

Legal Improvement of Personal Information Protection in the Era of Big Data in China

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Abstract. In the era of big data, the development of science and technology not only brings economic benefits, but also accelerates the flow of information. The possibility of personal information being illegally collected and used is greatly increased, and the resulting cases are also increasing. The protection of personal information has gradually become a problem that countries need to solve through laws. This paper adopts the method of comparative study to study the legal improvement of personal information protection in China in the era of big data. Firstly, this paper reviews the legislation and countermeasures related to personal information in China and the United States, analyzes and compares the differences in legislative purposes and measures between the two countries in this regard, and then points out that technical barriers in the protection of personal information in China lead to the imbalance of relevant subject status and the lack of industry supervision. It also proposes that China should continue to introduce administrative regulations and other normative documents on the basis of existing laws and increase the autonomy system of big data-related industries.

Keywords: Personal information protection; The era of big data; Unbalance of subject status; Industry supervision.

1. Introduction

In the "Typical Case of Public Interest Litigation for Personal Information Protection and Inspection" issued by the Supreme People's Procuratorate in March 2023, the defendant Zhang in Case 6 illegally invaded the computer information system of a software company with the help of non-public network technology means and obtained more than 60,000 user information from it. This information involves very private information, such as the consumer's name, mobile phone, address, transaction content, etc., which is subsequently sold by Zhang to multiple buyers, including fraud gangs, causing harm to the user's property and even personal life, and also infringing on social welfare and the process of law construction [1]. In fact, such cases of illegally obtaining and selling citizens' personal information are common and varied. Behind the rapid progress of computer technology, the relevant legal system needs timely follow-up and protection to better protect citizens' personal information security and rights and interests.

This paper will analyze the legislative objectives and specific protective measures of the two countries from the current legal perspectives on the protection of personal information in China and the United States, find the deficiencies in the field of personal data protection of China and propose suggestive improvement measures.

2. Comparison of Legal Protection of Personal Information in China and the United States

Compared to a time when mainly paper media and broadcasting were the main channels of information, the rapid development of computers and information technology now provides a lot of facilities for citizens' lives. In the age of big data, people can choose to browse news information on web platforms, acquire knowledge skills, or consume or receive services in various types of software, but the use of related features is accompanied by the collection and use of personal information that is almost everywhere. This personal information relating to personal privacy and security is converted

into data stored in application backgrounds or platform information systems as a valuable resource that is at risk of being acquired, sold, analyzed and used in situations where a large number of users may not be aware of it, and how to protect the rights of users through legislation becomes an important issue in countries around the world.

2.1. Protection of Personal Information in the United States

The United States generally protects citizens' personal information through legal regulation and industry autonomy. The basis of the right of claim for the protection of personal information in the United States is established on the right of privacy. In terms of legislation, the mode of "decentralized legislation" is adopted, and there is no unified national special legislation, and specific provisions are regulated by each specific public domain [2]. First of all, the Constitution of the United States fundamentally establishes the legality of the protection of citizens' personal information, and personal information is one of the citizens' rights that are not infringed by any means. However, the high protection of free speech in the First Amendment of the United States Constitution also limited the protection of personal information as a form of privacy to some extent at that time [3].

To more specific and targeted matters, the United States Federal Government promulgated the Privacy Act in 1974, which mentioned the reasonable practices of the United States organs with public power in handling citizens' personal information, including eavesdropping, tracking, lie detection and other intelligence means are considered to violate citizens' privacy. Correspondingly, restrictions on the collection and use of personal information by private authorities are established in the Fair Credit Reporting Act [4]. In addition to federal legislation, state legislation also focuses on protecting the personal information of people in each state. California, through the California Consumer Privacy Act, gives citizens the right to self-determination in personal information, allowing them to use this right to defend their own interests and avoid being infringed by public authorities [5].

As for the industry field, the United States strongly advocates self-management and supervision within the industry or special relationship, and does not impose too much legal control, only promulgation of special bills in a few special aspects to ensure that the legislative process is compatible with the development trend of the big data era. For example, the Electronic Communications Privacy Act, the Financial Services Modernization Act, the Family Education Rights and Privacy Act, and the Children's Online Privacy Protection Act [6]. These acts provide basic provisions for the protection of personal information for the relevant industries to facilitate compliance and internal management more in line with the characteristics of the industry.

