

# Research on the legal issues of network privacy right and personal information protection

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**Abstract:** *This paper deeply studies the legal issues of network privacy right and personal information protection in the digital era. First, the challenges of the dissemination and storage of personal information in the network are analyzed, emphasizing the urgency of legal protection. Subsequently, the paper discusses the definition and practical effect of existing laws, and finds that there are deficiencies in dealing with the cross-use of third-party data and the privacy of new technology. In order to further improve the legal protection mechanism, the paper compares the legal framework of network privacy protection at home and abroad, and summarizes the experiences and lessons of different countries. This paper compares the legal framework of network privacy protection at home and abroad, summarizes the experience and lessons, and puts forward some legal amendments such as strengthening data security management, promoting technology application innovation and establishing international cooperation mechanism. Finally, it looks forward to the future development trend of network privacy and personal information protection laws, emphasizing that we should keep pay attention to emerging technologies and constantly improve the legal system to meet the new requirements of digital society.*

**Keywords:** *network privacy right, personal information protection, digital age, privacy legal framework*

## 1. Foreword

### 1.1 Background

With the rapid development of digital society, the Internet has become an important part of people's lives. The rapid development of network technology not only provides convenience for people, but also gives birth to a huge data flow. However, the wide spread of such information also brings about the profound problems of network privacy right and personal information protection. In this era of information explosion, it is easier to obtain, transmit, store and use personal information more and more, and legal protection is particularly urgent. The large-scale collection and use of personal information has become the norm of commercial and social development. However, it is followed by privacy leakage, information abuse and other problems, which has caused extensive attention to the network privacy.

### 1.2 Research Purpose and Questions

This paper aims to study the legal issues of network privacy and personal information protection in order to clarify the legal framework for the collection, processing, utilization and protection of personal information in the digital age. Specifically, the study will focus on the following aspects:

1) Discuss the definition of network privacy right by the legal framework and the soundness of personal information protection: The research will evaluate whether the definition of network privacy right in the current law is clear enough, and examine whether the protection of personal information is sound. This includes whether the legal provisions on the collection, use, transmission and storage of personal information fully protect personal privacy rights.

2) Analyze the challenges of emerging technologies to the protection of personal information: The research will analyze the role of emerging technologies such as big data and artificial intelligence in information collection and processing, as well as their new challenges to the protection of personal information. This concerns how new technologies affect individuals' rights to privacy and whether current laws are sufficient to address the challenges these technologies pose.

3) Investigate the impact of third-party data sharing and cross-use on personal privacy: The research will investigate the impact of third-party data sharing and cross-use on personal privacy in the digital environment, and study whether the legal framework is sufficient to deal with these situations. This includes exploring how third parties can access and use personal information, and whether current laws can effectively regulate and protect personal privacy.

Through the in-depth research of the above issues, this paper aims to provide substantial suggestions for the improvement of the legal framework to better adapt to the new requirements of the information society for the protection of personal information. Through the comprehensive analysis of the legal status and emerging challenges, it will provide useful reference and guidance for strengthening the legal system of network privacy and personal information protection.

### ***1.3 Structural arrangement***

In order to further explore the legal issues of online privacy and personal information protection, this paper will be divided into the following chapters: The first part will analyze the current legal challenges in detail, including cross-use of third-party data, data security, and problems brought by new technologies; The second part will discuss the experience and deficiency of different countries in online privacy protection through the comparative study of domestic and foreign legal frameworks; The third part will put forward the countermeasures to solve and strengthen the legal protection, including law revision, technology application and the establishment of cooperation mechanism; The fourth part will look forward to the future development of Internet privacy and personal information protection law, and finally make a summary.

Through the above structure, we will comprehensively and deeply study the legal issues of network privacy right and personal information protection, and provide in-depth legal analysis and innovative solutions to solve the privacy dilemma in today's digital era.

