Research on Legal Regulation of Face Recognition Technology Application

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Abstract

With the continuous development of science and technology, face recognition technology based on computer and light and shadow imaging and other related technologies has been widely used in life, which saves labor costs to a certain extent, but at the same time, it is also accompanied by certain personal information leakage, etc. Security risks. Therefore, in order to fully protect personal information and other rights, it is necessary to enhance the security and reliability of the technology through measures such as strengthening supervision and improving legislation, and promote the safe and sustainable development of face recognition technology. This paper outlines the basic concepts of face recognition technology, the current development status of face recognition technology in my country, the reasons for the abuse of the technology, and summarizes the experience from the legal regulation of face recognition technology outside the territory, so as to propose targeted regulatory measures.

Keywords

1. Introduction

With the rapid development of the digital economy in my country's market, face recognition has become more widely used in my country, but the probability of social risks arising from the application of this technology is also increasing. Therefore, the current research on the legal regulation of the application of face recognition technology has the potential to meet the needs of society. the practical significance of development. However, at present, most of the research on face recognition technology in my country is related to natural science theories and technical issues related to the technology. The social risks of the application of this technology are often ignored, and corresponding legal regulation strategies have not been proposed. Therefore. Research on this issue is very necessary and urgent, which is not only an inevitable measure to regulate the development of face recognition technology, but also a practical need to protect personal information. Further research on this will not only help to determine the legal bottom line that face recognition technology should follow, but also clarify the basic points of legal regulation of face recognition technology.

2. Overview of Face Recognition Technology

2.1. Definition of Face Recognition Technology

Face recognition is a biometric recognition technology based on human facial features. A series of related technologies for face recognition are usually called portrait recognition and facial recognition. 1 The engineering application of computer automatic face recognition began in the 1960s. From the initial geometric features to the current data-driven representation learning, face recognition has gone through nearly 60 years of development history, and the accuracy of face recognition is also Rapid rise. 2 At present, the highest accuracy rate of the face recognition system exceeds 99.5%, while the recognition accuracy rate of the human eye under the same

conditions is only 97.52%. To some extent, face recognition can be said to be more accurate than the naked eye. 3

2.2. Features of Face Recognition Technology

2.2.1. The Concealment of the Application Process

Face recognition technology is a complex algorithm system, and it is difficult for ordinary users to grasp its operating mechanism. For example, users upload photos of themselves in daily life in cyberspace, but the service provider may include facial recognition technology. It is easy to collect the user's personal facial information through related technologies. This process is extremely concealed, and it is difficult for users to realize that their face information has been matched and collected. In real public places, we cannot and will not avoid ubiquitous cameras, so that face information will be collected without the knowledge of the information subject, increasing the possibility of personal privacy being violated.

2.2.2. The Closeness of Personal Relationships

Different from biotechnology such as fingerprint recognition and iris recognition, face recognition technology is directly related to citizens' right to portrait, and is most closely related to personal relationship. Spiritual interests are the basic interests of portrait rights, and property interests are derived interests and secondary content of portrait rights, both of which are closely related and independent of each other. Article 1018 of the Civil Code stipulates that a natural person shall have the right to portrait and shall have the right to make, use, publish or permit others to use his portrait according to law. However, due to insufficient regulation of face recognition technology, face information is being collected and used by some illegal means, and personal portrait rights are also facing huge challenges.

2.2.3. Risk Prevention Complexity

Technological development is a double-edged sword, which brings both opportunities and risks. Technological development is often changing rapidly, and legislation is lagging behind, so it is difficult to prevent the risks of face recognition technology. Face recognition technology risks are highly concealed. The non-contact nature of face recognition technology and the need for too much human participation are not only important reasons for face recognition technology to stand out, but also face recognition technology risks. It is very likely that the information subject will have face information stolen without their knowledge, and a large amount of data will be collected, organized, sold, and sold without their knowledge, which seriously violates the information subject's right to know. In addition, the risks of face recognition technology are not easy to manage and control. Face recognition technology in the Internet environment has the characteristics of fast dissemination, wide influence and serious consequences, which makes the risk prevention and control of this technology more complicated.

3. The Necessity of Standardizing the Application of Face Recognition Technology

3.1. Based on the Needs of Social Development

In the report of the 19th National Congress of the Communist Party of China, General Secretary Xi Jinping emphasized the need to establish a comprehensive network governance system and move towards the goal of becoming a network power. Up to now, the development of face recognition has been at a high level, and the recognition accuracy has gradually improved. In daily life, various facilities such as face-scanning payment and face-recognition access control systems that can be seen everywhere have profoundly affected people's way of life. In the future, the development of face recognition is even more unstoppable. If the development of various emerging technologies represented by face recognition is not regulated in time, it will not only

be difficult to effectively protect the face information of individual citizens, but even the overall security of the country may be threatened, causing other countries to covet my country's Internet information sovereignty .

