, thereby influencing decisions and seeking remedies. Moreover, written documentation provided clear and explicit evidence for citizens' oversight and remedy efforts. The provisions of Articles 51 and 52 of the *Law on Administrative Penalty*, which mandate that administrative penalty decisions be made and delivered to the parties concerned on the spot, exemplify this paradigm.

In the digital government era, the foundations of digital administrative procedures have fundamentally shifted, and the procedural obligations paradigm is experiencing systemic failure. The technological due process theory imposes technical procedural obligations on administrative organs, yet it remains within the procedural obligations paradigm and faces the same risk of failure.[23] First, the formalization of

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[21] Ma Yanxin, "Administrative Penalties under Automated Administration: Challenges and Responses," *Political Science and Law* 4 (2020): 139-148.

[22] Wu Yanxia, Jiao Mingzhu and Yue Wenzhong, "After a Fresh Graduate's Employment Path Was Blocked by 'Erroneous Social Security Records'…," *People's Court Daily*, December 6, 2025, 1, 3.

[23] Danielle Keats Citron, "Technological Due Process," *Washington University Law Review*, vol. 85, no. 6 (2008): 1249-1313.

procedural obligations. Digital administrative procedures transform proceedings into digital forms such as platform notices, algorithmic explanations, and data sharing. This readily leads to formal compliance without substantive fulfillment, effectively hollowing out procedural obligations.[24] For example, when notifications are delivered via pop-up windows or SMS, citizens may fail to become aware of them because pop-ups are obscured by advertisements, or SMS messages are classified as spam or automatically filtered. Second, the opacity of procedural obligations. Digital administrative procedures occur within a closed "algorithmic black box," making the fulfillment of procedural obligations difficult to observe and supervise.[25] The opacity of algorithmic technology, which contains numerous hidden parameters, renders the logic of administrative decision-making unknowable. The obligation to provide reasons thus largely remains at the level of outcome explanation, unable to reach the internal logic of the algorithmic process. Due to this information asymmetry, the oversight of procedural obligations loses both its object and its focus. Third, the lag in remedying procedural obligations. Digital administrative procedures are characterized by instantaneity, automation, and irreversibility. Once an automated administrative decision is made, it takes effect and is executed immediately, and the infringement occurs instantly. In off-site traffic enforcement by the police, for instance, the processes of capturing, recognizing, reviewing, and generating a penalty decision are often completed within minutes.[26] However, post hoc remedies such as appeals, administrative reconsideration, and litigation are severely delayed, leaving citizens not only unable to raise objections in real time but also facing difficulties in proving their case and enduring lengthy remedy cycles.

The fundamental reason for the failure of the objective procedural obligations paradigm is that procedural obligations cannot cope with the systemic, instantaneous, and technical risks posed by digital administrative procedures.[27] This paradigm is characterized by passivity, staticity and time lag. In the context of digital administrative procedures, relying solely on administrative organs to fulfill procedural obligations cannot effectively protect citizens' rights. It is therefore necessary to shift from the objective procedural obligations paradigm centered on administrative organs' procedural obligations to a subjective procedural rights paradigm centered on citizens' procedural rights. This can affirm digital procedural rights as a subjective public right enjoyed by citizens in the digital government era, thereby ensuring procedural justice. As a subjective public right, digital procedural rights are characterized by proactiveness, comprehensiveness, and defensiveness.[28] This means citizens have the right to proactively demand that administrative organs fulfill procedural obligations,

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[24] Wang Jingbo, "The Development of Digital Government and the Response of Administrative Rule of Law," *Modern Law Science* 5 (2023): 112-124.

[25] Liu Jianwen and Xu Mingchen, "Digital-Numeric Integration: Research on the Mechanism and Risk Governance of Embedding Digital New Quality Productive Forces into Digital Government Construction — An Explanatory Framework Based on Sociotechnical Systems Theory," *Henan Social Sciences* 10 (2025): 88-99.

[26] Yu Lingyun, "The Normative Construction of Off-Site Traffic Enforcement by the Police," *Chinese Journal of Law* 3 (2021): 36-51.

[27] Zhan Penghe and Cui Chengxin, "Technology-Oriented Rights Adaptation: Systematic Construction of Procedural Rights in Digital Administration," *Study and Practice* 12 (2025): 70-79.

[28] Li Ce, "The Local Logic and Practical Reflection on Plaintiff Standing in Administrative Complaint Cases," *Administrative Law Review* 1 (2022): 146-157.

rather than passively accepting predetermined procedures; citizens may exercise digital procedural rights throughout all stages and dimensions of administrative proceedings, not merely in response to administrative outcomes; and citizens may invoke digital procedural rights to directly address algorithmic discrimination, errors, and black-box problems in digital administrative procedures, thereby defending against rights infringements. By establishing digital procedural rights as the citizens' procedural rights paradigm, we can effectively address problems such as information asymmetry, algorithmic black boxes, and remedial lag inherent in the procedural obligations paradigm, thereby protecting both procedural and substantive rights of citizens in the digital government era.

B. Jurisprudential foundations of digital procedural rights

Digital procedural rights are not groundless; they are rooted in the core value of human dignity, possess a constitutional fundamental rights basis, and are justified through subjective procedural justice.

First, digital procedural rights take human dignity as their core value. Dignity is the foundation of rights.[29] "The dignity of humanity as a rational being"[30] is an essential attribute of what it means to be human. It is precisely for this reason that humans are ends in themselves, not means or objects. Consistent with Kant's "humanity as an end" theory, the Communist Party and government of China regard the protection of people's rights as their ultimate pursuit.[31] In the digital government era, AI risks such as algorithmic black boxes and automated administration pose serious threats to human dignity and subjectivity.[32] At present, AI consciousness has not yet "awakened"; it cannot become a legal subject but remains an object serving humans, "lacking moral significance."[33] As a new development of traditional procedural rights in the digital government era, digital procedural rights are a fundamental requirement of human dignity. They answer, at the deepest level, the Kantian fundamental proposition: humanity is an end. Their ultimate purpose is to prevent digital administrative procedures from reducing humans to objects, ensuring that humanity remains an end in digital administrative proceedings and defending human dignity as such.

Traditional administrative procedures expressed respect for and protection of human dignity through face-to-face interaction and on-site participation. Digital administrative procedures, centered on platforms, algorithms, and data, compel citizens to become data tags on algorithmic nodes — to a certain extent, becoming objects that are calculated, predicted, and managed. The technical logic of algorithms thereby undermines human subjectivity to a certain degree. The value core of digital procedural rights advocates a bundle of procedural rights grounded in human dignity

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[29] Lei Lei, "Can Dignity Constitute the Foundation of Human Rights?" *Chinese Journal of Human Rights* 1 (2025): 13-29.

