

The Crisis of Safeguarding Equal Rights under Algorithmic Discrimination and the Constitutional Response

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Abstract

In the course of constitutional law, I was deeply impressed by Professor Mao's lecture on the basic rights and equal rights of citizens. Among them, Professor Mao's analysis of the right to equality based on the different admission situations in each province through the college entrance examination further deepened my thinking on the right to equality. Now, combining the right to equality with the hot topics of the times, we will elaborate on the issue of safeguarding citizens' basic rights in algorithmic discrimination. In the digital age, algorithmic discrimination has become a new social governance challenge, challenging the traditional theory and practice of constitutional equality rights. The academic community has explored the basic theory of equal rights, infringement of rights, and regulatory pathways, with rich viewpoints. Algorithmic discrimination theoretically makes it difficult to achieve the value neutrality premise of formal equality, while substantive equality is trapped due to algorithmic characteristics. In practice, it leads to legislative lag, difficulties in administrative supervision, and difficulties in providing evidence and judgments for judicial relief. To address the challenges, it is necessary to establish a local guarantee path. Firstly, the state should fulfill its negative obligations, regulate the application of public power algorithms, including clarifying responsibilities, supervising the entire chain, and building an access list; The second is to update positive obligations and improve algorithmic governance systems to ensure equal rights and achieve a balance between technology and humanities.

Keywords

Constitution; Equality; Algorithm; Discrimination; Basic Rights

1. Introduction

Equality has always held a central position, and in contemporary legal civilization, equality has transformed from an abstract concept to a concrete constitutional right. It has not only been established as the basic value criterion of China's constitution, but also become an important yardstick for measuring the effectiveness of legal construction. However, in the context of the comprehensive reshaping of social life

by digital technology, algorithmic discrimination, as an "endogenous risk of technological uncertainty," has become a new social governance problem that urgently needs to be solved. This discriminatory phenomenon that runs through the entire chain of algorithm design, development, and application not only stems from the subjective bias of designers, but also from objective factors such as data sample bias and algorithm black boxes, which further promote the concealment and diffusion of discrimination. Compared to traditional discrimination, algorithmic discrimination is based on technical codes and presents complex forms, difficult identification, and amplified harm, which puts the traditional theory and practice of constitutional equality in a passive position when dealing with it. As an emerging concept that has not yet been fully defined by law, "algorithmic discrimination" still lacks a unified cognitive framework in academia. By tracing its root causes and categorizing the forms of discrimination in different scenarios, we can not only reveal the essential differences between algorithmic discrimination and traditional discrimination, but also fill the cognitive gap in the theory of equal rights in the digital age. In the face of multiple challenges such as increasing social inequality, ineffective traditional anti-discrimination theories, and outdated discrimination recognition mechanisms, drawing on international governance experiences such as the European Union and the United States, exploring localized governance paths will promote the practical innovation of constitutional equality theory in the digital age. In addition, the "individualization" and "refinement" characteristics of algorithms have put forward higher requirements for the equal rights and obligations fulfillment of the entire process of legislation, law enforcement, and judiciary, solving technical difficulties in legislation, balancing regulatory contradictions, and improving judicial relief mechanisms. Taking algorithmic discrimination governance as the starting point, it can systematically optimize the national equal rights and obligations fulfillment mode, construct a constitutional rights protection system that adapts to the needs of the digital age, and ultimately achieve a dynamic balance between technological rationality and humanistic values.

2. The impact of algorithmic discrimination on constitutional equality rights

2.1 The Dual Impact of Algorithmic Discrimination on Traditional Equality Theory

The core essence of the right to equality is that even if individuals have differences in innate endowments and social backgrounds, they should still equally enjoy the right to shape and develop their free personality. Its theoretical evolution presents a deepening trajectory from formal equality to substantive equality: formal equality upholds the principle of "equal opportunity", advocates treating all individuals with a unified standard, emphasizes procedural justice but relatively ignores objective differences between individuals; Substantive equality places greater emphasis on

fair outcomes and recognizes differential treatment based on reasonable reasons, aiming to achieve social fairness and justice through differentiated adjustments. However, the emergence of algorithmic discrimination has posed unprecedented challenges to the traditional application paradigms of these two equality theories.