3.2. The Consequences of Misuse of Face Recognition Are Irreversible

In theory and technology, any information has the possibility of being leaked, but compared with other information, face information is special. If the user's payment password, bank card number, etc. are leaked and stolen, the user can avoid the occurrence and expansion of the damage by changing the password, freezing the account, etc. However, once the face information is leaked, it has the possibility of being unchangeable. Others can accurately identify the various features and even the health status of the information subject's face through the face information, which provides convenience for criminals to carry out fraud and other illegal activities. The effects are irreversible for the information subject. Even if remedial action is taken after the fact, it is difficult to remedy the damage that has already been incurred.

4. The Current Development Status of Face Recognition Technology in My Country

4.1. The Legal System Is Not Perfect

Judging from the current state of legislation, there is no special law in my country that regulates the collection of face information. Therefore, from the perspective of personal information, the legal protection of personal information has defects such as delayed legislation and scattered regulations. Article 1034, paragraph 1, of the Civil Code, which came into effect on January 1, 2021, stipulates that "the personal information of natural persons is protected by law", and in the definition of personal information in Article 2 of the law, biological information is clearly listed as an individual information, but no special protection is given to personal biometric information. On October 21, 2021, the "Personal Information Protection Law (Draft)" was published on the National People's Congress website and solicited opinions from the public. Article 27 of it stipulates that "the collected personal images and personal identification information can only be used to maintain public The purpose of safety shall not be disclosed or provided to others, unless the individual consent is obtained or the laws and administrative regulations provide otherwise." However, formal legislation has not yet been passed, lack of compulsion, and cannot form effective binding force. In addition, most of the existing regulations focus on the regulation of the subject of private power, but the subject of public power represented by the government is excluded. There is an unequal status between the two, and personal information is more likely to be violated. There is a lack of relevant documents to regulate, which is also an area that needs to be improved.

4.2. The Government's Law Enforcement Is Not Standardized

Administrative power is related to many aspects of our lives. The administrative power with the value orientation of "pursuing efficiency and maximizing economic benefits" is most suitable for risk prevention and control according to its nature. 4 However, due to the lack of relevant legislation at present, the inaction of the administrative department that follows the law of administration has become a matter of course, and it is difficult to establish a dynamic to effectively control the risks of face recognition technology. The administrative department also lacks a special regulatory agency for face recognition technology, and the risk management system related to supervision has obvious lag. For example, the network problem of face recognition technology is supervised by the Ministry of Industry and Information Technology, and the relevant criminal problems are investigated by the public security organs. Illegal business activities It is the management of the industrial and commercial sector. This decentralized management model is prone to offside, vacancy and dislocation.

4.3. Information Subjects Have Low Security Awareness

When accepting the services of the network service provider platform, the agreement terms of most platforms are long and cumbersome, and many users will agree to the terms involving privacy without reading it, and the information subject's right to know and consent is difficult to fully realize. At present, the awareness of personal privacy protection of most citizens in my country is still in the traditional privacy field, but there is not enough privacy protection awareness in the new personal privacy field including face information. For example, the user agreement of the face-changing app deprives citizens of Right to know, but not enough attention from users, such phenomena are not uncommon. Service providers use big data to generate great value of personal information, but in order to enjoy the benefits of services as individual users, they ignore the protection of information, and various potential risks such as abuse and leakage of personal information are also emerging.

4.4. The Construction of Industry Self-regulatory Organizations Is Not Yet Mature

As information users, enterprises have the closest contact with social groups. At a time when national laws are not fully regulated, it is most appropriate for enterprises to be the guardians of face recognition technology. The exercise of reasonable measures by industry self-regulatory organizations is not only beneficial to the development of the face technology industry, but also helps to provide experience for the formulation and implementation of future laws and government supervision. However, my country's current face recognition technology-related industry self-regulatory organizations still have major shortcomings. Industry standards are formulated by the relevant core enterprises in the industry, but as a for-profit legal person, enterprises often aim to maximize profits. The industry standards formulated by them are undoubtedly aimed at safeguarding their own interests, and it is difficult to protect information. The real purpose of the subject's interests. Compared with the formulation of national laws and regulations, due to the influence of various objective factors such as the ability to formulate norms, the industry norms formulated by industry self-regulatory organizations have major defects, and it is difficult to regulate and guide the healthy development of the industry.