[30] Immanuel Kant, *Foundations of the Metaphysics of Morals* (London: Routledge, 2016), 277.

[31] Li Ce, "The Principles and Construction of Party Leadership in an Administrative Basic Code," *Journal of Political Science and Law* 3 (2025): 61-74.

[32] Chen Jinghui, "Legal Challenges of Artificial Intelligence: Where Should We Begin?" *Journal of Comparative Law* 5 (2018): 136-148.

[33] Dai Yibin, "How Is AI Ethics Possible? — From the Perspective of Moral Subjects and Moral Recipients," *Studies in Ethics* 5 (2020): 96-102.

in the digital government era, requiring that digital administrative procedures must embed and reflect respect for and protection of human dignity. The core requirement of digital procedural rights for respecting human dignity can be summarized as technological respect, manifested in four dimensions: first, respecting the demand for fairness — citizens have the right to demand equal treatment in digital administration, with algorithmic bias and discrimination eliminated; second, respecting the demand for cognition — citizens have the right to know and understand the operational logic of algorithmic models; third, respecting the demand for participation — citizens have the right to participate in digital administrative proceedings and exert substantive influence on the administrative process; fourth, respecting the demand for outcomes — citizens have the right to reject digital decisions that are seriously unlawful.

Second, digital procedural rights are grounded in constitutional fundamental rights. The administrative law is the concretization of the *Constitution*, and citizens' rights under the administrative law are the concretization of constitutional fundamental rights.[34] From a positive law perspective, constitutional fundamental rights provisions constitute the constitutional basis for digital procedural rights. Digital procedural rights are the concretization of constitutional fundamental rights in the digital government era, and they possess the character of fundamental rights: non-transferable and non-deprivable.[35] First, the provision in Article 33(3) of the *Constitution* — "the State respects and protects human rights" — constitutes the fundamental constitutional basis for digital procedural rights. Digital procedural rights are an important component of human rights, and "the State respects and protects human rights" inherently entails the fundamental requirement of "the State respects and protects digital procedural rights." Second, the provision in Article 38 of the *Constitution* — "the personal dignity of citizens is inviolable" — constitutes the direct constitutional basis for digital procedural rights. As procedural rights, digital procedural rights possess intrinsic value and are themselves an expression of respect for and protection of personal dignity. Third, the provision in Article 41 of the *Constitution* on citizens' right of supervision constitutes an extended constitutional basis for digital procedural rights. The elements of knowledge, participation, and objection inherent in digital procedural rights also carry the implication of supervision over administrative power, consistent with the legislative spirit of the constitutional provision on citizens' right of supervision.

It is thus evident that digital procedural rights, evolved from constitutional fundamental rights, possess a dual character: subjective right and objective order. On the one hand, digital procedural rights have the character of a subjective right. Citizens may directly invoke digital procedural rights to demand that administrative organs act or refrain from acting in specified ways, and may initiate administrative reconsideration or administrative litigation on this basis. On the other hand, digital procedural rights have the character of an objective order. The State shall expressly provide for digital procedural rights in legislation and impose statutory duties and

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[34] Li Ce, *On the Codification of Administrative Law* (Beijing: Law Press·China, 2025), 49-79.

[35] Wang Weiyu, "How Does the Right to Family in China's Constitution Become a Fundamental Right?" *Chinese Journal of Human Rights* 2 (2025): 42-61.

obligations on administrative organs to safeguard them, such as obligations of algorithmic transparency and human review. This dual character constitutes a dual constraint on digital administrative procedures, effectively protecting citizens' procedural rights in the digital government era while elevating the rule of law in digital administration.

Third, digital procedural rights are built on subjective procedural justice. Subjective procedural justice takes participants' subjective perceptions of the process as its foundation, emphasizing individual trust, sense of control, and sense of dignity. It provides a novel mechanism for justifying procedural justice — one grounded in subjective experience and process control.[36]

Firstly, trust in subjective procedural justice — people's positive expectations and experiences of legal procedures — shapes their subjective perceptions of administration and their assessments of its legitimacy.[37] If citizens are not entitled to digital procedural rights and digital administrative procedures are entirely controlled by administrative organs, they lose trust in these procedures and develop "algorithm aversion."[38] Such distrust diminishes citizens' subjective perceptions and legitimacy assessments of digital administrative procedures. Establishing digital procedural rights, therefore, enables citizens to understand, participate in, and place trust in digital administrative procedures. Secondly, the sense or belief that controlling the process enables control over the outcome enhances satisfaction. "This control includes two aspects: the perception that one has been allowed to present one's own views, and the perception that the decision-maker has listened to and taken those views into account."[39] Citizens should have a sense of control over digital administrative procedures and their outcomes, manifested in their perception of having participation opportunities and other digital procedural rights. By clarifying digital procedural rights, citizens can achieve "meaningful participation" or "the opportunity to express and to have their views considered," thereby enhancing their sense of control over and satisfaction with digital administrative procedures. Lastly, the sense of dignity "emphasizes whether procedures can satisfy people's need for dignity."[40] A key way to let people experience justice through procedures is to ensure they are treated with respect in them. According to the group-value theory, individuals value their standing within a group, and procedural respect for an individual reflects his or her group status in that procedure.[41] The instantaneity, off-site nature, and automation of digital administration tend to omit certain procedural steps, and when citizens lack the opportunity to object, this produces a subjective perception of being "undignified." This sense of dignity demands that digital administrative procedures

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[36] Tom R. Tyler, "Procedural Justice," in *The Blackwell Companion to Law and Society*, Austin Sarat ed., Gao Hongjun et al. trans. (Beijing: Peking University Press, 2011), 481-485.
[37] Tom R. Tyler, "Procedural Justice and the Courts," *Court Review*, vol. 44, no. 1/2 (2007): 26-31.
[38] Berkeley J. Dietvorst, Joseph P. Simmons and Cade Massey, "Algorithm Aversion: People Erroneously Avoid Algorithms After Seeing Them Err," *Journal of Experimental Psychology: General*, vol. 144, no. 1 (2015): 114-126.
[39] Tom R. Tyler, *Why People Obey the Law*, Huang Yong trans. (Beijing: China Legal Publishing House, 2015), 242.
[40] Ibid., 262.
[41] Tom R. Tyler, "The Psychology of Procedural Justice: A Test of the Group-Value Model," *Journal of Personality and Social Psychology*, vol. 57, no. 5 (1989): 830-838.

uphold the dignity of citizens. Digital procedural rights can maximize this sense of dignity, ensuring that citizens are treated as ends in themselves, not merely as means, within digital administrative procedures.

C. Resolving the paradoxes of digital procedural rights

Despite their practical necessity and juridical foundation, digital procedural rights face feasibility challenges, including the efficiency paradox, the capacity paradox, and the abuse paradox, which require resolution through dialectical analysis.

