

Reflection on the Research Status of Digital Jurisprudence

Yansiqi Liu

Inner Mongolia Technical College of Mechanics & Electrics, Hohhot, Inner Mongolia autonomous Region, 010000, China

Abstract. At present, digital technology is developing rapidly, digital technology has penetrated into all aspects of social life, economic life and cultural life. Law is a wide range of disciplines, involving many fields, including both public law and private law. Therefore, digital technology will inevitably touch on many aspects of the field of law and have a huge impact. For example, digital technology is applicable to the field of personal information. From the four stages of collection, storage, classification and use of personal information, it is necessary to play the role of legal protection and regulation. The content of digital jurisprudence is characterized by fast update speed and wide coverage. This background determines the necessity and importance of changing traditional law and establishing digital jurisprudence. However, the current digital jurisprudence is in its infancy, many concepts have not been fully determined, many boundaries have not been fully divided, and there is a lack of clear goals for progress. The purpose of this paper is to further clarify the concept of digital jurisprudence from the perspective of vertical and horizontal intersection, divide clear boundaries, and clearly set goals, so as to lay a solid foundation and inject vitality into the development of digital jurisprudence.

Keywords: Digital Jurisprudence; Digital Technology; Artificial Intelligence.

1. Introduction

Emerging digital technologies such as big data and cloud computing are developing rapidly. Digital technology has the characteristics of fast innovation, rich information and wide radiation range. In the business field, the reason why enterprises favor digital technology is that digital technology has unique technical advantages. The general standard of digital technology is binary, so it is very convenient for integrated processing. Digital technology has strong anti-interference ability and stable operation. Digital technology has superior storage capacity, large storage capacity, strong confidentiality, and can achieve dual protection of quantity and quality. The above is an important reason for the wide application of digital technology. The wide application of digital technology has improved economic efficiency, greatly shortened the transmission distance, accelerated the transmission speed between the two sides, and built a multi-connected transmission network system. In the legal field, some traditional legal systems have been impacted by digital technology. The current problem is how to update the legal provisions in time to adapt to the update speed of digital technology. The problem is that digital technology has an impact on many departmental laws.

2. Definition of Digital Jurisprudence

2.1 Connotation of Digital Jurisprudence

The current general division standards include theoretical law, applied law and comparative law. Digital jurisprudence includes both basic concepts and the formulation and interpretation of laws. Therefore, it is necessary to reiterate the independent status of digital jurisprudence and give it independent research objects, specific contents and coverage. Some scholars hold the view that digital jurisprudence is not an independent discipline. They believe that digital jurisprudence is only a new content of various departmental laws. Digital jurisprudence should belong to the existing departmental laws and cannot go beyond the scope of the existing legal system. The mistake of this view is that it does not really recognize the important influence of digital technology on the construction of the legal system. We should completely deny this wrong view. However, denying the

above views is not to overstate the independence of digital jurisprudence, but to maintain an objective position and correctly understand the independent status of digital jurisprudence from the reality.

2.2 Covering Areas of Digital Jurisprudence

By analyzing the types of projects included in digital technology, the basic classification of digital jurisprudence can be obtained. This classification method is not a simple copy and paste, but an integration of practical cases and theoretical construction. For example, mobile communication technology and Internet of Things technology belong to communication technology, artificial intelligence belongs to intelligent technology, and data collection and data storage belong to big data technology.

2.2.1 The Internet Field in Digital Jurisprudence

First of all, let us focus on the Internet. The Internet has the natural advantage of convenience and convenience, and provides a convenient way for the communication and exchange of modern society. At the same time, the rapid development of the Internet has promoted the innovation of the traditional industrial system and realized innovation-driven development. In the field of law, network law has its own independent research system, with rich research content and multiple research objects. The hierarchical structure of the Internet is used as a reference basis, and the network interface layer, which is very low in relevance to the field of law and focuses on the technical level, is deleted. Finally, it is divided into network layer, transmission layer and platform layer. The object of legal regulation is mainly focused on these three levels, and the content closely related to the personal rights and interests of network users is also focused on these three levels.

