

Legal Regulation of Automatic Administration in the Era of Artificial Intelligence

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ABSTRACT

The application of artificial intelligence is reshaping the operation mode of the government, and automatic administration plays an important role in administrative licensing, administrative punishment, etc. The use of artificial intelligence to assist the administration has undoubtedly greatly improved the administrative efficiency, but it should also be noted that this practice brings new challenges to the administrative law. Traditional administrative laws follow due administrative procedures, while some procedures in automated administration will inevitably be compressed. Big data technology also brings potential crisis to citizens' personal information rights. The "black box" and "prejudice" of algorithms in automated decision-making systems are also torturing the fairness and justice of automated administration. In the face of these challenges, it is necessary to not only standardize the automatic decision-making system of supervision and management from the system, but also clarify the public relief channels. To regulate automatic administration from the perspective of law is also people's attitude towards automatic administration: the way of law enforcement keeps pace with the times, and fairness and justice will never fade.

Keywords: Automated administration, Due process, Algorithm, Legal regulation.

1. INTRODUCTION

"Artificial intelligence (AI) is one of the most profound research directions that human beings are engaged in, even more profound than fire and electricity." The maturity of algorithm and data structure technology has enabled machines to simulate some human intelligent behaviors. Artificial intelligence technology is widely used in all walks of life in human society. In the field of administrative law enforcement, the means of law enforcement are also showing a trend of digitalization, intelligence and unmanned. Although AI's entry into the administrative field has improved the administrative efficiency, it also challenges the traditional administrative law field.

2. THE RISE OF AUTOMATIC ADMINISTRATION

As the name implies, automatic administration refers to the administrative activities in which specific links or all links in the administrative procedure are handled by artificial intelligence

without the need for individual manual intervention, so as to realize partial or total unmanned administrative activities.[1]

In the 21st century, artificial intelligence is no longer the imagination that exists in science fiction movies. Intelligent machines have already shown their skills in various fields. Intelligent machines are imperceptibly influencing people's of life.[2] In the field of administrative licensing, artificial intelligence also plays a pivotal role. In 2021, the first enterprise intelligent approval self-service machine in Wuhan was put into use in Qiaokou District Government Affairs Center. The administrative counterpart who wants to start a company only needs to operate on the self-service machine, and the whole process from application to successful approval can be achieved without manual intervention. Compared with the past window or front desk handling, it has truly realized "self-service" and "batch by second". This is the "win-win model" of administrative organs and administrative counterparts.

The field of administrative punishment also shows the characteristics of automation with the participation of intelligent machines. Intelligent machines collect, process and analyze massive information and data of administrative counterparts, which will be the reference basis for administrative organs to make punishment decisions. Unlike intelligent machines in the field of administrative licensing, which can make administrative decisions on their own, intelligent machines in administrative penalties are often more used for information collection and processing. Intelligent machines play a more auxiliary role. Only when there are some penalties with clear illegal facts, minor violations and simple procedures, can administrative penalties be imposed by intelligent machines. For example, in the field of traffic law enforcement, intelligent machines have replaced the naked eyes of police officers to achieve full coverage of the capture and inspection of motor vehicle violations. Intelligent machines can obtain evidence and send a reminder message to the counterpart of administrative penalty.[3]

In the field of environmental law enforcement, the use of the automatic monitoring system of pollution sources and the corresponding integrated management platform makes the ecological supervision work more convenient and comprehensive. The monitoring system is responsible for collecting information and online monitoring the emission of pollutants; The integrated management platform further processes and analyzes the information collected by the monitoring system. The environmental punishment intelligent case handling system has more than 400 causes of environmental violations and more than 20,000 data of environmental violations, which makes the automatic decision of administrative punishment a reality. The procedures from filing, investigation and evidence collection, notification, legality review to decision, execution, and closure can be realized in the system. The addition of intelligent machines has greatly improved the efficiency of social governance.

With the construction of digital government in China, the intellectualization of administrative rule of law will be gradually promoted. The application scenario and vision of AI for government administration have become increasingly clear.

3. PROBLEMS IN ARTIFICIAL INTELLIGENCE ASSISTING ADMINISTRATION

Compared with traditional administration, automatic administration reduces the administrative pressure of the government and improves its administrative efficiency; It provides more convenient services for administrative counterparts. However, it should also be noted that automated administration also has some problems, such as challenges to the principle of due process, intrusion of citizens' privacy and limitations of its own algorithms. All these have had an impact on the traditional administrative field.