2.1.1 The practical dilemma of formal equality

Formal equality requires algorithmic decision-making to adhere to the principle of value neutrality and strictly prohibit differential treatment based on sensitive factors such as race, gender, and skin color. The implementation of this requirement relies on two major prerequisites: firstly, algorithm designers need to ensure that there is no subjective discriminatory intent. Secondly, the data source for algorithm training must completely exclude sensitive information. But in real-world scenarios, both of these prerequisites are difficult to achieve. On the one hand, the historical data relied upon for algorithm training often contains pre-existing biases and discrimination in society. Even if designers subjectively maintain neutrality, algorithms may solidify these biases into decision rules through data learning. For example, if there is implicit discrimination against a specific gender or age group in the training data of a recruitment algorithm, the algorithm may transform this discrimination into screening criteria, resulting in unequal opportunities for job seekers. On the other hand, in the era of big data, sensitive personal information is widely present in various data sets, and completely eliminating it is almost impractical. Even if direct collection of sensitive data can be prohibited, proxy algorithms can still indirectly discriminate against specific groups through alternative data association analysis.

2.1.2 The paradox of achieving substantive equality

Substantive equality allows for differentiated treatment based on reasonable differences, but the trend towards "individualization" and "refinement" of algorithms has led to this principle being trapped in practice. The algorithm relies on big data technology and outputs differentiated decision results for different individuals or groups through deep learning of historical data of specific groups. This trend makes the division of legal adjustment objects more detailed, and traditional legal standards are difficult to accurately determine whether the "differences" generated by algorithms are reasonable. Meanwhile, the algorithm training data constantly accumulates historical biases, and its design process is inevitably influenced by historical experience, making it difficult to completely break free from the constraints of inherent discriminatory factors. What is more serious is that the algorithm, relying on the propagation characteristics of the Internet, has broken through the time and space constraints, and the number of users has grown exponentially, which has magnified the unequal consequences caused by algorithm discrimination hundreds of times. Moreover, the long-term retention of algorithms in the cloud poses a persistent risk of discrimination. In the process of repeated decision-making, unreasonable "differences" may be constantly reinforced, forming the "Matthew effect"

where the strong become stronger and the weak become weaker, seriously threatening the foundation for achieving substantive equality. For example, in credit approval algorithms, if historical data has biases against certain regions or industries, the algorithm will continue to give these groups lower credit ratings, limiting their access to financial resources and further exacerbating socioeconomic inequality.

2.2. Impact on the Practice of Equality

The establishment of equal rights relies on the coordinated fulfillment of guarantee obligations by various government agencies. Based on different functional divisions, legislative, administrative, and judicial organs jointly build an institutional defense line for equal rights. However, the arrival of the algorithm era has disrupted this balance, and algorithmic discrimination is like an undercurrent, causing a comprehensive impact on the system of state power operation.

2.2.1 Legislative body: lagging dilemma and authority dissolution

The legislation of equal rights in our country has a profound historical origin. As early as the period of the New Democratic Revolution, the people's political power in the base areas had already reflected the right to equality in constitutional documents. After the reform and opening up, legislative bodies at all levels have continued to make efforts to build a comprehensive and equal rights legislative system with the Constitution as the core, covering political, economic, cultural and other fields, as well as women, children, ethnic minorities and other groups. The second paragraph of Article 33 of the Constitution establishes the principle of "equality before the law", and there are also 26 articles that provide detailed provisions for various types of equality rights. Single laws such as the Law on the Protection of Women's Rights and Interests and the Law on the Protection of Disabled Persons further strengthen the protection of equality rights for specific groups. But the emergence of algorithmic discrimination has put the legislative body in a dual dilemma. On the one hand, algorithms rely on big data and deep learning technologies, with extremely fast iteration speeds, and their discriminatory manifestations are complex, variable, and difficult to predict. This amplifies the inherent lag of legislation infinitely, making it difficult for traditional mechanisms for interpreting and revising regulations to keep up with the pace of algorithmic development, and placing higher demands on legislative techniques and timing control. On the other hand, the era of algorithms has given rise to a new power structure. Large platform enterprises, relying on their technological advantages, not only monopolize the market, but also master the "quasi legislative power" by formulating platform rules, exercising supervisory power, and handling disputes, forming a dual power ecology of "government power+commercial power". Platform rules have to some extent replaced the law, causing an impact on traditional legislative authority. The decentralized social power dispersion dilutes the core position of the law in the protection of equal rights.