The first is the efficiency paradox — the concern that digital procedural rights may increase procedural requirements, thereby burdening administration and reducing efficiency.[42] This view conflates case-specific efficiency with systemic efficiency. Digital procedural rights may reduce efficiency in individual cases but enhance the overall efficiency of digital administration. They are not applied uniformly without distinction; rather, different degrees of digital procedural rights are matched to the risk levels of different digital administrative actions, in order to achieve a balance between rights and efficiency. For high-risk digital administration, citizens are granted full digital procedural rights — even at the cost of efficiency, rights must be protected. For medium-risk digital administration, citizens are entitled to limited digital procedural rights, which enhances efficiency while ensuring basic procedural safeguards. For low-risk digital administration, citizens are granted only minimal rights, such as the right to information, thereby enabling efficient processing. This tiered, categorized approach precisely matches digital procedural rights to the fields and scenarios where they are needed, preventing excessive procedural requirements from undermining administrative efficiency. From a systemic, long-term perspective, efficiency gained at the expense of digital procedural rights is fragile and costly. Such efficiency may carry hidden risks — such as algorithmic errors — that can trigger large-scale rights infringement and mass litigation, thus eroding government credibility and incurring extremely high correction costs. Robust digital procedural rights, by contrast, can effectively enhance the legality, rationality, and acceptability of administration and reduce systemic correction costs, thereby improving overall administrative efficiency. Therefore, digital procedural rights and administrative efficiency are not opposed but mutually reinforcing.

The second is the capacity paradox: due to insufficient expertise, citizens may struggle to exercise digital procedural rights, and reviewers may find it difficult to audit intelligent algorithms. The key lies in establishing support mechanisms and duties for exercising digital procedural rights, rather than leaving the burden entirely to citizens and reviewers. On one hand, drawing on EU standards, algorithmic explanations should meet the threshold of comprehension by "a layperson with no specialized training."[43] Administrative organs should use plain language and visual aids — such as diagrams and tables — to explain algorithmic logic and avoid complex jargon like "random forest", ensuring that explanations are accessible to citizens. For instance, Article 13 of the *EU Artificial Intelligence Act* requires that

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[42] Wang Xiaojie, "Structural Transformation and Value Integration of Administrative Procedures in the Digital Government Era," *Zhejiang Academic Journal* 1 (2025): 152-158.

[43] WP29, "Guidelines on Automated Individual Decision-Making and Profiling for the Purposes of Regulation 2016/679," Brussels, BE: WP29, 2018, page 25-26.

information about the use of high-risk AI systems be comprehensible to deployers.[44] On the other hand, a diversified and multi-dimensional support mechanism for exercising digital procedural rights should be established. Government platforms should provide dedicated service options such as algorithmic explanation portals and digital procedure appeal windows, offering targeted guidance to citizens and ensuring accessible channels for reviewing the source code of automated systems.[45] Independent third-party institutions should be introduced to provide citizens with key algorithm auditing and assessment services, with evaluation reports published on a regular basis.[46] Additionally, the legal aid system can be expanded to specifically address digital procedural rights issues, and government platforms can embed digital literacy content to enhance citizens' digital capabilities.

The third is the abuse paradox — the concern that the universal grant of digital procedural rights may lead to rights abuse and harm public interest. For instance, repeatedly requesting manual review or lodging malicious objections may disrupt administrative order. It must be acknowledged that any right carries the potential for abuse, but this cannot justify denying the right itself, for that would be to discard the solution for fear of the problem. The abuse of digital procedural rights should be addressed through targeted measures while affirming the rights themselves. On the one hand, conditions for exercising digital procedural rights should be established. For rights such as the right to manual review and the right to refuse automated decision-making, citizens should be required to show prima facie grounds — for instance, discriminatory algorithmic code — before exercising them. Besides, statutory time limits should be imposed on the exercise of digital procedural rights, and the number of objections should be capped. On the other hand, the boundaries for identifying abuse and the corresponding legal liability should be clearly defined. Rights must not be abused: citizens shall exercise digital procedural rights in good faith, shall not exercise them in violation of laws or regulations, and are strictly prohibited from making false statements or repeatedly exercising digital procedural rights without just cause. Where digital procedural rights are abused, administrative organs should flag such cases and respond promptly — for example, by temporarily restricting the exercise of relevant rights for a specified period. Where the abuse of digital procedural rights causes significant harm to public interest, civil or administrative liability shall be pursued in accordance with the law.

III. Ideal Types of Digital Procedural Rights

Digital procedural rights are both a new form of traditional procedural rights in the era of digital government and a new category of procedural rights unique to that era. Accordingly, digital procedural rights can be extended into three hierarchical ideal types: first, the right to be free from algorithmic discrimination at the subject

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[44] European Parliament and Council, Regulation (EU) 2024/1689 of the European Parliament and of the Council of 12 July 2024 on Artificial Intelligence (Artificial Intelligence Act), *Official Journal of the European Union*, 2024, Article 13.
[45] Danielle Keats Citron, "Technological Due Process," *Washington University Law Review*, vol. 85, no. 6 (2008): 1249-1313.
[46] Ibid.

level; second, the rights to digital information, digital participation, record retention, and manual review at the process level; and third, the right to refuse automated decision-making at the outcome level. Their core purpose is to enhance citizens' control over digital administrative procedures. Among these, the right to be free from algorithmic discrimination and the right to reject digital decisions have not yet matured or been fully codified. In the sense of ideal types, they may be called "rights"; in positive law, "entitlements" is the more appropriate term. These types of digital procedural rights are, of course, highly abstract ideal types in the Weberian sense — not perfectly aligned with reality — but serve to provide an analytical framework for the diverse and complex digital procedural rights that arise in practice.

A. Right to be free from algorithmic discrimination

The traditional principle of natural justice requires adjudicators to have no interest in a case and to remain neutral — one cannot be a judge in one's own case. In the digital government context, digital decision-making systems are not human and have no self-interest of their own. Therefore, in response to bias in intelligent automated algorithms, discrimination in data-driven training, and procedural differentiation across unified platforms, citizens' primary entitlement is the right to be free from algorithmic discrimination, achieved through the right to algorithmic transparency and the right to procedural consistency.