3.1 The Challenges of Automatic Administration to Administrative Due Process

The administrative law emphasizes that the legitimacy of administrative procedures is the necessary prerequisite for the legitimacy of administrative acts. The principle of due process of administrative procedure is one of the important principles of administrative rule of law. The fairness and legality of administrative procedure can effectively limit the hegemony of public power over private rights, and is a powerful defense line to protect the interests of citizens. The current administrative procedures in China are formulated on the basis of the original social development level, and do not fully consider the use of intelligent machines. But with the progress of science and technology, the application of intelligent machines in the administrative field is becoming more and more common, and automatic administration will become an important part of administrative behavior. Although automatic administration improves administrative efficiency, it also impacts the principle of due process.

For example, China's "Administrative Punishment Law" and relevant laws and regulations clearly stipulate specific procedural systems such as notification, explanation of reasons, statement and defense of the parties, and hearing. But in the off-site law enforcement procedure, the administrative counterpart statement and defense procedure is difficult to achieve. [4] If the traditional traffic police find any illegal act in law enforcement, they should listen to the statement and defense of the counterpart in accordance with the provisions of the Administrative Punishment Law. After capturing the illegal facts of the counterpart, the "electronic

police" could not listen to and analyze the statement and defense of the counterpart, but exposed the illegal facts and relevant information of the counterpart in real time, which undoubtedly violated the principle of due process, and the rights of the administrative counterpart were virtually suppressed.

In the case of "Tian Zhipeng v. Zhanqian Branch of Xi'an Public Security Bureau in Shaanxi Province on administrative penalty dispute", Tian Zhipeng, the administrative counterpart, sued that Xi'an Zhanqian Branch did not issue a Letter of Punishment Decision to him, which was illegal, and requested the court to judge Xi'an Zhanqian Branch to return the penalty amount and late fees according to law. Although the case has come to an end, it has brought legal torture to automatic administration. Does automatic administration limit the right of administrative counterpart to defend and state invisibly when it is intelligent and convenient? Does the act of self-service printing of the Punishment Decision have tacitly implied that the administrative counterpart could not immediately raise a defense under the background of automatic administration? Is this an infringement of the procedural rights of the administrative counterpart? [5] Public power is given by the people. The use of public power should always be cautious. The starting point of any automatic administration system is to improve the efficiency of administrative law enforcement and better serve the administrative counterpart. Therefore, automated law enforcement should improve its own system, establish procedural correction measures for automatic administrative acts, determine the effective rules of "service" of automatic administration, and ensure that the legitimate rights and interests of the counterpart are not infringed.

3.2 The Intrusion of Automatic Administration on Citizens' Right to Privacy

There is a well-known saying in Europe: "A man's home is his castle". One of the characteristics of human civilization is that people begin to show shame and hope to hide some personal ideas. The recognition of privacy as the right of the people is a symbol of civilization. The concept of the right to privacy was first explained specifically in the article "On the Right to Privacy" by Warren and Brandeis, an American scholar. Since then, it has triggered legal research on the right to privacy by legal scholars. The so-called right of privacy is a

right that private life will not be disturbed and private information will not be infringed. Its core is the right that individuals legally have relative separation from society. [6]

However, one of the basic logic of intelligence is the big data algorithm supported by massive data. The intelligent machine uses predictive algorithms to process and analyze the collected user behavior information to determine the user's behavior tendency. This means that in order to achieve intelligence, there must be a lot of data information as the analysis unit. People can often find that you said you were interested in something in the morning with a friend, and they can see the recommendation of this item when they open Taobao in the afternoon. Similarly, the practical application of automatic administration also requires massive citizen information to support the establishment of the administrative system database. The automatic administration relies on the big data system of mathematical modeling to simulate, process and analyze the social dynamic operation, so as to help the government carry out public management and scientific management.

But in the context of automatic administration, it will inevitably invade the privacy of citizens. On the one hand, in consideration of public interests, the government will inevitably have a series of conflicts with citizens' privacy in the process of collecting citizens' information. [7] For example, during the epidemic prevention and control period, in order to better prevent and control the epidemic situation, it is necessary to master the travel information of citizens, and citizens need to perform the obligation to submit personal information. [8] It is required to collect and use personal information with the consent of the collector. However, the scope of personal information related to public security stipulated in the relevant privacy policy is too general and the boundary is not refined, which will lead to the expanded interpretation of the specified personal information boundary in the specific implementation process. Public information has become a "cover" for violating the right to privacy, and the legal provisions and the actual implementation are greatly separated because the rules cannot be refined.