## **2. Legal issues and challenges**

### ***2.1 Legal difficulties in the collection and sharing of third-party data***

#### ***2.1.1 Privacy Policy and informed consent***

Third-party data collection and sharing raises legal challenges in privacy policy and informed consent. Some scholars have conducted empirical studies, and at present, the registration service privacy policies formulated by various website software platforms in China are very different from international enterprises in terms of name, content details, sharing scope, etc., and there are many unreasonable places or loopholes. With the popularity of Internet services, many users do not fully understand how their data is collected, used and shared. Therefore, the law requires companies to provide transparent privacy policies and ensure that users are informed and consent before data is collected.<sup>[1]</sup>

#### ***2.1.2 Ownership and control of the data***

There is a legal dispute over data ownership and control. Individuals may have ownership of their own data, but may lose control once they are shared with third parties. The appropriate legal framework needs to balance the rights between enterprises and users and ensure the legal, fair and transparent processing of data.<sup>[2]</sup>

### ***2.2 Threats of data security and network attacks to personal information***

#### ***2.2.1 Legal liability and data leakage***

Data security problem concerns legal liability and the handling of data leakage. The law requires companies to take appropriate security measures to prevent data leakage, and stipulates that they should promptly notify affected users. In addition, the law also stipulates the specific responsibilities of companies in preventing and responding to data breaches.

#### ***2.2.2 Huge fines and compliance requirements***

As data breaches increased, some regulations began to impose huge fines to punish businesses that fail to protect personal information. For example, the EU's General Data Protection Regulations and

other regulations stipulate high fines, emphasizing the importance of data protection compliance. Companies need to invest more resources to ensure that their data security systems meet the regulatory requirements, otherwise they may face serious legal consequences.

### ***2.3 Privacy challenges of emerging technologies***

#### ***2.3.1 Privacy issues of AI***

The development of artificial intelligence has brought new challenges to privacy rights. For example, intelligent algorithms may violate personal privacy by analyzing personal data to generate detailed user portraits. The law needs to keep up with the technology to ensure that AI systems are designed and applied in compliance with privacy regulations.

#### ***2.3.2 Legal Considerations of Big Data***

Big data analysis can provide valuable insight, but may also involve large-scale processing of personal information. The law needs to balance the innovative use of data with the need to protect personal privacy. Transparent data processing process, anonymization technology and so on have become the key elements in the regulation to ensure that the use of big data does not violate personal privacy.

In general, the network privacy right and personal information protection are faced with many legal problems and challenges. Third-party data collection and sharing raises legal difficulties in privacy policies and informed consent. The law needs to balance the rights between enterprises and users and ensure the legal, fair and transparent processing of data. Data security issues involve legal liability and the handling of data leakage, and enterprises need to invest more resources to ensure that their data security system meets the regulatory requirements. Emerging technologies, artificial intelligence, big data and so on pose new challenges to privacy, and laws need to keep pace with technology to ensure that the design and application of AI systems comply with privacy regulations. Big data analytics can provide valuable insight, but may also involve large-scale personal information processing, and the law needs to balance the innovative use of data with the need to protect personal privacy.

## **3. Comparative study of the domestic and foreign legal framework**

### ***3.1 Overview of Domestic Internet privacy regulations***

#### ***3.1.1 Personal Information Protection Law***

The core of the domestic online privacy regulations is the Personal Information Protection Law of the People's Republic of China. The Personal Information Protection Law, which came into effect in 2021, clarifies the concept of personal information, defines the principles for personal information processing, and imposes penalties for illegal handling of personal information. Among them, the collection and use of personal information shall be explicit purpose and method, and prior consent. At the same time, the regulations specify the obligations of critical information infrastructure operators.

#### ***3.1.2 The Telecommunications Regulations of the People's Republic of China and the Cyber Security Law of the People's Republic of China***

In addition, regulations related to Internet privacy include the Telecommunications Regulations of the People's Republic of China and the CyberSecurity Law of the People's Republic of China. The Telecommunications Regulations of the People's Republic of China stipulate the responsibility of telecom business operators to protect users' personal information, standardize the telecommunication market order, safeguard the legitimate rights and interests of telecom users and telecom business operators, and guarantee the security of telecommunication network and information; the Network Security Law of the People's Republic of China standardizes the obligations of network service providers in information processing, strengthens the security of network operation, and protects key information infrastructure.

#### ***3.1.3 Industry standards and Specifications***

In addition to regulations, there are also a series of industry standards and norms on online privacy in China, such as the Personal Information Security Code. These standards further detail the specific specifications of personal information processing, and provide operational guidelines for enterprises. They further make the standard meet the requirements of China's relevant laws and regulations,

increase the applicability of the standard to guide practice, help improve the level of personal information protection in the industry and society, promote the further development of the industrialization of technical products and consulting services in the field of personal information protection, and provide a solid guarantee for the healthy development of China's information industry.

### ***3.2 International experience and Comparative study***

#### ***3.2.1 The General Data Protection Regulation of the EU***

Internationally, noteworthy is the European Union's Universal Data Protection Regulation. The General Data Protection Regulation emphasizes the control of individuals over their personal data and defines strict data processing principles and regulatory compliance requirements. It also imposes huge fines for regulatory violations, binding on companies globally processing data on EU citizens.

