Journal of Artificial Intelligence and Information, Volume 2, 2025 https://www.woodyinternational.com/

On the Administrative Law Protection of Personal Information in the Era of Big Data

Siyu Zhang

Guizhou University of Finance and Economics Guizhou Guiyang 550025

Abstract: In the era of big data, the security and privacy of personal information face new challenges, and the diversity of data sources and large-scale collection methods increase the risk of information leakage. Administrative law demonstrates higher efficiency and flexibility in protecting personal information compared to civil law and criminal law. By regulating the information processing procedures of administrative agencies, strengthening regulatory systems, and improving relief mechanisms, it helps to more effectively protect personal information. At the same time, the transformation of government information disclosure and data sharing has prompted administrative law to play an important role in balancing personal privacy and public interest. This article explores the necessity, current issues, and optimization paths of personal information protection in the era of big data from the perspective of administrative law.

Keywords: Big data era; Personal information; Administrative Law Protection.

1. THE NECESSITY OF ADMINISTRATIVE LAW PROTECTION FOR PERSONAL INFORMATION IN THE ERA OF BIG DATA

1.1 Personal information protection faces new challenges in the era of big data

1.1.1 Diversified data sources increase personal information security risks

Big data analysis relies on massive databases to accurately mine the potential value of massive amounts of data. In daily life, various apps have become an important source of personal information collection. At the same time, with the deepening of information technology construction, various industries widely use electronic information technology to build personal information databases, such as government electronic archive systems and hospital medical systems, achieving efficient and convenient remote synchronous operations. However, the widespread application of big data has significantly increased the security risks of personal information while improving efficiency and convenience. The diversified ways of obtaining information greatly increase the possibility of personal privacy leakage, posing a serious threat to information security.

1.1.2 Big data blurs the causal relationship between the utilization and leakage of personal information

A significant characteristic of big data is its low value density, which means that despite the large amount of data, the proportion of truly valuable information is relatively low. In the big data environment, the value of personal information is usually revealed through the integration of a large amount of data, and a single piece of information itself does not have obvious independent value. In addition, the collection of big data is aimed at a wide range of data sets rather than specific individuals. However, this large-scale and diversified data collection method poses serious challenges to personal information security. Due to the enormous amount of data, the direct correlation between personal information and information security has become unclear. When personal information with low individual value and no direct recognizability is illegally leaked or abused, the causal relationship between the resulting damage and the leakage behavior is also difficult to clearly define.

1.2 Advantages of Personal Information Administrative Law Protection in the Era of Big Data

Compared to criminal law and civil law, administrative law demonstrates higher efficiency and simpler operational methods in protecting personal privacy information. When citizens seek compensation for privacy infringement through litigation, they often need to spend a lot of time and energy on data collection, evidence submission, court attendance, and judgment execution. Although China's Tort Liability Law specifies the principles of compensation for economic losses and mental damages, many cases are difficult to obtain court support due to limitations such as the burden of proof rules. Administrative law protection has significant advantages. Through a reasonable organizational structure and sufficient law enforcement resources, administrative law can quickly stop illegal activities and operate efficiently in investigation, evidence collection,

© The Author(s) 2025

© OPEN ACCESS



An Multidisciplinary Academic Journal Publisher

Journal of Artificial Intelligence and Information, Volume 2, 2025 https://www.woodyinternational.com/

supervision, and management. This not only simplifies the process of citizens' rights protection, but also enhances the crackdown on illegal activities, and more effectively safeguards the personal privacy and information security of citizens.

1.3 The Need for Rule of Law Administration and Enhancing Government Credibility

With the public nature of personal information, traditional private law protection seems inadequate in dealing with administrative agencies. Therefore, in the era of big data, the protection of personal information urgently needs the deep intervention of administrative law. Nowadays, the functions of administrative agencies have expanded from traditional law enforcement to public affairs management and social services. The construction of government informatization has also undergone a transformation from an internal office automation system to a transparent and service-oriented e-government system. Through this transformation, the government is committed to sharing data resources, improving administrative efficiency through scientific and rational policy decisions, and making public satisfaction an important indicator. This not only enhances the well-being of the people, but also strengthens the credibility of the government and social trust.