1. Right to algorithmic transparency

The black-box nature of intelligent automated algorithms and data-driven systems renders the public unable to know, understand, or oversee algorithmic decisions, making algorithmic discrimination unavoidable. The right to algorithmic transparency enables openness and accountability in algorithms, thereby preventing, detecting, and eliminating discrimination. The National New Generation AI Governance Specialist Committee's *2019 Governance Principles for the New Generation of Artificial Intelligence: Developing Responsible AI* explicitly requires that "the transparency and explainability of AI systems should continuously be enhanced."[47] The *National Artificial Intelligence Research and Development Strategic Plan* (2023 update) released by the White House calls for improving the explainability and transparency of AI systems.[48] Algorithmic opacity in current digital administrative procedures can be categorized by cause into three types: deliberate secrecy (trade secrets, state secrets, etc.), technical illiteracy, and technical complexity.[49] Citizens should be granted corresponding rights to algorithmic transparency tailored to each type. For deliberate secrecy, citizens' right to request disclosure of the source code or relevant data of digital decision-making systems should be affirmed. This does not require full disclosure; rather, the scope of disclosure should be limited to protect the interests of all parties involved in the

[47] National New Generation AI Governance Specialist Committee, *Governance Principles for the New Generation of Artificial Intelligence: Developing Responsible AI*, June 17, 2019.

[48] National Science and Technology Council, Select Committee on Artificial Intelligence, *National Artificial Intelligence Research and Development Strategic Plan* (2023 Update), Washington, D.C.: National Science and Technology Council, 2023.

[49] Jenna Burrell, "How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms," *Social Sciences Electronic Publishing*, vol. 2015, no. 3 (2015): 1-12.

data.[50]

For the latter two types of opacity, the primary cause is the complexity of technical code — even if it is disclosed, citizens would struggle to comprehend it. A right to transparency alone is therefore insufficient to be effective. Given the technical and professional nature of the right to transparency, citizens should be explicitly entitled to require qualified professionals to identify algorithmic discrimination through algorithmic auditing, the standard for which is procedural consistency.

2. Right to procedural consistency

Traditional due process theory requires equal treatment of the parties concerned — like cases treated alike, which embodies the fundamental requirement of procedural consistency: administrative procedures must apply equally to all citizens, with no differential application absent justifiable cause.[51] This underscores the universality and nondiscriminatory nature of procedures, an articulation from the administrative standpoint. From the citizen's perspective, this translates into a right to procedural consistency. To address procedural disparities arising from cross-departmental, cross-stage integration on unified platforms and design biases in intelligent automated algorithms, citizens are entitled to demand that digital decision-making systems apply administrative procedures to them equally, without differential treatment absent justifiable cause. To this end, in addition to ensuring the universal applicability and specificity of procedures, citizens' right to reproducibility of decisions should be established: citizens have the right to require that decisions made by automated systems be reapplicable to analogous cases, and that administrative organs embed corresponding algorithms at the initial design stage of digital decision-making systems. Furthermore, from an outcome-oriented perspective, citizens' right to procedural consistency assessment should be clarified: citizens have the right to require technical experts to evaluate procedural consistency through static analysis (code review) and dynamic analysis (evaluation of program execution and outputs).[52] Correspondingly, administrative organs are obligated to refine digital decision-making systems based on assessment findings.

B. Right to digital informed consent

Citizens affected by algorithms hold a dignity-based right to "know the why behind the what."[53] The right to digital informed consent fundamentally addresses information asymmetry in digital administrative procedures — such as opaque cross-departmental procedures on unified platforms, pop-up obstructions in mobile government services, and data-driven black boxes — and spans all digital administrative processes. When administrative organs make digital decisions or adopt facts determined by digital systems, citizens have the right to know the intended administrative action, its factual and legal bases, and discretionary reasoning — including processing reasons and remedy channels in mobile government services.

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[50] Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Cambridge, MA: Harvard University Press, 2015), 142.

[51] Shaughnessy v. Mezei, 345 U.S. 206, 224 (1953).

[52] Gary McGraw, *Software Security: Building Security In* (Boston, MA: Addison-Wesley Professional, 2006), 119-121.

[53] A. Waldman, "Power, Process, and Automated Decision-Making," *Fordham Law Review*, vol. 88, no. 2 (2019): 623.

This corresponds to the administrative organ's duty of notification. Notification may be delivered through formatted communication based on citizens' registered contact information or through personal interaction. Moreover, to address issues such as the difficulty in identifying blockchain-stored evidence, citizens shall have the right to access relevant original evidence and the operational process of automated systems. On this basis, citizens are further entitled to know the facts and reasons underlying the administrative action after making statements, defenses, or objections. Administrative organs are obligated to provide further explanation and notification through on-site communication, human customer service, home visits, or similar means.

Given the technical complexity of source codes for intelligent automated algorithms, citizens may face significant difficulty in understanding automated decisions. To substantively realize the right to digital informed consent, citizens shall be entitled to require administrative organs to explain algorithms in content comprehensible to the general public. This is the citizen's right to algorithmic explanation—an enhancement of the right to algorithmic disclosure. The latter is a lower-tier "knowing"; the former, a higher-tier "understanding." The right to algorithmic explanation constitutes the interface between individuals and automated decision-making systems,[54] aiming to enable people to truly comprehend algorithms and become subjects who master them rather than objects controlled by them. The EU *General Data Protection Regulation (GDPR)* (2018) specifies multiple data subject rights, including the right to information and the right to rectification. Article 13 provides that data subjects have the right to obtain from data controllers meaningful information about the logic involved and the envisaged consequences of automated decision-making—precisely to enable effective "understanding" of algorithmic operations and outcomes. Specifically, the right to algorithmic explanation can be refined by distinguishing algorithmic transparency from structural complexity, drawing on EU standards that adopt the comprehension level of an "uneducated layperson" as the benchmark.[55] In light of the corresponding algorithmic transparency and complexity, citizens shall be granted the right to require administrative organs to flexibly and comprehensively employ pre-modeling and post-modeling explanations, as well as global and local explanations.[56] The core objective is to enable citizens to fully and effectively understand algorithmic logic across varying levels of transparency and complexity, thereby realizing their right to digital informed consent and laying the groundwork for the protection of other rights.

C. Right to digital participation

To address the unilateral dominance of administrative organs in digital administrative procedures, citizens shall be entitled to participate in the entire digital administrative process and to oversee the full use of automated systems by administrative organs. Citizens hold varying degrees of participation rights across

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[54] Riccardo Guidotti et al., "A Survey of Methods for Explaining Black Box Models," *ACM Computing Surveys*, vol. 51, no. 5 (2018): 1-42.

[55] WP29, "Guidelines on Automated Individual Decision-Making and Profiling for the Purposes of Regulation 2016/679," Brussels, BE: WP29, 2018, page 25-26.

[56] Liu Dongliang, "Technical Due Process: The Dual Variation of Procedural Law and Algorithms in the AI Era," *Journal of Comparative Law* 5 (2020): 64-79.

design, development, procurement, deployment, evaluation, and oversight. These rights may take diverse forms, selected from the "ladder of citizen participation" according to the level of engagement.[57] Such full-process participation enables communication and error correction, thereby enhancing citizens' trust in automated systems.