2.2.2 The Field of Data in Digital Jurisprudence

Why are we in the era of big data? Why does a lot of data produce great value? The era of big data refers to the use of specific algorithms to classify and store large-scale data, and to obtain the potential value by setting corresponding primary standards. So how should we correctly understand the concept of "big" in the "big data era"? From the perspective of literal meaning, it refers to the huge amount of data and the huge amount of information contained, which benefits from the optimization and improvement of storage media. Due to the slow development of the previous network, the transmission and circulation of data take a long time, and the efficiency of data transmission is low. With the slow arrival of the era of big data, everything has changed. It used to take a long time to transmit the completed files, and now it can be completed in a few seconds. The object of data is focused on personal information, so personal information protection is the core content. Only by establishing a complete legal norm of personal information protection can the digital economy maintain long-term development. The most common applications of data in the business field are personalized recommendation and consumer behavior analysis. Consumer behavior analysis speculates consumers' behavior and preferences by analyzing their favorite preferences. Personalized recommendation is to provide customized products and services based on consumers' browsing records, shopping records and other specific information. The role of data in the financial field is to increase the probability of successful decision-making. For example, in financial credit, it is necessary to fully understand the borrower's credit situation and evaluate its credit risk by analyzing the user's credit data and behavior. Use the data as an important basis for deciding whether to invest, analyze the relevant data and then make a summary, and finally make a decision book. In social governance, it is also necessary to give full play to the unique advantages of data. The core of social governance is citizens. Therefore, data related to citizens has become an important source of information. Both urban governance and public security need data support.

2.2.3 The Field of Rule of Law in Digital Jurisprudence

The intelligent rule of law system includes multiple departments, such as intelligent courts, intelligent prosecution, intelligent justice and so on. It is necessary to improve the integration ability of data resources and improve the utilization and conversion rate of data resources. In the court system,

we will build a smart rule of law platform in an all-round way, and rely on the advantages of digital technology to form an integrated operation mechanism of smart courts covering villages and cities in an all-round way. At present, it has become a consensus to attach importance to court mediation. The location of court mediation can break through the limitation of space and give full play to the unique advantages of the combination of on-site mediation and network mediation. The court can open a network mediation platform, the parties only need to log on to the website to fill in the relevant facts and click on the 'application' option. In addition to court mediation, the trial can also break through regional restrictions and work in the form of live webcasts. Extending the law popularization classroom to the online live broadcast platform to answer citizens' legal questions online can give full play to the influence of the law popularization classroom and greatly improve the efficiency of law popularization. Innovate working methods in the field of public legal services, create a smart judicial service platform, use digital technology to achieve full coverage of public legal services "online and offline" and create a "digital rule of law, smart justice" system.

3. Practical Problems Faced by Digital Jurisprudence

3.1 The Research Objectives are Dispersed

The disciplines of digital technology are diverse, which will inevitably lead to differences in research objectives with different disciplines as the core. Looking back in the past, since cloud computing has gradually penetrated into people's daily life, digital technology seems to be used at anytime and anywhere. Digital technology is applied to work, study and life, and digital technology has been integrated into our lives. The fields involved in digital technology include computer, communication equipment, electronic products and numerical control technology. Due to the dispersion of specific application objects, the difficulty of integrating the research objects of digital jurisprudence is finally increased. From a macro perspective, the research objects of digital jurisprudence focus on the hot topics of emerging technologies and the frontiers of digital technology development, such as personal information protection and artificial intelligence infringement. In summary, the research objectives of digital jurisprudence are constrained by the development of digital technology. The research focus has always focused on technical hot topics, and has always maintained a natural lag. Therefore, scholars can only conduct research within a limited range, and the research results are difficult to belong to a unified system.

3.2 The Discipline Positioning is Not Accurate

As an independent discipline, digital jurisprudence must combine universal research methods with unique research methods. Since the field of digital technology involves public law and private law, it is necessary to solve practical problems at two levels. At present, there is a consensus in the academic circles on whether it is necessary to formulate an independent departmental law for digital jurisprudence, and there is no need to set up a special departmental law. However, there is still controversy over whether digital jurisprudence should be summarized under a specific branch of law. One view is that digital jurisprudence must rely on a new branch of law, which can only belong to one type. Another view is that digital jurisprudence can realize the combination of multiple departmental laws and multiple disciplines. In the face of specific problems, specific analysis should be carried out first, and departmental laws involving corresponding content should be screened out, and then the appropriate legal provisions should be found in combination with the actual situation.

3.3 Theoretical Research is Difficult to Solve Practical Problems

In the context of the continuous updating of the proper nouns of digital technology, the development of digital jurisprudence must face the problem of the combination of professional technology and legal concepts, which is the first part of the research process. However, at present, many scholars have confused the concepts of 'primary' and 'main', and regarded concept analysis as the main content of digital jurisprudence research. This mistake leads to the neglect of the core