2.2. Protection of Personal Information in China

On the whole, China's personal information protection is based on private law, taking into account the form of public law, and special legislation has been introduced in the subsequent process of legal update. Different from public information related to social interests, personal information is mostly private and exclusive, and belongs to the owner's private domain, so it is in line with legislative logic to regulate more by private law. The Civil Code of the People's Republic of China, as the core of civil legislation, also responds to the problem of personal information protection legislation. The Civil Code divides personal information and private information under the right to privacy, and the scope of rights and protection paths of the two are different. The former is carried out in accordance with the legislative ideas of personal information protection and the latter in accordance with the protection of personality rights, and specifically defines the remedies for the infringement of citizens' personal information on the Internet in the era of big data [7].

In terms of public law, China mainly cracks down on the infringement of citizens' personal information through the Criminal Law of the People's Republic of China. The Amendment to the Criminal Law (IX) directly sets up a special charge after the merger of related charges, that is, the crime of infringing on citizens' personal information, including illegal acquisition, provision, circulation and other related industrial chain behaviors within the scope of criminal jurisdiction, and

the specific criminal punishment measures are imposed according to the specific circumstances of the corresponding fixed-term imprisonment, criminal detention, fines of one or more.

Different from the traditional communication era in the past, personal information in the era of big data is stored in various digital media, especially the development of cloud computing technology provides new possibilities for the transmission and storage of information, and information has become a hot resource. In response to the rapidly changing status quo and conceptual conflicts in the digital economy, China's top legislature passed the Personal Information Protection Law of the People's Republic of China in August 2021 and officially implemented it on November 1 of the same year. This law fills the deficiency of special legislation in the field of personal information protection, and makes special provisions on general rules for the processing of personal information, the rights and obligations of personal information processors, sensitive information, cross-border information provision, performing departments, and legal responsibilities.

2.3. Comparative Analysis

According to the review of the laws on personal information protection in China and the United States, it can be found that the approach of multiple legislation and industry self-discipline adopted by the United States provides a dual channel for personal information protection, taking into account the constraints of law and industry ethics. In practice, the law cannot involve all the details, and those problems that are easy to be ignored or do not meet the need to be controlled by legal enforcement are left to the internal consideration of the industry. This is a regulatory perspective that is rarely applied in China and can be used for reference. There are industry rules to manage the use and storage of personal information, and to give negative industry evaluation to practitioners with bad records, which is more conducive to relevant personnel consciously abide by industry norms and maintain the security of personal information.

In addition, China and the United States have different legislative purposes. The United States mainly balances the personal interests and public interests involved in the processing of personal information through the form of privacy, pays attention to the protection of the integrity and privacy of information, and maintains the healthy development of related information industry. China has passed special legislation to clarify in Article 2 of the Personal Information Protection Law that this is a special interest, and no organization or individual may infringe upon the personal information rights and interests of natural persons. At the same time, China makes it clear that the primary responsibility for the protection of personal information is the personal information processor, and emphasizes the special obligations of all responsible parties, including large Internet platforms and state organs. Drawing on the experience of the previous Cybersecurity Law and Data Security Law, China has improved the punishment mechanism for acts that endanger personal information, and incorporated administrative responsibility, civil compensation, criminal punishment and credit information system into the regulatory means to protect citizens' personal information from multiple angles [8].

Moreover, there is a clear difference between the decentralized legislation adopted by the United States based on the federal system and China's specialized legislation, which is also an important difference between different legal systems and national conditions. As a typical representative of the Anglo-American law system, the United States does not set up a national law to protect personal information, but deals with relevant issues through regulations and precedents. Although this relatively decentralized legislation can effectively balance the legislative, judicial and executive powers, it is also prone to the situation that the legislation of the federal and the states is not unified, or the legislation between the states conflicts with each other. By contrast, China's unified legislation takes the form of a clear law. The Personal Information Protection Law also inherits the regulatory concept of civil law, criminal law and other fields, and combines the technical characteristics of big data to expand the protection subject to all subjects including state organs and natural persons, strengthen the application of relevant principles and informed consent rules, and emphasize the rights and obligations of relevant subjects in the automatic processing of personal information procedures. It reflects the legislators' attention and response to the era of personal information protection and big

data.