First, the right to participate in design and development. To address issues such as design bias in intelligent automated algorithms, citizens shall be entitled to participate fully and meaningfully in the design and development of algorithmic models and ethical standards within automated systems. Currently, system design and development proceed with virtually no public participation. Instead, they are dominated by administrative organs, related enterprises, and technical experts, which will inevitably embed value preferences that facilitate administrative power into algorithmic models and ethical standards.[58] It is therefore necessary to introduce citizens' digital participation rights in the design and development of automated systems, particularly algorithmic models and ethical standards. This provides a digital interaction framework for human-machine engagement and corrects the systemic bias of automated systems toward power operations at the expense of rights protection, infusing them with rights-based values.

Second, the right to submit comments. To address the lack of communication and feedback in mobile government services and data-driven processes, citizens shall be entitled to submit comments on automated decisions, including challenges, objections, and contests. Automated systems are not infallible; they make errors, as humans do. Their algorithms may contain flaws, and they may be subject to malicious attacks by viruses or adversarial examples. Given the repetitive applicability of automated systems, errors can produce widespread consequences. Automated systems with deep learning capabilities further "reinforce" existing errors in subsequent decisions. On this basis, citizens shall be entitled to raise comments and challenges regarding automated systems and their decisions. Administrative organs should not only tolerate such participation but are obligated to respond to citizens' comments and improve systems accordingly.

Third, the right to a digital hearing. Traditional due process requires a hearing before an adverse decision is made, entitling citizens to "prior notice and a hearing before a neutral decision-maker."[59] The automated, instantaneous nature of digital decisions on intelligent unified platforms with cross-departmental processing poses substantial obstacles to prior-decision hearings. Meanwhile, post-decision hearings may also be undermined by the black-box nature of digital decisions and their algorithms. To address this issue, citizens' hearing rights should be calibrated according to the risk level of digital decisions, thereby supplementing traditional procedures. For high-risk digital decisions involving personal liberty, major property rights, or public safety, citizens shall be granted a right to a prior hearing, which may take digital form. For low-risk digital decisions such as traffic violation fines or social

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[57] Sherry Arnstein, "A Ladder of Citizen Participation," *Journal of the American Institute of Planners*, vol. 35, no. 4 (1969): 217.

[58] Ma Changshan, *Towards a Legal Framework for the Digital Society* (Beijing: Law Press·China, 2021), 194.

[59] John Alder, *Constitutional and Administrative Law* (London: Palgrave Macmillan, 2013), 394.

security reviews, a post-decision hearing right may suffice.

D. Right to record preservation

Raw records within automated systems can capture in detail the judgment and decision-making processes of such systems. This meets legal compliance requirements, provides a basis for subsequent review, audit, and legal disputes, and clarifies accountability. Citizens are therefore entitled to require administrative organs to preserve complete and clear raw records of the entire digital administrative process and to maintain them in a state of ready accessibility. In terms of content, the right to record preservation covers relevant personal information, transaction records, and other data; operational logs including system startup, execution, and parameter adjustments; and the decision-making process and outcome information such as algorithmic rules and algorithmic operations. To protect this right, relevant authorities shall formulate concrete standards for record preservation, specifying basic requirements for integrity, accuracy, security, and accessibility. For records closely tied to citizens' legitimate rights and interests — such as administrative enforcement records and real estate registration information — blockchain-based evidentiary preservation should be adopted, with citizen query interfaces provided to ensure records are tamper-proof and traceable. The *Notice of the General Office of the State Council on Issuing the Guidelines for the Development of Government Websites* (Guo Ban Fa [2017] No.47) stipulates that "website operation logs shall be retained for no less than six months." On this basis, citizens' right to request preservation of automated system records and administrative organs' corresponding duty to act shall be clearly specified. Given the time interval between the issuance and service of administrative acts and the filing and service of lawsuits, the retention period may be appropriately extended beyond the six-month administrative litigation filing period. Where citizens apply for administrative reconsideration or file a lawsuit, retention should be extended until the conclusion of legal remedy proceedings.

In administrative procedures, citizens may require administrative organs to preserve raw records, and such organs bear a corresponding duty that may not be shirked. In supervisory, reconsideration, and litigation proceedings, citizens may request supervisory authorities, reconsideration organs, and courts to obtain raw records for examining whether the facts and legal bases of administrative acts are lawful and appropriate, and whether citizens' digital procedural rights are effectively respected and protected. Where necessary, citizens may request courts and other organs to conduct professional audits of automated system raw records — a requirement shared by the right to record preservation and the right to algorithmic transparency.

E. Right to human review

In the era of digital government, digital systems have penetrated virtually every facet of administration. Given their inherent imperfection and inability to bear administrative responsibility, they cannot fully replace human judgment. From a purely technical standpoint, the design and development of digital systems is itself an iterative process of continuous feedback and error correction — a process equally

applicable to the operation and decision-making of automated systems.[60] Human review is therefore essential, which can effectively compensate for the limitations of digital systems and enhance citizens' capacity to respond to digital decisions. Accordingly, to address process-level defects such as operational deviations in intelligent automated algorithms, data gaps in data-driven processes, and irregularities in mobile government services, citizens should be entitled to request human review during digital administrative procedures. Administrative decisions may not be issued externally without prior human review; such review is a prerequisite for any administrative act, and digital systems may not autonomously generate administrative decisions. In particular, for high-risk digital decisions involving personal liberty, major property rights, or public safety, administrative organs bear a statutory obligation to conduct human review upon citizens' request. Additionally, a review upon request does not preclude administrative organs from conducting a review ex officio. They should proactively perform human review of digital administrative processes in key, high-risk, and high-frequency areas—including intelligent automated risk alerts, data-driven social security eligibility reviews, and cross-departmental processing on unified platforms—to minimize the risk of erroneous judgments and decisions made by systems. Furthermore, to effectively protect citizens' right to human review, personnel familiar with the principles of automated systems and versed in digital technology applications and potential risks are indispensable. This requires administrative organs to provide the necessary technical training for review staff.[61]

F. Right to refuse automated decision-making

Digital technology is underpinned by surveillance and control over citizens.[62] To avoid the legal risks of intelligent automated decision-making via digital systems and to uphold human dignity and agency, citizens shall also be entitled, under specific circumstances, to refuse decisions made entirely by automated systems, as well as decisions made by administrative organs through digital systems such as unified platforms or mobile government services that are manifestly unlawful or seriously infringe upon their legitimate rights and interests. This constitutes the citizen's right to refuse automated decision-making. Unlike the right to human review, which emphasizes process scrutiny, the right to refuse automated decision-making centers on outcome resistance. The first is the citizen's right to refuse decisions made entirely by automated systems — a quintessentially new right in the digital government era that is grounded primarily in the systemic risks of fully automated decision-making. Relevant legislation has already addressed this issue. Article 22(1) of the EU *General Data Protection Regulation (GDPR)* provides that "the data subject shall have the right not to be subject to a decision based solely on automated processing." Article 24(3) of China's *Personal Information Protection Law* provides that individuals "shall

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[60] Joshua A. Kroll et al., "Accountable Algorithms," *University of Pennsylvania Law Review*, vol. 165, no. 3 (2017): 641.