Second, as a common tool in the administrative field, the use of image acquisition and monitoring devices has indeed played an important role in maintaining social security. [9] At present, installing such devices in public places has become

an important measure for the government to carry out public management. As the largest image and video monitoring system in China, China Skynet has more than 20 million monitoring devices. The AI system can use big data technology to analyze and judge the information collected from video shots, so as to achieve the purpose of police forecasting, which greatly deters criminal acts and improves the administrative efficiency of the government. However, it should also be noted that the substantial increase in the number of electronic monitors has also brought problems to citizens' privacy. Taking Beijing as an example, in 2021, Beijing Traffic Management Bureau will add more than 3,000 traffic technology monitoring equipment to more than 1,000 roads in the city. With such a high density of monitoring probes, people's lives are almost impossible to hide, and advanced technology can integrate and analyze the information collected by isolated monitoring equipment. The original trivial and fragmented information is integrated into a logical clue with the help of big data technology, exposing citizens' daily preferences, behavior habits, routes and other information. Citizens are transparent under electronic monitoring, and their privacy rights are already facing an imbalance.

Moreover, the government is guarding such a huge information treasure house, and once it is disclosed or abused, it will cause harm to citizens' privacy. For example, during the epidemic period, sensitive information such as the identity of the people involved in the epidemic in a certain place was forwarded in a large number in the WeChat group, which led to the disclosure of the information of the people involved in the epidemic and then suffered cyber attacks. The malicious attacks of network hackers will also bring security risks to the government's protection of citizens' information security. For example, in 2018, the official website of the US government was maliciously attacked by hackers, which made the personal information of tens of thousands of people in the US exposed. In the same year, the information of French outbound passengers was also stolen.

3.3 Limitations of the Algorithm of Automatic Decision System (AI)

The application of AI in the field of administrative law enforcement makes "code is law" to a certain extent. In fact, as a discipline focusing on logic, legal provisions, especially

procedural legal provisions, can be easily compiled into code. Similarly, in the world of intelligent machines, is the law not a code?

The core of an intelligent machine is algorithm. The key for an intelligent machine to make decisions is not what information it collects but what algorithm it uses to process information. In essence, algorithm is the method to solve problems, and it describes the big answer accurately and completely. The solution to the problem is translated into specific code by selecting appropriate algorithms. When the algorithm is applied to public power, whether the justice of the algorithm is related to the realization of citizens' private rights, there is a must to have a thorough understanding of the algorithm.

Why does AI go wrong?

There are two important procedures for designing algorithms. One is to establish a mathematical model matching the problem to be solved after digital description, and the other is to select the data structure to be used. The essence of establishing mathematical models is to reduce the complexity of the problem, and in the process of simplification, linear models are sometimes used to replace nonlinear models. The mathematical model can only show the fitting of the results, but can not perfectly take into account all the practical measurement factors. In this process, some subtle differences will be missed, which may lead to distortion of the results. For example, in the 2019 lottery event of a real estate in Hangzhou, the mathematical model on which the intelligent system relies for decision-making made mistakes, and some data were not given random values. Matching inappropriate structural models for AI algorithms will also lead to errors in intelligent machines. In addition, the principle that AI can carry out deep learning is that intelligent machines rely on massive data to build expected function models, thus gaining the ability to "learn". However, the process of building a function model requires constant debugging of corresponding parameters, and the process of debugging parameters itself is a process of trial and error.

There may also be subtle discrimination hidden in the algorithms of intelligent machines.

Machines do not seem to have the characteristics of human perception, but only mechanically execute a series of procedures, cold and fair. But in fact, machines also hide their own "caution". For example, Google's search algorithm

once identified the pictures of black people as "orangutans"; Amazon's algorithmic screening system favors men when selecting employees. The reason is that the discrimination and prejudice of human society are projected into the program algorithm. Even a machine cannot do justice completely.

The algorithm is difficult to achieve full transparency.

The algorithm "black box" may not be an inherent property of the algorithm itself. However, in the era of artificial intelligence, algorithms are often related to the huge interests of their developers, so developers of algorithms often choose to refuse to disclose algorithms on the grounds of company secrets. Therefore, the algorithm actually becomes a "black box". In this case, people can only know the input information and output results, but it is difficult to know how the intelligent machine works to get this result.