5. Legal Measures and Suggestions to Regulate the Application of Face Recognition Technology

5.1. Improve the Legislative System for the Application of Face Recognition Technology

On the one hand, my country's current legislation focuses on the protection of personal information, but lacks clear regulations on how to prevent and use information. Therefore, only by regulating the collection of personal information by legislation, can information abuse be suppressed from the source, the irreversible harm caused by information abuse can be avoided, and the interests of the information subject can be safeguarded. On the other hand, laws and regulations related to information network security are fragmented, some laws and regulations are repeated, and there are loopholes in the existing legal system. Therefore, unified laws can be formulated to reduce the problem of low enforcement power, improve administrative regulations, and at the same time Improve basic laws and departmental legal systems, and form a comprehensive and scientific legal structure system.

5.2. Strengthen the Standardization Construction of Government Law Enforcement

To standardize government law enforcement, we must first break the traditional and outdated concepts, overcome the shortcomings of the physical mechanism, and improve the level of

governance and supervision. Clarify the rights, obligations and responsibilities of different levels of law enforcement agencies, standardize the governance behavior of the internal staff of functional departments, and formulate detailed and standardized codes of conduct. It can learn from advanced foreign experience, set up information network supervision agencies, introduce professional and technical personnel, strengthen the supervision and maintenance of information, provide citizens with rights protection services such as information infringement, complaints, and appeals, and keep abreast of public demands, thereby establishing the authority of government departments. , to improve the efficiency and quality of governance.

At the same time, the government can support the construction of industry self-discipline organizations, and give priority to providing financial support such as credit to enterprises that join industry self-discipline organizations and comply with industry self-discipline conventions, and encourage enterprises to actively join industry associations and abide by industry norms. The members of industry associations are not all impartial and selfless. Members often join industry associations based on their own interests. Industry associations also have their own private interests. Therefore, while strengthening the construction of industry self-discipline organizations, the government should also strengthen its supervision to achieve The best balance between public and private interests.

5.3.   Raise Awareness of the Rights of Information Subjects

Due to the late start of the construction of a rule-of-law society in my country and historical and cultural reasons, citizens' awareness of rights protection is relatively weak. rise. The awareness of rights of information subjects can be improved from two aspects. On the one hand, it is necessary to organize relevant publicity and education activities, use the activities to publicize and explain the issues that should be paid attention to in the use of face recognition technology, popularize the publicity and education on personal information protection, and enhance the legal awareness of information subjects; on the other hand, citizens themselves It is necessary to actively understand relevant rights and other contents, and increase the attention and vigilance of face recognition technology in daily life. When accepting services related to face recognition technology, you should carefully read the privacy policy and cannot easily agree to the collection of personal information. It is necessary to have the awareness and ability of self-protection. When using face information collection equipment, it is necessary to know in time which part of the face information is collected, the purpose of collection, and the storage time. After the face information is violated, the service provider is required to terminate the service as soon as possible, and protect their legitimate rights and interests through legal channels, so as to avoid further leakage of personal information and prevent further violation of personal privacy rights.

5.4.   Strengthen the Construction of Industry Self-discipline Organizations

The legal protection and regulation of facial information can provide direction for companies to engage in facial information business activities, but laws are often the product of the balance of interests of multiple parties, and only provide minimal protection for facial information. With the rapid development of technology, the lag of the law often does not match the development of technology, and it is neither possible nor realistic to let the law completely regulate it. Taking industry self-discipline as a supplement to the application of the law, and formulating corresponding policies and norms according to the company's own situation, the enthusiasm of the company to protect face information can be reviewed.

The most effective measure for industry organizations to regulate members' behavior of collecting face information is to establish applicable self-discipline norms. At the same time, industry organizations should supervise the behavior of enterprises using face recognition, collecting and processing face information. In addition, industry associations should establish an effective connection mechanism with national government agencies. For violations of laws

and regulations, industry associations can report and inform state administrative agencies, so as to impose corresponding penalties and sanctions on violating enterprises.

6. Conclusion

In the era of intelligence, network information infringement is becoming more and more prominent, which is an inevitable problem in the development of science and technology. The rapid development of facial recognition technology and the unequal legal system that has not yet been completed have caused people's concerns. In order to prevent and control the social hidden dangers that may arise in the use of this technology, it is necessary to increase a certain amount of research and development investment, and it is also necessary to prevent and regulate the risks that may arise from the use of face recognition technology from a legal perspective. We need to improve the legislative system, raise the awareness of citizens' privacy protection, guide the self-disciplined development of the industry, and make the use of this technology more standardized, rationalized and legalized, so that we can enjoy the convenience of technological development and avoid the risks brought by face recognition technology.

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