[61] Danielle Keats Citron, "Technological Due Process," *Washington University Law Review*, vol. 85, no. 6 (2008): 1249-1313.

[62] Jathan Sadowski, *Too Smart: How Digital Capitalism Is Extracting Data, Controlling Our Lives, and Taking Over the World* (Cambridge, MA: MIT Press, 2020), 155.

have the right to refuse the processor for making the decision only through automated decision-making." The second is the citizen's right to refuse decisions made by administrative organs through digital systems that are manifestly unlawful or seriously infringe upon their legitimate rights and interests. This is the digital-government manifestation of the traditional right to refusal. Article 77 of China's *Law on Administrative Penalty* provides that "where an administrative organ, when imposing a penalty on a party, fails to use receipts for fines or confiscation of property, or uses receipts that are not made by the statutory department, the party concerned shall have the right to refuse to accept the penalty." The conditions for application are manifest illegality and serious infringement of legitimate rights and interests; "sole reliance on digital systems" is not required — only that digital systems be "utilized." In terms of legal effect, the citizen's right to refuse automated decision-making corresponds to the administrative organ's statutory duty to accept the refusal and its obligation not to compel acceptance.

IV. Institutional Safeguards for Digital Procedural Rights

Where digital technology is applied to administration, infringement on digital procedural rights results from the coupling of multiple factors, including legal and technical factors.[63] Legal factors are mainly manifested as the lack of a legal basis for digital procedural rights and insufficient legal control over digital administrative power, while technical factors are primarily reflected in the deviation of digital technology from normative requirements. In light of this, a universal safeguard pathway for citizens' digital procedural rights should be built from three dimensions — rights, power, and technology — along with a targeted safeguard pathway against risks specific to different digital administrative procedures.

A. Rights dimension: legal recognition of digital procedural rights

To ensure that automated administration under a digital government does not infringe on citizens' digital procedural rights, a holistic response at the level of legal philosophy is required to provide abstract, general guidance for administrative legislation, enforcement, and adjudication in the digital era. According to the social contract theory, the ultimate purpose of the state is to protect the rights of the people.[64] It is therefore essential to establish the protection of digital procedural rights as a baseline requirement and ultimate goal of a digital government. Where a digital government or automated administration encounters issues related to citizens' digital procedural rights, these issues must be given the utmost respect; no derogation from or restriction of such rights shall be permitted on any ground. Guided by this legal philosophy, the top priority is to legally recognize citizens' digital procedural rights and build a comprehensive legal framework, providing a foundational and universal legal basis for law enforcement and judicial practice. Currently, China's administrative legislation on citizens' digital procedural rights is concentrated mainly at the local level, covering local regulations, rules, and normative documents of

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[63] Ren Rong, "Risks of Algorithm Embedding in Government Governance and Their Prevention and Control," *E-Government* 7 (2021): 31-41.

[64] Jean-Jacques Rousseau, *The Social Contract*, He Zhaowu trans. (Beijing: The Commercial Press, 2003), 19-21.

various tiers. For instance, regarding the right to digital informed consent, Article 109(1) of the *Beijing Measures for Implementation of the Road Traffic Safety Law of the People's Republic of China* stipulates: "Traffic management departments of public security organs shall publicly announce traffic violations confirmed through technical traffic monitoring records, and the public shall have the right to consult such records." While existing legislation has yielded positive results, it still suffers from a lack of universal legal basis, gaps in specific provisions, and imprecise legislative language, all of which call for further refinement of the legal framework.

First, in terms of a universal legal basis, a General Administrative Law should be enacted to establish a universal legal framework for citizens' procedural rights, thereby providing the foundation for specific legislation on digital procedural rights. The General Administrative Law constitutes the general part of administrative law and "holds universal and leading value for the fundamental administrative code and even the entire administrative legal system."[65] Incorporating citizens' procedural rights serves the fundamental purpose of protecting citizens' legitimate rights and interests, and also constitutes a highlight and distinctive feature of the General Administrative Law.[66] Specifically, it should outline in principle general procedural rights — including the right to fair treatment, the right to information, the right to be heard, and the right to refuse — and explicitly stipulate their universal applicability to all digital administrative procedures: unified platforms, data-driven systems, intelligent automation, mobile government services, and blockchain-enabled processes. The provisions on procedural rights in the General Administrative Law serve primarily to provide a general legal basis and framework for citizens' digital procedural rights, thereby driving the specific branches and sectoral administrative laws to elaborate legislation on digital procedural rights for particular digital procedures,[67] and to provide a universal legal basis for administrative enforcement to protect such rights.

Second, in terms of specific legislative rules, priority should be given to supplementing legislation in three areas: the right to algorithmic explanation, the right to record retention, and the right to human review. The right to algorithmic explanation primarily addresses the black-box risks inherent in intelligent automation and data-driven systems. Given the breadth and diversity of digital decision-making applications, it is difficult to make uniform provisions; a decentralized, tiered legislative approach is therefore appropriate. For "self-explanatory" algorithms that do not involve a black box, public disclosure of basic principles alone suffices for citizens' comprehension,[68] so the right to request disclosure of such principles should be explicitly specified. For algorithms that contain black boxes, citizens' right to

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[65] Ma Huaide, "The Normative Functions and Construction of the General Part of Administrative Law in the Era of Codification," *Journal of Political Science and Law* 3 (2025): 47-60.

[66] Li Ce, "The Constitutional Foundation of China's Administrative Code," *Administrative Law Review* 1 (2025): 160-171.

[67] Li Ce, "Foundational Theory of Administrative Law Codification and the Optimal Composition of the Administrative Law System," *Academic Forum* 5 (2025): 50-66; Li Ce, "Theoretical Coordinates and Institutional Logic of the Health Code in the Era of Administrative Law Codification," *Medicine and Jurisprudence* 1 (2025): 8-14.

[68] Ji Shouling et al., "A Survey of Explainability Methods, Applications, and Security of Machine Learning Models," *Journal of Computer Research and Development* 10 (2019): 2071-2096.

request explanations of corresponding precision should be specified, supplemented by textual explanatory statements from administrative organs (soft explanation) and analytical assessment based on the outputs of quantitative relationships made by computer programs (hard explanation).[69] The right to record retention addresses issues such as fragmented cross-departmental traces on unified platforms, evidentiary barriers in blockchain-enabled records, and logs of intelligent automated algorithms. Retention records currently embedded in internal administrative procedures should be externalized: citizens' right to require administrative organs to retain relevant records should be made explicit, and the scope of records should be extended from texts and audio-visual materials to the complete audit trail of automated systems — that is, detailed logs of system activities. The right to human review primarily targets issues such as biases in intelligent automated approval and data-driven decisions, and operational errors in mobile government services. Different tiers and degrees of human review should be designed according to different application scenarios: for review upon request, citizens' right to apply should be clarified; for review ex officio, administrative organs should be granted discretionary power subject to necessary control mechanisms.

