

Discussion on Civil Information Security Education in China in the Era of Big Data

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ABSTRACT. *With the rapid development of science and technology, information technology network is becoming more and more popular. Mobile internet, social networks, and e-commerce have greatly expanded the application areas of the Internet. We are in a data explosion era of "big data" which has a profound impact on social economy, politics, culture, people's life and other aspects. In the meanwhile, the era of big data presents new challenges and opportunities for human data management ability. A large amount of data is stored in the network information system, which objectively makes us put forward higher requirements for network security and personal data privacy. Therefore, it is necessary to educate citizens on information security in the era of big data.*

KEYWORDS: *Big data era; Citizens; Information security education*

1. Introduction

Currently, we are in the era of "big data" with explosive growth in data[1]. The popularity of big data has extended from the initial IT industry to all areas of people's social life, and also has had a profound impact on people's lives, work, and thinking. So the data industry has a new development path for the famous enterprises (such as IBM, Google, amazon, alibaba at home and abroad)' use of big data work. At present, the application prospect of big data in education, medical care, automobile and service industries shows its energy, which makes enterprises and researchers full of confidence in the future of big data[2].

2. The necessity of citizen information security education in the era of big data.

2.1 Many security problems are brought about with the wide application of big data

Development of the Internet is gradually becoming more dependent on citizens' personal information[3]. For example, when a user downloads an app on their phone, it is often asked if the app should be allowed to share their communication and location information, with the situation of allowing, the user will be exposed to

the risk of information disclosure; otherwise, they will not be able to enjoy some convenient services. The growing demand for citizen information has led to irreconcilable conflicts among citizen information security, privacy and convenience. On one hand, consumers benefit from big data, such benefits include: consumers can buy good and inexpensive goods; consumers' quality of life can be improved; consumers are more likely to find their favorite products; merchants can recommend products according to consumers' consumption habits. On the other hand, manufacturers obtain consumers' purchase preferences and health data, which pose a threat to the users' privacy and security.

2.2 In the era of big data, enterprises are confronted with multiple security risks.

Big data technology is a double-edged sword, enterprise can make profits from data analysis, also hackers can attack enterprises or individuals in the same way. For example, hackers can first obtain personal information such as the telephone and home address of the attacking object in the social network, e-mail and e-commerce website. When they get the VPN account of the attacking object, hackers can get the working information of the attacking object and further intrude into the enterprise network. Therefore, in the era of big data, enterprises not only need to learn how to use data mining value to bring economic benefits, but also need to coordinate security deployment, make plans, and guard against data leakage and network attack.

2.3 In the age of big data, national security is also facing cyber terrorism.

From the perspective of national security, in the era of big data, the dependence of the state on the network in the fields of water, electricity, oil, commerce, transportation and military is increasing, which makes the national security also face great challenges. Huge and comprehensive user data provide new resource support for cyber terrorism, and it make the situation be more and more easy to invade all aspects of people's lives. From the perspective of information protection, citizens themselves and public authorities should take action.

3. The main content of citizen information security education in the era of big data

3.1 Strengthen citizens' awareness of information security protection.

The development of big data technology provides a stage for the exploration of data value, but also raises issues of data security and privacy protection. The application of big data technology can be seen everywhere in life. For example, when users scan two-dimensional codes and forward information through Wechat, big data analysis tools will capture users' consumption habits and personal preferences, and analyze and predict users' needs. The analysis results will provide users with more services, and also they often provides data without knowing it,

information security issues have also followed. It is an important period for the development of big data, and information security is an unavoidable problem in the development of big data. Many consumers are unknowingly collected and stolen personal information by relevant companies. At present, we can only hope that enterprises can attach importance to information security while making profits by using big data technology, and take corresponding precautions and protection measures to protect consumers' privacy.

Because our country has not yet promulgated the personal information protection law, only some laws and regulations refer to the personal information security scatteredly, so the legitimacy of many activities related to big data can not be said. The effect of relying solely on government departments and judicial organs to protect personal information security is limited. Citizens' awareness of information security protection is the first line of defense for information security protection.

3.2 Clarify the relationship between individuals, enterprises and national information security.

In the era of big data, the information security of individuals, enterprises and countries in China has inherent unity. Disclosure of citizen information not only damages personal interests, but also may affect the interests of groups and even the country. Some data of citizens (medical records, education level, etc.) do not seem to involve privacy, but the unique by-products of the network era such as hostile hackers can get the national conditions of our country through big data analysis technology, thus carrying out the ideological invasion of our country, seriously damaging the national interests. Therefore, citizens should clearly recognize the consistency of personal, enterprise and national information security. Citizens' information security awareness is an important way to prevent information disclosure, and protecting personal information security is to protect enterprise and national information security.

4. Suggestions on strengthening citizens' information security education.

Refuse unreasonable access requests for mobile phone users. Current mobile applications, especially some domestic software, disregard the actual needs of users and require permissions beyond the scope of its own functions. Mobile phone users should learn to refuse unreasonable permission requirements.

Encrypt the data. For individual users, when they upload a private file to the network, the encryption password should be set when compression, so that the personal data transmission will be more secure.

Users should use HTTPS protocol when browsing web pages. HTTPS protocol is a network protocol that can be used for encrypted transmission and identity authentication. It is more secure than HTTP protocol, which enhances the security of information transmission between computers and servers.

Because of Trojan Horse Virus, users should not store bank account passwords and other privacy information in computers, cloud disks and other addresses.

5. Conclusion

In short, in the era of big data, the information security education of citizens needs to be paid enough attention to by the whole society. Awakening citizens' awareness of information security is an important way to prevent information leakage. Only by strengthening citizen's information security education and strengthening government departments and legislatures to protect personal information security, can we create a healthy big data space.

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