#### ***3.2.2 Personal privacy laws in the United States***

American privacy laws are relatively fragmented and lack comprehensive federal regulations. However, some states have enacted their own personal privacy laws, such as California's Consumer Privacy Act. These regulations to some extent strengthen the protection of personal information and respect for users' privacy.

#### ***3.2.3 Personal information protection in the Asia-Pacific region***

In the Asia-Pacific region, some countries are also developing or updating relevant regulations on personal information protection. For example, both Japan's personal information protection system and South Korea's Personal Information Protection Law have made detailed provisions on the processing and protection of personal information.<sup>[3]</sup>

##### **Comprehensive comparative study**

By comparing the domestic and foreign legal frameworks, some common points and differences can be found. Common points include the basic principles of personal information protection, such as express purpose, user consent, security protection, etc. However, the differences are mainly in the intensity of penalties, the setting of regulatory agencies and special regulations for specific industries. Through the comparative study of the domestic and foreign legal framework, it can provide a reference for the improvement of the domestic network privacy regulations. At the same time, learning from international experience and promoting international cooperation will also help to build a more consistent and powerful personal information protection system around the world.

## **4. Solution and countermeasures of legal problems**

### ***4.1 Revision and improvement of laws***

#### ***4.1.1 Background and necessity of law revision***

The revision and improvement of laws are the key links to ensure that regulations keep pace with The Times and meet new challenges. In the field of network privacy, the rapid development of technology and the constant evolution of threats require the flexibility and adaptability of regulation. Legal revisions usually need to take into account many factors, such as technological innovation, social change, and international trends.

#### ***4.1.2 Direction of law amendments***

The revised laws could include more detailed and precise definitions of personal information, special provisions for emerging technologies, and the management of cross-border data flows. In addition, the legal revision should also pay attention to the stricter punishment for illegal acts, so as to strengthen the enforcement and deterrent effect of regulations.

### ***4.2 The legal application of the privacy protection technology***

#### ***4.2.1 Encryption technology and privacy protection***

Encryption technology plays a crucial role in maintaining privacy rights. The law should actively encourage and regulate the application of encryption technologies to ensure that personal information is effectively protected during transmission and storage. Specifically, regulations can stipulate that

companies must adopt advanced encryption measures as part of their compliance standards to ensure the security and confidentiality of information.

#### ***4.2.2 Anonymization and desensitization technology***

To minimize the risk of personal information leakage, regulations can encourage businesses to adopt anonymization and desensitization technologies. These technologies are effective in protecting individual privacy while ensuring data availability under legitimate information processing scenarios. By encouraging businesses to adopt these technologies, laws can promote the legitimate and effective use of information while protecting privacy.

#### ***4.2.3 Data security and protection measures***

Regulations shall clearly stipulate the security protection measures of enterprises for personal information, including but not limited to access control, identity authentication, network security and other aspects. These measures help to ensure that enterprises take the necessary measures in information processing to prevent the risk of information leakage and abuse. By enforcing these security measures, the law can increase the importance of enterprises to personal information security and protect users' privacy rights.

### ***4.3 Cooperation and responsibility between the government, enterprises and individuals***

#### ***4.3.1 Government supervision and law enforcement***

The government plays the role of regulation and law enforcement in the network privacy protection. Administrative organs shall strengthen administrative guidance and supervision. If the dominant network service provider fails to meet the requirements of the industry when formulating the standards for the protection of privacy rights, the government administrative organs should play a guiding and supervisory role at this time and carry out effective administrative supervision on them. Regulations should give relevant government agencies sufficient power and resources to ensure that they can effectively supervise the actions of enterprises, punish violators, and take emergency measures, when necessary, to respond to cyber security threats.<sup>[4]</sup>

#### ***4.3.2 Main responsibility of the enterprise***

The regulations shall clearly stipulate the main responsibility of enterprises for personal information, including legal collection, reasonable use, safe storage and timely notification of data leakage. Enterprises shall establish a sound internal management system to ensure employees' understanding and compliance with privacy protection laws and regulations.

#### ***4.3.3 Right to know and right to participate***

Regulations should emphasize the individual's right to know and the right to participate. Individuals should have the right to know how their information is collected and used and have the ability to choose whether or not. In addition, regulations can also stipulate companies to provide users with the right to access and delete data, enhancing individual control over their own data.