2.2.2 Administrative agencies: Identifying difficulties and regulatory confusion

Administrative agencies are an important guarantee force for the implementation of equal rights laws. They must strictly enforce the law and maintain equal rights through active administrative assistance, and implement equal rights protection through administrative legislation, regulations, and specific administrative actions. However, algorithmic discrimination poses many challenges for administrative agencies. There are significant obstacles in identifying algorithmic discrimination. The algorithm itself is highly specialized and structurally complex, making it difficult for ordinary law enforcement personnel to deeply understand its operational logic due to insufficient knowledge reserves. At the same time, the existence of algorithmic black boxes, trade secret protection, and proxy discrimination greatly reduces the transparency of algorithms, making it difficult for even professional technicians to fully understand the full picture of algorithms. In addition, the personalization and non disclosure of algorithmic decisions make discriminatory behavior hidden behind massive amounts of data and personalized services, making it difficult to detect and regulate. The regulatory system also faces serious deficiencies. Algorithmic discrimination involves multiple fields, and departments such as cyberspace, culture, credit reporting, and civil affairs may all have regulatory powers. This leads to departments either shifting blame and playing the ball, or repeating law enforcement and wasting resources in the actual governance process, making it difficult to form an efficient regulatory synergy. What is even more alarming is that the integration of algorithms and administrative decision-making carries the risk of discrimination. With the advancement of "digital government" construction, algorithmic automation decision-making has been widely applied in law enforcement inspections, administrative discretion, and other aspects. Although it has improved administrative efficiency, it has also changed the traditional decision-making mode. However, the accountability mechanism of traditional administrative decision-making often fails in the face of algorithmic decision-making, and cannot effectively constrain algorithmic discrimination behavior.

2.2.3 Institutions: Relief of Difficulties and Judicial Reform

The judicial organs in our country fulfill their obligation to protect the right to equality through judicial rulings. With the granting of judicial remedies to citizens in the event of discrimination under the Employment Promotion Law, the judicial protection of the right to equality is constantly improving. But in cases of algorithmic discrimination, the traditional judicial system faces numerous challenges.

At the level of judicial relief, it is difficult to provide evidence in cases of algorithmic discrimination. The traditional discrimination review standards require the plaintiff to prove the differential treatment behavior, cause, adverse consequences, and causal relationship, but the complexity and opacity of the algorithm cut off the logical chain of "behavior responsibility". The decision-making process of algorithms is

difficult to trace, and the decision results are not public. Ordinary parties find it difficult to collect evidence to prove the existence of discrimination. Even if the evidence is presented, the division of responsibility between algorithm designers and platform operators is still very vague. At the same time, algorithm platforms often evade responsibility on the grounds of user "informed consent", "technical neutrality", and trade secret protection, while the lag of existing laws leads to a lack of clear basis for judicial judgments and disputes over jurisdiction definition. Algorithms are profoundly changing the judicial process in terms of adjudication methods. From the early exploration of computer sentencing to the widespread application of various judicial intelligence systems today, algorithms not only assist lawyers in their work, but also gradually penetrate into the core of judicial decision-making. Although significant achievements have been made in the construction of smart courts in our country, we also need to be vigilant about the transformation of algorithms from "auxiliary tools" to "decision-making subjects", which may have an impact on the protection of judicial equality rights.

3. Local construction of equal rights protection path under algorithmic discrimination

As the guardian of equal rights, the state shoulders the responsibility of building a solid foundation and must actively respond to the risk of algorithmic discrimination, construct an algorithmic governance system that is in line with local characteristics. This requires the state to not only fulfill its negative obligations of equal rights, but also keep up with the times and update its positive obligations.