position of practice. We must build a bridge between theory and practice, and the ultimate goal of carrying out various studies is to solve the problems existing in reality. Although the existing research results are very rich, the research results are only limited to the elaboration of concepts, and there is no practical orientation to truly solve practical problems. The existing research results are difficult to be transformed into specific measures to guide practice, and it is difficult to provide effective suggestions for the case guidance of judicial organs and procuratorial organs, and even far behind the progress of judicial practice. For example, the first case of face recognition in China occurred in 2019. At that time, companies using face recognition technology were already very common. The entry facilities of Hangzhou Wildlife Park used face recognition technology to collect users' facial information. In addition to face recognition, there are other ways to enter Hangzhou Wildlife Park. However, visitors have never been told that there are other ways to enter the park, and zoo staff have told visitors that there is only one way to enter the park. There are no relevant legal provisions before the case, and no judicial case guidance can be used as a reference. Therefore, the prosecutor's claim that the content of the face recognition format clause is invalid was rejected by the court. The judge believed that the content of the format clause is invalid for the prosecutor, which is only a unilateral invitation from the wildlife park. The court held that taking photos to collect facial feature information was not a fraud, and only supported the deletion of facial feature information, but the court did not support the request to delete identity information.

4. Suggestions on Promoting the Development of Digital Jurisprudence

4.1 Develop Clear Research Objectives

Digital jurisprudence has the significance of teaching research. With the advent of the digital age, the discipline of law must follow the pace of the digital age and achieve self-renewal and self-improvement. If the law discipline is limited to the existing theoretical knowledge, it will become backward and cannot undertake the task of cultivating high-level legal talents in the new era. It must be made clear that digital jurisprudence is not divorced from the essence of practical teaching, nor is it a virtual concept that cannot be operated in reality. In the process of digital jurisprudence teaching, it is necessary to introduce a large number of emerging technology concepts. From the beginning of research and development to the whole process of putting into use, it is necessary to formulate corresponding teaching contents. Therefore, it is necessary to combine the traditional concept of law with the application practice of digital technology to achieve a good fit between tradition and modernity, and the digital rule of law must adapt to the development of digital society. Different from the past, digital technology has two types of disciplines: managers and users. These two types of disciplines have natural unequal status. In this context, how to use legal regulation means to adjust this unbalanced status quo, how to ensure digital security, and how to safeguard digital human rights. The above problems are practical problems waiting to be solved on the development path of digital jurisprudence.

4.2 Achieve Accurate Discipline Positioning

We must establish a basic premise that digital jurisprudence belongs to the discipline of law. We come to this conclusion is not only based on the text, but through rigorous analysis and rational thinking. Although digital jurisprudence contains a wide range of fields and combines various types of research methods, the ultimate end-result of digital jurisprudence is still the category of legal theory. The research methods of law include: class analysis, value analysis and empirical analysis. The empirical analysis method includes: social investigation method, historical research method, comparative research method, logical analysis method, semantic analysis method and quantitative analysis method. Combined with the commonly used research methods of digital technology, including: comparative analysis, group analysis, structural analysis, average analysis, cross analysis. Digital jurisprudence has a unique research method, which integrates the scientific nature of digital technology and the logic of legal theory. It is an organic combination in line with the development

trend of modern law. The research scope of digital jurisprudence has always been dynamic, but the core is still the various legal risks arising from digital technology innovation. The legal risks arising from digital technology are very different from those of traditional jurisprudence, and have obvious professional and technical barriers, which inevitably determines the differences in research methods. For example, in the name of helping the local medical insurance department to promote the electronic medical insurance card for free, the network technology company defrauded the authorized documents of the medical insurance department, and then subcontracted them to the sales teams in various regions to deceive the residents to register the electronic medical insurance card. Fraudulent residents' mobile phone numbers, verification codes and citizen identity card information are sold to gangs such as online gambling for downstream crimes. This illegal act seriously disrupted the social order and damaged the credibility of the government.

4.3 Emphasize the Role of Practice

The rapid development of digital technology has increased the demand for risk management. With the frequent occurrence of infringement incidents and the continuous updating and expansion of emerging technologies, the research focus of digital jurisprudence must be shifted accordingly, not only focusing on the interpretation of emerging concepts, but also on the improvement of the system and the application of the law. The development of digital technology must have a matching legal system guarantee, and the two must be organically linked. For example, the SMS verification code interface of a company's recruitment software has been attacked 13 million times, and 300,000 registered accounts have been successfully matched. After the investigation of the public security organs, it was found that this was a case of hackers using website vulnerabilities to illegally obtain account information and use it for illegal activities. The signature algorithm of the website is single, so hackers use this weakness to write instructions, make hacker software, and attack the website. Finally, two criminal suspects were criminally detained. In this case, although the scale of the infringed users is huge, there are corresponding legal rules and regulations to protect them. It can be seen that digital jurisprudence must pay attention to the practical role and establish the practical application of practice-oriented digital jurisprudence.

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