Through the comprehensive study of the legal revision and improvement, the legal application of privacy protection technology, and the cooperation and responsibility of the government, enterprises and individuals, a more sound, adaptable and feasible legal system of network privacy protection can be established. This will help safeguard individual rights and interests, promote scientific and technological innovation, and ensure social stability.

## **5. Future development and prospects**

### ***5.1 Summary of the main study conclusions***

In this study, the core issues of network privacy rights are explored in depth, and the current situation and challenges in this field are fully understood through typical case analysis and empirical research and investigation. Here is a comprehensive summary of the main conclusions for each section:

#### ***5.1.1 Summary of network privacy issues***

At the beginning stage of the research, the purpose of the research is clearly defined, that is, to deeply analyze the problem of network privacy rights and propose feasible solutions. Through the

literature review, it is found that the network privacy issues mainly focus on the abuse of personal information, data leakage and monitoring. At the same time, the choice of research methods, including case analysis and empirical research investigation, is emphasized to fully understand the complexity of the problem.

### ***5.1.2 Conclusions of typical cases***

Through in-depth analysis of typical cases, it reveals the commonness and particularity of network privacy issues in different industries and situations. Companies, individuals and regulators play different roles in the case, finding that the role of regulators is particularly critical. It emphasizes the urgency of establishing an effective regulatory mechanism to balance the interests of all parties and ensure that the Internet privacy right is properly protected.

### ***5.1.3 Summary of the investigation results of the empirical research***

Through extensive empirical research, understand users' attitudes, views and behavior on network privacy issues. Users' concern about the protection of personal information is increasing, but there is also the contradiction of information sharing, which adjusts the importance of users' legal awareness of network privacy, in order to improve their cognitive level of privacy protection. Further explore the specific manifestations and causes of the network privacy right problem, to provide practical and feasible suggestions for the subsequent regulation formulation and policy adjustment.

### ***5.1.4 Problems and challenges***

Through in-depth research, many problems and challenges are found, and the deficiencies of the legal system, the loopholes in the regulatory mechanism and the challenges caused by technological innovation are pointed out. These issues define the direction for future improvement, including strengthening the legal system, strengthening supervision and developing in step with technological innovation.

### ***5.1.5 Evaluation of the effect of the policy recommendations***

Finally, a series of policy recommendations are presented, and their actual effects are preliminarily evaluated. We have found that some policy suggestions have achieved some results, but there are also some difficulties in implementation. This indicates that further efforts are still needed at the policy formulation and implementation level to ensure the effectiveness and sustainability of online privacy protection.

In general, this study provides a comprehensive understanding of the network privacy issues through in-depth investigation and analysis, and puts forward a series of operational suggestions, aiming to promote the development of network privacy protection in the future.

## ***5.2 Legal development trend of network privacy right and personal information protection in the future***

### ***5.2.1 International Trends***

Pay attention to the development trend of the international network privacy right and personal information protection law. Understand other countries in this area, learn from it, see if there is something to learn from. For example, the European Union has developed strict regulations on the protection of personal information through the General Data Protection Regulation, emphasizing the transparency, legitimacy and restrictions in the purpose of personal information processing. The implementation of this regulation has affected enterprises and organizations around the world, and provided a useful reference for formulating relevant laws in China. Therefore, when formulating and implementing the network privacy protection law, we need to pay attention to the latest international developments, in order to better learn from the successful experience of other countries.

### ***5.2.2 Legal Challenges to technological innovation***

With the rapid development of technology, emerging technologies such as artificial intelligence and blockchain are changing the way we live and work. However, these technological innovations also present unprecedented challenges to the law, especially in the area of personal information protection. These technologies bring about new ways of collecting, storing, and processing data, but they also raise concerns about data privacy, security, and abuse.

The traditional legal framework was formed in the technological environment of the past, and may

not fully adapt to the development of these emerging technologies. Therefore, we need to re-examine and adjust the legal framework to ensure that the rights and interests of personal information are effectively protected. This includes creating new regulations, updating existing legal provisions, and strengthening cross-border cooperation to address global data privacy and security issues.

Specifically, we can take the following measures to deal with the legal challenges of technological innovation

1) Clarify the ownership and use right of data: it stipulates that the ownership and use right of personal data belong to the user himself, and any organization or individual must approve the user when using the user data.

2) Strengthen data security protection: enterprises are required to take necessary technical and management measures to protect user data and prevent data abuse or leakage.