3. Problems Existing in the Legal Protection of Personal Information in China

While the development of big data has brought many benefits to social life and the development of digital economy, it has also brought some problems due to the continuous update and breakthrough of related technologies. There are obvious conflicts between the protection of high-speed shared data and personal information. How to analyze the core nature of these problems and find the right solutions has become the focus of this paper.

3.1. Technological Gap Leads to the Imbalance of Relevant Subject Status

As one of the core principles to deal with the protection of personal information, informed consent rule was first proposed by Alan F. Westin in 1967 in the form of "privacy cybernetics", and has been gradually absorbed and applied by laws of various countries [9]. The informed consent rule, which is stipulated in both the Civil Code and the Personal Information Protection Law, requires the relevant personal information processor to obtain the consent of the natural person or guardian when using the personal information of another citizen in any way. However, in the era of big data, the rapid increase in information transmission speed and the rapid development of related technologies make the network platforms that master these professional technologies and economic advantages or other information processors that enjoy storage and transmission functions enjoy more operating space. This technological gap means that they can freely collect and process massive personal information and obtain huge economic benefits from it, even if the process does not require the confirmation of the person sharing the personal information. The consequences of violating the informed consent rule are nothing compared with the commercial value obtained, resulting in frequent cases of personal information infringement similar to those mentioned at the beginning of this paper.

In contrast, the subject of personal information is often a natural person or other non-dominant subject. In the use of network technology services, although the relevant platform or application may provide informed consent text, but these notices often have a lengthy length, boring and difficult technical terms, and most of them are for the entire user group of format terms, and must be accepted after the choice to use the service content. Users who need to use different software or services repeatedly every day often do not carefully read but directly choose to ignore and forced to accept, which may have damaged the user's personal information, but they do not know this fact [10]. Moreover, in the process of using relevant technologies, users are also limited by the interface content displayed by technology providers, and it is difficult to confirm whether the background records and saves personal information without authorization, and subsequent forensics or complaints also need the cooperation of providers, and users are often faced with a giant with professional litigation teams and technical advantages. Due to many factors, the right to know of individuals sharing personal information is easy to be ignored or violated, and it is difficult to protect their own interests through litigation or other legal means, so the informed consent rule exists in name only when facing such cases.

3.2. The Regulatory System of the Industry is Lacking

In the face of the ever-changing social reality and the development trend of science and technology, relying only on a single legal means and the administrative management of government departments cannot fully cover the increasing number of difficult problems in the digital economic market. Compared with the United States, China's shortcomings in industry regulation have gradually come into public view. As a supplement to national laws and administrative powers, industry supervision is not highly coercive, and it is more flexible and operable when dealing with personal information protection issues. Industry insiders are more aware of the internal practices and potential rules of the industry, and more aware of the operating mechanism and endogenous problems of the relevant industries, and are more likely to take a simple and legal way to deal with problems. Allowing problems to be solved internally is conducive to resolving legal risks in advance and saving judicial resources. Unfortunately, at present, China's information industry is basically not really involved in

the personal information protection chain, and the system similar to the information security certification system in the United States has not been introduced within the industry, and there are only evaluation methods such as "drop credit" in the people [11]. This kind of information security certification is a way for the industry to openly use professional third-party institutions to certify the qualification and credit of practitioners, affect the credibility of practitioners through external evaluation system, and then restrict practitioners in the industry, with higher credit degree and effectiveness than civil autonomy.

4. Measures to Improve the Legal Protection of Personal Information in China

In the era of big data, the conflict between low-cost and high-yield information violation costs and personal information protection is becoming increasingly acute, and it also reminds the authorities and managers to change their ideas and innovate and improve the protection methods and measures.