3.1. Standardize the application of public power algorithms to prevent and control discrimination risks

The implementation of negative obligations of the state is mainly reflected in the need for administrative and judicial organs to maintain a cautious and restrained attitude towards algorithmic automation decision-making, and nip the risk of algorithmic discrimination in the bud. Algorithmic technology naturally has hidden dangers of discrimination, and the decisions of administrative and judicial organs are often closely related to the vital interests of the public. When using algorithms to make major decisions, high vigilance must be maintained, which is the core requirement for the state to fulfill its negative obligation of equal rights in the era of algorithms.

3.1.1 Clarify the responsibility allocation mechanism

Administrative or judicial authorities should be the primary responsible parties for any infringement of rights caused by algorithmic decisions. From a legal and practical perspective, algorithmic decisions are nominally made by these agencies, and their responsibility is in line with legal logic and legitimacy requirements; And from

the perspective of the injured party, directly asserting their rights and interests to the public authority they come into contact with can significantly reduce the threshold and cost of rights protection, and effectively safeguard the legitimate rights and interests of victims. After assuming corresponding responsibilities, public authorities have the right to hold third-party technology platforms that provide algorithms accountable. To ensure smooth accountability, a commercial insurance system can be introduced. At the beginning of the cooperation, the algorithm provider was required to purchase relevant commercial insurance. Once compensation liability arises due to algorithm discrimination, the insurance institution can compensate on behalf of them. This model can effectively alleviate the compensation pressure on public authorities, while ensuring that victims receive timely and reasonable compensation, and building a multi-party win-win responsibility guarantee system.

3.1.2 Build a full chain supervision system

It is crucial to establish a unified supervision and review institution and a sound supervision and review system in order to effectively prevent, timely detect, and properly manage the discrimination risks of algorithms embedded in the decision-making process of public power. In terms of institutional construction, with the continuous expansion of algorithm application fields, algorithm risks are becoming increasingly complex and diverse, involving multiple law enforcement departments. If the algorithm regulation work is dispersed among different departments, it is highly likely to cause problems such as waste of administrative resources and low law enforcement efficiency. In March 2023, the country established the National Data Agency, which is responsible for coordinating the construction of data infrastructure systems and the development of Digital China, providing strong institutional support for the governance of algorithmic discrimination. Further endowing the National Data Administration with the functions of data rights protection and algorithm responsibility regulation, and establishing a specialized algorithm regulation agency. The institution should gather various forces such as government officials, experts in the field of science and technology, and representatives of the artificial intelligence industry to ensure the professionalism, scientificity, and authority of regulatory work. Its responsibilities include standardizing algorithm supervision processes, developing "admission" lists, conducting power operation reviews, facilitating public feedback channels, and organizing staff training. In terms of institutional improvement, a full process review and supervision mechanism should be established for different stages of algorithm application. Before the algorithm is put into use, it is necessary to cooperate with the subsequent "admission" list and strictly regulate the algorithm licensing system. Administrative and judicial authorities need to cooperate with professional institutions to comprehensively evaluate the algorithms to be applied, and only algorithms that pass the evaluation can be put into use. At the same time, ensure the right to information and consent of deci-

sion-makers, and publicly disclose the basic deduction standards and principles of algorithms in a simple and understandable manner. After the algorithm decision is made, if the other party has objections to the result, they have the right to request the decision-making authority to explain the algorithm and supervise the use of the algorithm. For decisions involving the basic rights of citizens, if the decision-making authority cannot prove the fairness and rationality of the algorithm, the counterparty has the right to refuse to accept the decision result and apply for manual re decision-making. If the counterparty believes that their right to equality has been infringed upon, they can protect their legitimate rights and interests through channels such as complaints, reconsideration, and litigation.

3.2. Combination of self-discipline and heteronomy, joint governance in multiple fields

Algorithmic discrimination governance is a systematic project, and given its technical complexity and wide-ranging impact, relying solely on government regulation is difficult to meet the needs. China should learn from the experience of social governance, construct a governance model that combines self-discipline and heteronomy, and promotes collaboration in multiple fields, and promote the participation of multiple entities such as the government, social organizations, enterprises, and research institutions.