Third, in terms of legislative language, digital procedural rights should be explicitly specified as rights from the citizens' perspective. Current legislation on digital administrative procedures primarily imposes digital procedural obligations on administrative organs without conferring corresponding rights on citizens, which readily gives rise to disputes over whether citizens are entitled to such rights. For instance, Article 22 of the *Management Measures of Guiyang Municipal People's Government on Data Resources* stipulates: "Administrative organs shall establish log records for government data provided and obtained by the organ itself; such log records shall be retained for no less than six months to ensure traceability of the data use process." This provision fails to reflect citizens' digital procedural rights. Going forward, based on the ethical value of human dignity vis-à-vis digital technology,[70] relevant legislation should, beyond specifying corresponding obligations for administrative organs, employ rights-oriented language — such as "shall have the right" and "right" — from the citizens' perspective to specify digital procedural rights, tailored to specific digital administrative scenarios. Examples include "Citizens shall have the right to consult procedural records stored on the blockchain" and "Citizens shall have the right to demand real-time responses from human customer service on government service platforms." This approach would ensure the correspondence of rights and obligations, thereby bringing digital procedural rights into genuine effect.

B. Power dimension: procedural control over digital administrative power

The most critical task in protecting digital procedural rights from the power dimension is to ensure the legalization and standardization of administrative organs' digital power. Currently, the most pressing priorities are to delineate the boundaries of power and responsibility for digital power, standardize its operational procedures, and

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[69] Riccardo Guidotti et al., "A Survey of Methods for Explaining Black Box Models," *ACM Computing Surveys*, vol. 51, no. 5 (2018): 1-42.

[70] Zheng Yushuang, "Value Justification and Jurisprudential Construction of Human Dignity," *Journal of Comparative Law* 5 (2019): 170-185.

strengthen legal oversight against unlawful or improper exercise of such power.

First, the principle of legal reservation for digital procedural rights should be established through power-responsibility lists. Legal reservation provides prohibitive norms for digital administration, requiring that no action detrimental to digital procedural rights be taken without a legal basis. The power-responsibility list is a key institution for implementing legal reservation and administrative transparency, which plays a fundamental role in the modernization of national governance.[71] Currently, infringement on digital procedural rights is largely attributable to the failure to delineate the power-responsibility boundaries of automated administration, resulting in ambiguity of powers and overreach that cannot be effectively curbed. To address this issue, it is recommended that power-responsibility lists be compiled for different types of digital administrative procedures, specifying the responsibilities, authorities, and boundaries of administrative organs in the digital government era. The principle of "no action without legal authorization" must be upheld to prevent derogation from citizens' digital procedural rights in the absence of a legal basis. The *Guiding Opinions of the State Council on Strengthening the Construction of Digital Government* has already mandated "enhanced digital management of regulatory matter lists" and the "compilation of public data open catalogs and associated responsibility lists." On this basis, a comprehensive digital administrative power-responsibility list should be compiled without delay, particularly for traffic enforcement, market regulation, platform economy, and other fields.[72] For instance, the list should specify the applicable matters for intelligent automated regulatory approval, as well as the data scope and purpose of use for data retrieval powers in data-driven processes, thereby delineating the boundaries of digital administration and strengthening risk assessment and prediction.

Second, the digital procedural obligations and duties of administrative organs should be clearly defined in accordance with citizens' digital procedural rights. The public law nature of digital procedural rights determines that where there is a right, there must be an administrative obligation — but where there is an administrative obligation, a right does not necessarily follow.[73] The right-holders of digital procedural rights are citizens, legal persons, or other organizations, while the obligation-bearers are administrative organs. This means citizens are entitled to demand that administrative organs fulfill their procedural duties. Digital procedural rights can only be given real effect if corresponding digital procedural obligations are imposed on administrative organs. Currently, procedures for the exercise of digital administrative power lack unified and specialized regulation; relevant norms are scattered across the *Law on Administrative Penalty*, the *Administrative License Law*, the *Administrative Coercion Law*, and other statutes. Going forward, an administrative procedure law could be enacted to incorporate the digital procedural obligations of

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[71] Ma Huaide, "The Mission and Tasks of Building a Law-based Government in the New Era," *Tribune of Political Science and Law* 1 (2023): 14-27.

[72] Li Ce, "Formation Mechanisms and Regulatory Paths of Profit-Seeking Administrative Enforcement," *Law Review* 5 (2025): 52-66.

[73] Li Ce, "The Indigenous Logic and Practical Reflection on Plaintiff Standing in Administrative Complaint Cases," *Administrative Law Review* 1 (2022): 146-157.

administrative organs corresponding to digital procedural rights, thereby providing uniform provisions on digital administrative procedures and a general legal basis and minimum standard for more specific regulations in other laws. These obligations would include: the duty to eliminate algorithmic discrimination, the duty of public notification, the duty to permit citizen participation, the duty of record retention, the duty of human review, and the duty to accept citizens' refusal of digital decisions. For example, administrative organs must require government service platforms and mobile government service apps to display mandatory notification content and provide options for statement and defense.

Lastly, supervision and constraint mechanisms for digital administrative procedures must be strengthened. Digital administrative power is characterized by high technicality, broad impact, and strong concealment. "Digital administration has evolved from the procedural 'service function' stage to the substantive 'decision-making function' stage."[74] Digital technology is predominantly mastered and deployed unilaterally by decision-making organs. Without effective law-based supervision and constraint, reliance on administrative organs' self-discipline alone readily leads to violations of due process and infringement on citizens' procedural rights. A full-process supervision and constraint system for digital administrative procedures must therefore be established to leverage technology for real-time monitoring and early warning. Supervision modules can be universally embedded in government service platforms and mobile government service apps to accept citizens' complaints, reports, and feedback, to conduct full-process assessments of the legality and rationality of digital administrative procedures, and to automatically detect and correct those procedures that infringe on citizens' digital procedural rights. Digital supervision can also be achieved through intelligent automated algorithm monitoring and mobile government service objection handling. In a case handled by the Justice Bureau of a city in Jiangxi Province — concerning excessive frequency of enterprise-related inspections by municipal law enforcement departments[75] — the bureau, along with relevant departments, developed and launched a QR code-based platform for official entry into enterprises to conduct full-process statistical monitoring of inspection subjects, targets, frequency, and procedures, thereby effectively regulating enterprise-related administrative inspections.