4.1. Improve the Supporting Laws and Regulations for Personal Information Protection

The fact that the natural technological gap leads to the disadvantageous position of the personal information subject is unavoidable, but it can choose to further formulate slanting protection legal provisions or other normative documents in response to this reality. At present, China has implemented the Personal Information Protection Law, which has laid a solid and high-level legal foundation for the protection of personal information. However, this law is more about providing principles, and relatively vague specific measures and implementation standards need more precise and detailed legal documents. For example, whether personal information should be protected as a specific right, rather than as a general citizen interest; How can the concept of personal information be accurately defined in the law to facilitate the distinction between the right to privacy in practice. Criteria for judging the impact on individual rights and interests in automated decision-making [12]; And how to distinguish between private value and public value involved in personal information. Many details require the legislature to update the promulgation of amendments or the Supreme People's Procuratorate and the court to issue judicial interpretations with guiding significance, so as to facilitate the local people's courts at all levels to unify the judgment standards and avoid huge differences in the judgment results of similar cases.

In addition, the national network information department and local governments at all levels also need to speed up the development of relevant administrative regulations or local normative documents. On the basis of complying with the existing legal requirements, the Internet and information technology department should take the initiative to update the implementation plan and unified principles in general, and ensure the synchronization with the upper law. As for local grass-roots governments at all levels, they may make adaptations in accordance with the unique conditions and ethnic characteristics of the administrative divisions, and promulgate their own law enforcement principles and implementation regulations applicable to the local areas. Doing so can ensure that the national thinking and practice on the protection of personal information standards are uniform, give local people clear guidance on behavior, and facilitate law enforcement officials to deal with incidents related to personal information in accordance with the standards.

4.2. Increase Industry Supervision System

As mentioned above, China can learn from the experience of the United States, strengthen the responsibility of the industry in the protection of personal information, and solve problems through internal channels, without the need to externalize to the judicial route. Industry regulation is beneficial to the information industry itself, and the construction of a safe and harmonious market environment can remove the concerns of relevant network service providers in this regard, and turn to the development of technology, improve the industry's production capacity, but also promote industry innovation and economic benefits.

First of all, China should establish an industry management system that conforms to China's national conditions. For example, it can refer to the information security certification system of the United

States and set up an information supervision association as a third party. This association does not participate in the development planning and specific implementation of the industry, but only supervises and records the procedures and security of the use of personal information by various enterprises and institutions in the industry and urges the personnel in the industry to consciously abide by laws and administrative regulations [13]. The Information Supervision Association can publicly release quarterly or annual ratings of personal information protection measures and effects in the industry and give security certification to enterprises with good performance and low incidence of related cases. In this way, practitioners can strengthen the protection of citizens' personal information through external public opinion pressure and internal competition, and it can also facilitate users to choose safer services, so as to protect the security and privacy of their personal information.

Second, big data-related industries should also set up industry-specific autonomous rules. Autonomous rules belong to the extension of laws and regulations, do not have the force, more close to the use of industry reputation and ethics to constrain the industry practitioners. Technical barriers within the industry have been significantly reduced or disappeared, and technical costs and communication costs have also been significantly reduced [14]. For the economic purpose of maintaining existing users and attracting potential users, practitioners will also strive to exceed the applicable conditions of competitors and flexibly create more user-friendly services. This is conducive to the establishment of a virtuous circle of industry atmosphere, promote the development of the information industry, but also reduce the waste of administrative and judicial resources, and then complement the legal system to jointly build a flexible and effective personal information protection system.

5. Conclusion

In the era of big data, high-tech products and cloud computing and other technologies have entered all aspects of people's lives, and the popularity and utilization rate are increasing, which brings about the frequent transmission, sharing and use of personal information. This process can be completed in the blink of an eye, and may not even be noticed by the operator, and to prevent and punish this kind of infringement of personal information requires the intervention of national laws to control. This paper starts with a comparative study on the legal rules of personal information protection in China and the United States, analyzes the existing problems in the legal protection of personal information in China according to the technical characteristics of the current era of big data and the conflict between traditional personal information protection systems, and proposes to improve the legal and regulatory system and industry supervision. It also tries to explore and innovate more possibilities of China's personal information protection program.

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