The algorithm transforms abstract solutions into clear instructions by constructing mathematical models and selecting data structures, and these instructions are expressed by programming languages and compiled into binary languages that can be recognized by machines. In this process, intelligent machines will inevitably be subject to a series of limitations.

4. LEGAL REGULATION OF AUTOMATIC ADMINISTRATION IN THE ERA OF ARTIFICIAL INTELLIGENCE

4.1 Improving Automatic Administration Due Process

Enhancing the comprehensibility of algorithms can ensure the public's substantive knowledge.

The principle of due process is and will always be one of the important principles of administrative law. [10] The principle of due process has always been an important tool to limit public power and safeguard the rights of administrative counterparts. Science and technology are developing, but the connotation of the principle of due process of administration cannot be changed.

Some American scholars put forward the concept of "technical due process". The main measures include open program coding, public participation in the programming process, etc. On the one hand, technological due process does partly

solve the problem of automatic administrative information disclosure and public participation, but on the other hand, it also challenges the public's scientific and technological knowledge reserves. Whether the public can substantially understand the operation of automated decision-making process is questionable. Therefore, on this basis, for those automated decision-making systems that have interests with administrative counterparts, their algorithms should be explained in a way that is more understandable to the public through the interpretation of professionals.

The "black box" on the aircraft can record the status and track of the aircraft. The same automated decision-making system should also have "traceability", which requires that the automatic administrative decision-making should explain the facts and rules on which the automated decision-making is based to the administrative counterpart. Traceability enables human regulators not only to understand the decision-making process of intelligent machines and make necessary amendments in the future, but also to play their due role in specific investigations and legal actions

It is necessary to improve administrative law enforcement procedures through technical means.

The administrative subject has the obligation to show its identity when carrying out specific administrative acts, while it cannot withdraw this due process in the automatic administration. The two-dimensional code for identity query can be added to the automated decision-making system, and the system automatically instructs the public to scan its identity information to confirm its identity. In administrative punishment, the decision-making system will inform the public of the facts of the case, and the counterpart can carry out self-help according to the process for the case without dispute. For the event that the counterpart needs to state his/her defense, the counterpart shall enter it into the background of the system, and the relevant personnel shall check and handle it again to ensure the right of the counterpart to state his/her defense.

4.2 Automatic Decision System for Comprehensive Supervision

4.2.1 Establishing a Perfect Supervision System for Automated Decision-making System

It is a necessity to increase the number of professionals in the field of algorithms, establish a

special regulatory agency for automated decision-making systems, and supervise and review the legitimacy and rationality of the design and application of the automated decision-making system. [11] There is a must to ensure that the R&D process does not violate the bottom line of human interests and social ethics,

and review the operation rules of the automated decision-making system. It is necessary to invite algorithm structure experts to review whether the algorithm structure is properly used and whether the personal value of the program developer is embedded in the algorithm program. Second, risk assessment and management of automated decision-making system. It is a must to ensure that the decision-making system can be put into use within the risk acceptance range.

At the same time, public oversight should also be strengthened. On the one hand, the automation system will involve a large amount of citizen information, and on the other hand, it is different from the traditional manual law enforcement. It is difficult for the public to have face-to-face communication with the administrative organs, and the public will inevitably have a sense of distrust of intelligent machines. Strengthening the supervision of public participation in the automated decision-making system can not only supervise the automated decision-making system more comprehensively, but also reflect the problems in the specific implementation process of automatic administration more quickly, and enhance the public's trust in automatic administration.

4.2.2 Regularly Maintaining and Testing the Automated Decision-making System

The automated decision-making system shall be overhauled and maintained regularly. Therefore, for the administrative body that sets up the automation system, the administrative organ should assume the obligation of maintenance and management of the intelligent machine to prevent the automation system from failing to take administrative actions due to failure, collapse and other reasons. After the automation system is put into use, the setting authority shall regularly collect the feedback of the system operation, manage the automation decision-making system according to the feedback, timely submit the system algorithm fault to the algorithm developer for upgrading and improvement, and timely repair and maintain the machine fault to ensure the normal use of the automatic administrative system.