2. PROBLEMS IN PERSONAL INFORMATION PROTECTION IN THE ERA OF BIG DATA

2.1 Non standardized procedures for handling personal information by administrative agencies

The essential reason for administrative agencies infringing on citizens' personal information lies in the serious irregularities in the internal information processing procedures, mainly reflected in the improper handling of the following three stages:

2.1.1 Collection phase

While big data technology provides convenience for administrative management, some administrative agencies have the following problems when collecting personal information:

(1) Excessive collection

According to Article 34 of the Personal Information Protection Law, state organs shall not collect information beyond the scope necessary to fulfill their statutory duties. However, some administrative agencies adhere to the concept of "preferring excessive over insufficient" and collect personal information beyond their scope and authority.

(2) Failure to fulfill the obligation of notification

Article 35 stipulates that administrative organs must fulfill their obligation to inform in accordance with the law when processing personal information. But some agencies, in pursuit of work efficiency, have not fulfilled their obligation to inform citizens.

(3) Collecting without consent

Article 13 specifies that state organs may only process information without consent when fulfilling their statutory duties or obligations. If the collection of information is not related to statutory duties, citizen consent must be obtained. However, the phenomenon of collecting information without consent is not uncommon in practice.

2.1.2 Save Phase

Although preserving citizen information lays the foundation for subsequent analysis and use, there are also issues at this stage, such as information being stored indefinitely. The Personal Information Protection Law requires that the retention period of personal information should be limited to the shortest time for completing the processing purpose. However, in practice, administrative agencies often establish complex information databases based on the logic of big data "prediction" [7], and store personal information for a long time or indefinitely, seriously exceeding the necessary time limit and infringing on individual rights and interests.





An Multidisciplinary Academic Journal Publisher

Journal of Artificial Intelligence and Information, Volume 2, 2025 https://www.woodyinternational.com/

2.1.3 Processing and usage phase

The personal information collected by administrative agencies has a wide range and diverse types, and it is necessary to analyze and process it in order to improve management efficiency. However, Article 9 of the Personal Information Protection Law explicitly requires processors to take security protection measures. However, in practical operation, the problem of information leakage often occurs due to errors or intentional violations by internal staff of administrative agencies.

2.2 Weak administrative supervision system

2.2.1 Lack of specialized regulatory agencies for personal information protection

At present, there is no specialized regulatory agency for personal information protection in China. At present, the regulatory authorities for personal information in China are relatively scattered, mainly due to the following reasons: firstly, the main body of administrative supervision is relatively scattered, and some administrative agencies are both important personal information processors and regulators. Administrative agencies have dual identities, but at the same time, there are situations where administrative agencies infringe on personal information. Although Article 65 of the Personal Information Protection Law stipulates that individuals have the right to complain and report illegal processing of personal information to the corresponding responsible departments, if the agency or department that illegally processes personal information is an administrative agency, it is difficult to fully protect the remedies for individual rights. Secondly, under this decentralized regulatory mechanism, regulatory responsibilities are dispersed among different departments, and the boundaries of administrative supervision are unclear, which leads to the phenomenon of no supervision or multiple supervision in some fields.

2.2.2 Inadequate supervision measures for personal information protection

The current regulatory measures focus on post supervision, mainly dealing with personal information protection through administrative punishment. The early supervision, inspection and review measures are obviously insufficient, which is closely related to the idea of "first development, then governance" in the early stage of Internet governance. Administrative interviews, as an important means of pre - and in-process supervision, aim to prevent illegal behavior through warnings and admonitions. The Cybersecurity Law and other regulations have clarified the interview system, but its actual implementation effect is not satisfactory, and it has not fully played its role in risk prevention in personal information protection. The regulatory mechanism needs to be further improved to strengthen the implementation and effectiveness of interviews.

2.3 The administrative relief mechanism for personal information protection is not smooth

If rights lack remedies, their existence is meaningless. Only by establishing effective relief channels can rights be truly protected. Before the promulgation of China's Personal Information Protection Law, remedies mainly relied on civil law, criminal law, and administrative law. Although the implementation of the Personal Information Protection Law has improved this situation, its effectiveness is still not ideal, especially in the field of administrative law, where remedies for personal information are still insufficient. The main reasons are reflected in the following two aspects:

(1) It is not clear whether the infringement of personal information rights falls within the scope of administrative litigation and administrative reconsideration.