3) Establish a cross-border data transfer mechanism: on the premise of ensuring personal privacy and security, establish a cross-border data transfer mechanism to promote international data flow and cooperation.

4) Strengthen legal responsibility and punishment: The legal responsibility and punishment should be strengthened for the behavior to play a deterrent role.

5) Enhance public awareness and education: Through publicity and education activities, improve the public awareness of personal information protection, so that people can understand their rights and interests and take corresponding protection measures.<sup>[5]</sup>

Through the above measures, we can adjust the legal framework to meet the development of emerging technologies to better protect users' privacy rights. At the same time, it also helps to promote the development of technological innovation and realize the harmonious coexistence of science and technology and law.

### ***5.2.3 Strengthening of laws and supervision***

With the popularity of the Internet and people's increasing attention to personal privacy, the development direction of the future law will have more specific and strict regulations on the protection of network privacy and personal information. This is not only to protect the basic rights of citizens, but also to meet the challenges of issues such as cybercrime and data leakage. Therefore, there may be more legal provisions on data security and privacy protection in the future, with stricter regulations on the collection, storage, use and disclosure of personal information.

At the same time, regulators will also strengthen supervision in this area to ensure the effective implementation of the regulations. This includes strengthening the supervision of Internet companies, requiring them to take stricter data protection measures and imposing severe penalties for violations. In addition, regulators may also strengthen the education and publicity of personal privacy protection, and improve the public's awareness of privacy protection, so as to form a good atmosphere for the whole society to jointly safeguard personal privacy.

### ***5.2.4 Global Collaboration and standard setting***

In today's era of globalization, network privacy and personal information protection have become a topic of much attention. To better address this challenge, global collaboration and standards-setting are particularly important. Through cross-border cooperation, we can jointly develop a unified set of network privacy rights and personal information protection standards, so as to ensure the security and privacy of user data. Global collaboration and standard-setting will also help to promote the continuous improvement of national laws and regulations. Through exchanges and cooperation, countries can learn from each other, constantly improve their own laws and regulations, and improve the level of online privacy and personal information protection. Through cross-border cooperation and communication, we can jointly promote the progress of network privacy rights and personal information protection, and provide users with a more secure and reliable digital environment.

### ***5.2.5 User education and independent rights***

Strengthen user education, improve users' cognition of network privacy, popularize knowledge of online privacy to users through various channels, guide them to use Internet services correctly, and protect their personal information. At the same time, it is possible to strengthen users' control over their data and enable them to manage their personal information more independently. This will help to improve users' sense of control over their personal data, reduce the risk of information leakage, and

also help to promote the healthy development of the Internet industry.

Through the comprehensive and in-depth prospect of the legal development of the network privacy right and personal information protection, it provides important guidance and inspiration for the future legal development. From the evolution of the law and the rapid development of network technology, we can see that the demand for privacy rights and personal information protection is growing. As society's attention to data security and personal rights and interests increases, laws need to keep pace with The Times to better balance the relationship between different interests and ensure that personal privacy and information security are fully protected. In the future legal development, we look forward to seeing the introduction of more perfect and detailed laws and regulations to meet the new challenges of online privacy and personal information protection. At the same time, the development of the law is also inseparable from the participation and cooperation of all sectors of society. We need to further strengthen public education and publicity, and improve personal awareness and skills of privacy protection, so as to form a good atmosphere for the whole society to jointly maintain privacy and data security. Let us look forward to the continuous improvement of the law and the joint efforts of all sectors of society, we can build a safer, more fair and transparent cyberspace.

## 6. Conclusion

In the digital age, the network privacy right and the protection of personal information have become the most legal issues. By studying the legal basis of network privacy and personal information protection, this paper analyzes the legal issues and challenges of third-party data collection and sharing, data security, and emerging technologies' privacy challenges. The comparative study of the legislative framework of different countries in this field is revealed. On this basis, through case analysis and empirical research, this paper puts forward the solution and improvement of legal revision and improvement, legal application of privacy protection technology, cooperation and responsibility between the government, enterprises and individuals. In general, the current legal framework has some deficiencies in the aspect of network privacy and personal information protection in the rapidly developing digital society, which need to be constantly improved and updated. The future development trend will pay more attention to transnational cooperation, technological innovation, timely revision of laws, and require the government, enterprises and individuals to jointly assume the responsibility of maintaining the network privacy and the protection of personal information. Through comprehensive research and discussion, this paper aims to provide reference for building a more sound legal framework that conforms to the needs of the digital age, and promote the continuous progress of network privacy and personal information protection laws.

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