4.3 Clarifying the Relief Ways of Automatic Administrative Acts

4.3.1 People Can Apply for Attaching the Algorithm Review of the Automation System

In the administrative reconsideration and administrative litigation, the counterpart may jointly review the normative documents below the regulations.[12] As mentioned above, the automated decision-making system relies on algorithms to make administrative actions, but the system has its inherent limitations. Therefore, when applying for administrative reconsideration or filing an administrative lawsuit, if people have objections to the algorithms in the automated system, they can also request the people's court to review the algorithms in the automated decision-making system.

4.3.2 Filing Administrative Compensation

Automatic administrative act is a new form of administrative act, and the administrative counterpart who suffers from interest damage due to improper automatic administrative act should also receive public relief. The state administrative organ shall be liable for compensation for the infringed legal rights and interests of the administrative counterpart. Therefore, for the loss of the legitimate rights and interests of the counterpart caused by the automatic administrative act, it should be clear about the compensation liability of the state administrative organ and its scope of compensation, and what kind of fault should be borne by the administrative organ to compensate for the loss, and what kind of fault should be borne by the developer of the automated decision-making system to compensate for the loss. To ensure that the administrative counterpart who suffers damage due to the exercise of automated administration can receive effective relief.

5. CONCLUSION

In the era of artificial intelligence, science and technology are profoundly changing people's way of production and life. The development of "Internet + government affairs" is an administrative trend in the era of artificial intelligence. The 14th Five Year Plan of the Party proposes to build a digital government from the top-level design. The construction of digital government cannot be separated from the development of automatic

administration. The concept of automatic administration is imperceptibly changing the traditional administrative mode. On the one hand, intelligent machines have improved administrative efficiency, on the other hand, they have also facilitated the public. At the same time, the challenge of automatic administration to traditional administrative law cannot be ignored. The "black box" dilemma of the algorithm has also cast a black veil on the automatic administration that is not trusted by the public. New technologies will inevitably bring new challenges. While promoting automatic administration, it is necessary to constantly strengthen its legal regulation, improve automatic administrative procedures to achieve formal fairness, supervise and manage automated decision-making systems to achieve substantive fairness, and protect citizens' rights. Technology is developing rapidly, but the background of fairness and justice will never fade.

AUTHORS' CONTRIBUTIONS

This paper is independently completed by Xiaoyu Liu.

REFERENCES

- [1] Zha Yunfei, Research on the Full Automation of the Administrative Act in the Age of Artificial Intelligence [J]. Journal of Comparative Law, 2018(05): 167-179. (in Chinese)
- [2] Wu Handong, Calm Thinking in the Era of Artificial Intelligence [J]. China Newspaper Industry, 2018 (03): 60-61. (in Chinese)
- [3] Xie Mingrui, Yu Lingyun, On Challenges to the Due Procedure of Off-site Law Enforcement Embedded with Technologies and the Responses [J]. Law Science Magazine, 2021, 42(03): 48-58. (in Chinese)
- [4] Wei Qiong, Xu Junhui, The Application of Artificial Intelligence in Administrative Punishment and Legal Regulation [J]. Presentday Law Science, 2021, 19 (01): 12-22. (in Chinese)
- [5] Zhang Linghan, Conflict and Reconciliation between Algorithm Automated Decision Making and Administrative Due Process System [J]. Social Sciences Digest, 2021 (02): 69-71. (in Chinese)
- [6] Ma Yanting, Administrative Penalty under Automated Administration: Challenges and Responses [J]. Political Science and Law, 2020 (04): 139-148. (in Chinese)
- [7] Yu Lu, Research on Public Video Surveillance and Citizens' Privacy Protection in the Era of Big Data [D]. People's Public Security University of China, 2021. (in Chinese)
- [8] Zha Yunfei, The Administrative Law Regulation of Big Data Surveillance [J]. Ecuapl Journal, 2022, 25 (01): 50-63. (in Chinese)
- [9] Zuo Weimin, Some Thoughts on the Application Prospect of Legal Artificial Intelligence in China [J]. Tsinghua Law Review, 2018, 12 (02): 108-124. (in Chinese)
- [10] Wang Gui, The Rise, Challenge and Adjustment of Algorithmic Administration [J]. E-Government, 2021 (07): 2-14. (in Chinese)
- [11] Zhang Linghan, Algorithm Power: Rise, Alienation and Regulation [J]. Studies in Law and Business, 2019, 36 (04): 63-75. (in Chinese)
- [12] Hu Minjie, On the Flawed Commands in Automated Administration and Related Legal Remedies [J]. Journal of Beijing administration institute, 2021 (04): 81-88. (in Chinese)