C. Technical dimension: normative requirements for digital technology

Protecting digital procedural rights is fundamentally a technical issue, and technical issues require technical solutions. Protecting digital procedural rights from a technical standpoint is, in essence, about governing digital technology itself. The key to governing digital technology lies in ensuring both its legal compliance and its alignment with digital procedural rights.

First, automatically embed digital procedural rights through digital technology. "Expecting to achieve complete identity neutrality in algorithms is, in itself, an

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[74] Zhan Penghe, "A Review of the Legitimacy of Power in Digital Administrative Means," *China Legal Science* 3 (2021): 114-138.

[75] Ministry of Justice of the People's Republic of China, "The Ministry of Justice Releases the Second Batch of Typical Cases of Administrative Law Enforcement," accessed January 1, 2026, https://www.moj.gov.cn/pub/sfbgw/gwxw/xwyw/202501/t20250115_513144.html.

unattainable goal."[76] To this end, it is necessary to translate legally prescribed digital procedural rights and administrative procedural obligations into computer codes and embed them into the underlying architecture of intelligent automated systems — including the data-bias verification code and the evidence-query interface code — as baseline requirements for intelligent automated administration. For instance, smart contracts can automatically verify compliance before an intelligent automated decision is rendered: any decision that fails to satisfy digital procedural rights, such as the right to digital informed consent, cannot proceed to the next step. In the meantime, visual procedural guidance systems for citizens should be developed, which are adapted to mobile government service platforms, with cross-departmental process demonstrations on unified portals. These systems are designed to vividly present citizens' digital procedural rights and administrative obligations, thereby satisfying the right of citizens to procedural information and preventing information asymmetry from undermining digital procedural rights. Government service large models and intelligent recommendation algorithms should be deployed to accurately identify users' circumstances and needs, automatically recommend optimal options, guide users in exercising their digital procedural rights, and leverage machine learning to collect user feedback for continuous algorithm refinement, thereby ensuring procedural rules better align with citizens' digital procedural rights.

Second, enhance the conformity of digital technology standards with procedural law norms. "If algorithmic models are flawed, they are more likely to produce unsatisfactory results."[77] Digital technology must not exceed legal boundaries or undermine the fundamental value of citizens' rights protection. Accordingly, technical standards tailored to different digital administrative procedures should be established, such as standards for online hearings, algorithmic transparency, electronic notice and service, and evidence storage and query. The fundamental requirement should be specified to ensure that all technical standards for digital administration comply with the procedural rules under the *Law on Administrative Penalty*, the *Regulations on Disclosure of Government Information*, and other statutes. In particular, government service platforms and mobile online hearings must ensure functions such as synchronous multi-party video to substantively protect citizens' digital participation rights. A robust assessment and dynamic adjustment mechanism for the conformity of digital technology with legal norms should be established, with regular evaluations of how well intelligent automated algorithms, data-driven systems, and similar technologies conform to legal standards, and either technology applications or legal norms should be adjusted as circumstances require. Where intelligent automated decision-making is used frequently, procedural requirements such as algorithmic transparency and accountability must be clearly defined to ensure the application of technology conforms to statutory procedural rights.

Third, strengthen algorithmic auditing. Algorithmic auditing refers to the testing and evaluation of the legality, effectiveness, and security of the entire lifecycle of

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[76] Ding Xiaodong, "On the Legal Regulation of Algorithms," *Social Sciences in China* 12 (2020): 138-159.
[77] Yao Xiansen and Wang Sen, "The Rights of Administrative Counterparts in Algorithmic Governance and Their Dual Protection," *China Soft Science* 10 (2024): 68-83.

algorithm design, development, and operation against recognized norms and standards, with optimization recommendations provided.[78] The widespread adoption of intelligent automation, mobile government services, and blockchain-enabled applications poses risks such as algorithmic bias and algorithmic black boxes that erode digital procedural rights. Therefore, it is necessary to comprehensively audit algorithm design, operation, and outcomes through both technical and legal means, thereby ensuring that algorithms remain subject to digital procedural rights at all times. Regarding audit subjects, in addition to government agencies, third-party professional institutions and citizens should be involved in the auditing of algorithms, with their respective authorities clearly defined. For instance, in intelligent automated decision-making, citizens shall have the right to review algorithm source code and consult with the development entity; in blockchain-enabled scenarios, they shall have the right to verify the authenticity of stored evidence. Enterprises should identify algorithmic risks and enhance algorithmic security through internal auditing.[79] Regarding the scope of audits, the auditing should cover the full lifecycle of algorithm development, operation, and outcomes, with particular focus on key risk sources such as algorithmic logic compliance, data source legality, and evidence immutability. Where algorithmic anomalies result in the omission or distortion of citizens' procedural rights, early warning mechanisms should be activated promptly and the algorithm corrected. Regarding audit outcomes, audit reports should, in principle, be made publicly available and open to public inquiry, with targeted explanations and responses provided. Additionally, audit results should be linked to litigation proceedings, serving as evidence for judicial determination of whether administrative actions have infringed on digital procedural rights.

Conclusion

Digital government inherently embodies the potential for public value creation and government modernization.[80] Digital technology has brought about a profound transformation to digital government and administrative procedures, giving rise to risks of citizens' procedural rights being infringed. Digital procedural rights can remedy the limitations of the digital procedural obligation paradigm. Grounded in the triple legal rationale of human dignity, fundamental rights, and subjective procedural justice, they are both feasible and well-founded, covering six ideal types: the right against algorithmic discrimination, the right to digital informed consent, the right to digital participation, the right to record preservation, the right to human review, and the right to refuse automated decision-making. The tripartite safeguard pathway, built across the three dimensions of rights, power, and technology, represents the most fundamental solution. Looking towards the grand vision set by the 20th CPC National Congress — to basically build a law-based nation, government, and society by 2035 — continued research is needed into fundamental and theoretical questions such as

[78] Zhang Yongzhong and Zhang Baoshan, "Innovation in the Paths of Algorithmic Regulation: On the Establishment of China's Algorithmic Auditing System," *E-Government* 10 (2022): 48-61.
[79] Wang Yufeng, "Model and Algorithmic Auditing: Theoretical Connotations, International Experience, and Audit Frameworks," *Auditing Research* 3 (2023): 11-18.
[80] OECD, *Recommendation of the Council on Digital Government Strategies*, OECD/LEGAL/0406, 2014.

the subjective public-rights basis of digital procedural rights, the correspondence between digital procedural rights and administrative procedural obligations, and the constitutional basis of digital procedural rights. The aim is to achieve a virtuous interaction between digital governance and the rule of law — "building digital government under a law-based government, and building a law-based government on digital government" — ensuring that digital government always serves as a sound instrument for the fundamental purpose of protecting citizens' digital procedural rights and basic human rights.

(Translated by *LI Chunyan*)