Firstly, strengthen the functions of specialized institutions for algorithm supervision. On the basis of establishing institutions such as the National Data Agency, further clarify its core position in algorithmic discrimination governance, empower it with powers such as investigation, mediation, and litigation support, establish cross departmental collaboration mechanisms, and enhance regulatory efficiency and authority. Secondly, leverage industry self-discipline and technological innovation. Encourage industry associations to develop algorithm development standards and ethical norms, and guide companies to use technological means to reduce the risk of algorithm discrimination, such as IBM's algorithm toolbox; Promote industry university research cooperation, integrate resources from enterprises, universities, and research institutions, and form a virtuous cycle of technological innovation and governance.

Furthermore, strengthen research on artificial intelligence rule of law and talent cultivation. Support universities and research institutions to conduct interdisciplinary research, focusing on cutting-edge issues such as algorithm ethics and privacy protection, and providing intellectual support for policy-making and technological development. At the same time, we will improve the construction of information infrastructure, strengthen digital skills training, enhance the public's data literacy and rights protection capabilities, narrow the "digital divide", and reduce the occurrence of algorithmic discrimination from the source.

3.3. Adopt the principle of no fault liability and standardize the repre-

representative litigation system

Judicial relief is the last line of defense to safeguard citizens' equal rights. In the face of algorithmic discrimination, the country needs to optimize its judicial mechanisms and provide victims with efficient and convenient avenues for safeguarding their rights. Currently, citizens face difficulties in providing evidence, high litigation costs, and low efficiency in protecting their rights in algorithmic discrimination lawsuits, which urgently need to be addressed through institutional innovation. On the one hand, it is suggested to introduce the principle of no fault liability in cases of algorithmic discrimination. Due to the technical characteristics of algorithm black box and data bias, traditional principles of fault liability or fault inference are difficult to effectively protect the rights and interests of victims. Adopting the principle of no fault liability, the plaintiff only needs to prove that the algorithm has caused substantial unequal treatment and adverse consequences to complete the preliminary evidence; The defendant must prove that the algorithm constitutes reasonable discrimination, otherwise they shall bear tort liability. This principle can significantly lower the threshold for victims to protect their rights and balance the burden of proof for both parties. On the other hand, standardize the representative litigation system in the field of algorithmic discrimination. Algorithmic discrimination often involves multiple victims, and the infringement behavior is covert, with strong technical expertise, making it extremely difficult for individual rights protection. Referring to the securities dispute representative litigation system, establish a class action mechanism suitable for algorithmic discrimination cases, clarify the qualifications, selection procedures, rights and obligations of litigation representatives, simplify the litigation process, improve the efficiency of rights protection, optimize the allocation of judicial resources, and effectively protect the legitimate rights and interests of victims.

4. Conclusion

The game between algorithmic discrimination and constitutional protection of equal rights is a key proposition that must be confronted in the construction of the rule of law in the digital age. When algorithms reshape the logic of social operation in the name of technology, the discriminatory risks they bring have broken through the boundaries of traditional equality theory and practice, forming a systematic impact from theoretical foundations to institutional operation. The traditional theory of equality has exposed insufficient explanatory power in the face of algorithmic black boxes and data biases, as well as lagging legislation, ineffective administrative supervision, and judicial remedies, highlighting the disconnect between the existing security system and the needs of the digital age. To solve this dilemma, it is necessary to reconstruct the path of equal rights protection with systematic thinking. By standardizing the application of public power algorithms, the negative obligation of prudence and restraint is integrated throughout the entire process of administrative

and judicial decision-making. With a clear system design of responsibilities, strict supervision, and scientific access, the bottom line of preventing and controlling algorithmic discrimination is firmly established; By improving the algorithmic governance system, positive obligations will be transformed into practical driving forces for legislative innovation, diverse governance, and judicial reform. With the improvement of the legal system, the coordination of social forces, and the optimization of judicial mechanisms, a full chain governance network will be constructed. This is not only a response to the risks of algorithmic technology, but also a theoretical innovation and institutional sublimation of constitutional equality in the digital age. With the iterative upgrading of artificial intelligence technology, new forms of discrimination risks may continue to emerge. This requires the equal rights protection system to maintain openness and adaptability, seeking a dynamic balance between technological innovation and rights protection. Only by deeply integrating equal values into every aspect of algorithm design, application, and regulation, and resonating with technological rationality and humanistic care, can we safeguard the core value of constitutional equality in the digital wave and promote the construction of a more fair, inclusive, and just digital social order.

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