Although China has administrative reconsideration and administrative litigation systems, their scope of jurisdiction does not cover cases of personal information infringement. Although there is a "etc." clause in the law, its application is still influenced by subjective factors of administrative agencies or courts, and whether to accept it needs to be judged based on specific circumstances.

(2) Article 70 of the Personal Information Protection Law includes the public interest litigation system in the field of personal information protection, but its specific application still needs to be improved.

Not only does it require the cooperation of other departments, but it also needs further explanation. The current prosecutorial public interest litigation includes civil and administrative types, but there is still controversy over whether the public interest litigation system introduced by the Personal Information Protection Law covers





An Multidisciplinary Academic Journal Publisher

Journal of Artificial Intelligence and Information, Volume 2, 2025 https://www.woodyinternational.com/

administrative litigation, which leads to differences in the relief channels for personal information protection in the field of administrative public interest litigation.

3. THE PATH OF PERSONAL INFORMATION ADMINISTRATIVE LAW PROTECTION IN THE ERA OF BIG DATA

3.1 Standardize the procedures for administrative agencies to handle personal information

3.1.1 Standardize the procedures for administrative agencies to collect personal information

Administrative agencies should refine and improve procedural rules around the three core links of collection, use, and storage when processing personal information. Firstly, before collecting information, it is necessary to strictly review whether it complies with the principles of legality, openness, purpose, and balance of interests, to ensure that the behavior is legal and compliant. Secondly, citizens should be fully informed of their identity, the necessity, scope, purpose, storage period of information collection, as well as their rights and remedies, in order to safeguard their right to know and autonomy in decision-making. Once again, the collected information must not be arbitrarily changed for any purpose. If any changes are necessary, the consent of citizens must be obtained again, and citizens have the right to withdraw their consent. Administrative agencies should immediately delete or destroy the relevant information. Finally, database supervision should be strengthened, professional personnel should be arranged to be responsible, encryption protection should be implemented, approval processes should be improved, personal information security should be comprehensively guaranteed, and leakage risks should be prevented.

3.1.2 Standardize the procedures for government information disclosure

In the process of government information disclosure, administrative agencies must carefully evaluate the characteristics and potential impact of personal information. Due to the diverse interests and varying impacts of personal information, administrative agencies need to clarify the boundaries between disclosure and confidentiality in accordance with laws, regulations, and public interests. For publicly available information, its suitability and timing for disclosure should also be evaluated, especially for high-value or sensitive information, which needs to be handled with caution. Before formal disclosure, it is necessary to thoroughly demonstrate the legitimacy of disclosure, ensure compliance with laws and regulations, and fully protect the legitimate rights and interests of information subjects. The entire process should adhere to the principle of proportionality, while pursuing public purposes, minimizing the damage to personal information as much as possible. For high-risk information, priority should be given to not disclosing it or adopting desensitization measures, such as hiding or replacing sensitive content, to properly protect the privacy of the information subject.

3.2 Building a more comprehensive and professional administrative supervision system

3.2.1 Establish a specialized regulatory agency for personal information protection

From the perspective of China's Legislation Law and relevant administrative laws and regulations, there is no independent information protection agency established within the administrative organs to regulate and standardize their information processing procedures. As the managers of society, when there is a lack of corresponding internal supervision and restraint mechanisms, the power of government agencies in information processing will be infinitely expanded. The illegal abuse of information power by administrative agencies has caused serious infringement of citizens' personal information, leading to a crisis of trust among the public. Therefore, establishing a specialized regulatory agency for personal information protection can provide guarantees for the relief of citizens' rights.

3.2.2 Integrate various regulatory resources in the existing network

In the era of big data, in order to more effectively regulate citizens' personal information, various regulatory resources in the network should be fully integrated. Massive and complex information cannot be fully regulated by a single administrative agency alone. It is necessary to rely on big data and artificial intelligence technology to build an efficient citizen personal information network supervision platform. This platform can not only broaden the channels for information collection, but also attract the public to directly participate and express their opinions and suggestions on personal information protection, thereby fully exerting the supervisory power of the people, providing multi-dimensional information support for supervision, and continuously improving the level of https://example.com/theat-support-for-supervision, and continuously improving the level of

OPEN ACCESS



An Multidisciplinary Academic Journal Publisher

Journal of Artificial Intelligence and Information, Volume 2, 2025

supervision. To form a joint force, it is necessary to establish a collaborative supervision system that cooperates with the online supervision platform. The system should cover administrative organs, social organizations, Internet associations and other subjects, and all parties should share and exchange information to ensure the accuracy and timeliness of regulatory information. At the same time, by strengthening communication and collaboration among stakeholders, building a closely unified regulatory framework, and working together to address challenges in personal information protection. This comprehensive regulatory system will build a more solid barrier for protecting citizens' personal information.

3.3 Establish a sound administrative relief system for personal information protection

3.3.1 Improve the system of political reconsideration and administrative litigation

The scope of cases under China's Administrative Reconsideration Law and Administrative Litigation Law does not include administrative cases related to personal information. Even if there are fallback clauses, there are certain requirements for their use. Therefore, to improve China's administrative reconsideration and administrative litigation system, the key is to include cases that infringe on personal information in their scope of cases. In the Personal Information Protection Law, it should be clearly stipulated that when citizens' personal information is infringed by administrative agencies, they should have the right to choose administrative reconsideration or administrative litigation to protect their rights. Administrative supervision agencies, with their multiple functions of supervision, investigation, and punishment, as well as familiarity with the process of handling personal information, should become the accepting agencies for administrative reconsideration to ensure that citizens' personal information is effectively protected.

3.3.2 Strengthen the construction of administrative public interest litigation

In the wave of big data, the infringement of personal information is becoming increasingly widespread and dispersed, making the role of public interest litigation crucial. As an important part of legal supervision, the procuratorial organs actively utilize their administrative public interest litigation functions to supervise the implementation of their regulatory responsibilities in personal information protection. For acts that infringe on personal information, the procuratorial organs may file civil public interest lawsuits against responsible parties such as network operators to ensure that they bear corresponding civil liabilities. More importantly, the procuratorial organs can deeply intervene in the administrative law enforcement process through administrative public interest litigation, effectively urging the administrative authorities to strictly fulfill their regulatory responsibilities in accordance with the law, thereby maximizing the defense of citizens' legitimate rights and interests.

4. CONCLUSION

In the era of big data, personal information protection faces severe technological challenges and urgently requires deep intervention and regulation by administrative law. Clarifying the responsibilities of administrative agencies in information collection, storage, and use, strengthening the supervision and accountability mechanism for information leakage, can significantly improve the level of personal information protection. At the same time, building professional regulatory agencies, integrating social resources, and promoting collaborative supervision among multiple entities such as the government and enterprises will effectively improve administrative efficiency and enhance public trust in personal information protection. Looking ahead to the future, improving the administrative relief system and actively promoting public interest litigation will provide more solid legal protection for citizens' personal information and promote the balanced development of personal privacy rights and social public interests.

REFERENCES

- [1] Minyue Shi, Jiaxin Ma, XiaojingZhu Challenges and legal responses to personal information protection in the era of big data [J]. China's forestry economy, 2020, (06).
- [2] Xiao Cheng The legitimate interests of the processor are not the legal basis for personal information processing [J]. Jinan Journal (Philosophy and Social Sciences Edition), 2024, 46 (09): 52-64.
- [3] Jinghong Fang, Xiaoxiao Li On the Administrative Law Protection of Personal Information [J]. Journal of Capital Normal University (Social Sciences Edition), 2024, (S1): 171-180.



WID.

Woody International Publish Limited

An Multidisciplinary Academic Journal Publisher

Journal of Artificial Intelligence and Information, Volume 2, 2025 https://www.woodyinternational.com/

- [4] Di Sun, Xuetao Liu Government responsibility and administrative law regulation of citizen identity information disclosure in the context of the COVID-19 [J]. Credit investigation, 2022, 40 (09):35-42.
- [5] Zhibin Fan, Ning Li Path optimization of personal information administrative law protection in the era of big data [J]. Journal of Hebei Open University, 2023, 28 (06): 53-56.
- [6] Yuntang Wang Research on the administrative law protection dilemma and path selection of personal information in the era of big data [J]. Bohai Rim Economic Outlook, 2020 (1): 113-114.
- [7] Xuetao Liu Analysis of Administrative Law Protection of Personal Information in the Era of Big Data: Connotation, Challenges, and Path Selection [J]. Journal of Nanjing University of Posts and Telecommunications (Social Sciences Edition), 2018 (6): 23-31.

