The Development of Online Courts in The Digital Age and The Prospect of Future Justice: Based on The Innovation of Judicial Methods in China and The United Kingdom

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Abstract. New technologies such as big data and artificial intelligence have brought challenges to people's way of life, but also have an impact on the traditional case handling mode of courts. As an innovative judicial trial model, online court is put forward under this background.This article takes online courts in China and the United Kingdom as the research object, and analyzes the application of emerging technologies to trials and the global challenges of judicial intelligence and digitization.It will use the method of comparison and examples, firstly discuss and compare the structure and function of traditional courts and online courts, and reveal the hidden dangers of online courts. Then it gives examples of judicial innovation and online court development in China and the United Kingdom respectively in the digital age, and summarizes valuable common experience and feasible innovation models. The reasonable development of online courts will undoubtedly bring convenience and flexibility to litigation, which is an innovation of judicial model under digital governance, but at the same time, problems such as the actual implementation of the ideal, maintaining trial efficiency and quality, and privacy information protection also need to be solved.In the age of digitization, opportunities and conflicts coexist, and where technology will take the law depends on people's choice of its value.

Keywords: Online court; future justice; artificial intelligence; online dispute resolution.

1. Introduction

With the development of emerging technologies and the arrival of the big data era, digital governance and artificial intelligence are challenging traditional lifestyles and presenting opportunities for the court's case-handling model. The online court is a revolutionary judicial trial model proposed in this context. The age of online courts has arrived, for example in England and Wales, the United States, China and Singapore, where operational systems are already running. This article will discuss online courts, and the future of justice as follows.

The first part will analyze the court's framework and functions, outline the vision and standard architecture of online courts, evaluate the pros and cons of functions and benefits by comparing online and offline courts, and respond to the most common criticisms of online courts.

The next part will discuss the successful experience of online courts and the exploration and innovation of online justice in China and the United Kingdom in the form of examples and compare the attempts of the two countries with different cultural backgrounds and judicial systems to improve their court operation systems, so as to draw a general summary experience.

The final section will look into the future of justice and discuss advanced information technologies such as telepresence, augmented reality, virtual reality and more online dispute resolution methods. Also, it will look forward to the possibility of global deployment of online courts and the global challenges of digitization.

2. Overview of Traditional Offline Court and Online Court

2.1. Structure and Function of Traditional Court

Regarding the trial structure of traditional offline courts, taking Chinese law as an example, it can be roughly divided into the following stages. Filing stage: the parties submit the complaint and

relevant evidentiary materials to the court with jurisdiction. After receiving the complaint, the court will decide whether to accept it within a specified time and notify the parties.Pre-trial preparation stage: includes the service of a copy of the complaint to the defendant, the submission of the defense by the defendant, and possible exchange of evidence and pre-trial conferences. The purpose of this stage is to prepare for trial. Trial stage: The court will hear the case, including court investigation, court debate and other parts. The parties and their agents are entitled to debate in court on disputed facts and legal issues. Judgment stage: The court makes a decision based on the circumstances of the trial. The verdict may be handed down in court or at some time after the trial.Execution stage: If the party does not take the initiative to perform the obligations stipulated in the judgment, the other party can apply to the court for enforcement.

2.2. Structure and Function of Online Court

Online court is a public system based on "Online Dispute Resolution (ORD)". In Online courts and the future of justice, Richard Susskind explored the three-tiered online court architecture as one way to understand the nature and scope of online courts [1].

The first layer of architecture is to provide online assessment services, ideally providing two systems of assessment of the nature of the infringement and substantive legal guidance to help users assess their situation from a legal perspective, so that issues can be analyzed and understood to avoid disputes.

The second level of service is aimed at controlling disputes, with a state-employed case officer acting as a mediator to review submissions from parties and to mediate conflicts between parties in a negotiated manner, so that disputes do not escalate and fester as often as they do under the current system.

The third level is the online adjudication service, and when parties cannot resolve disputes at the first or second level, they move to the third level. When the case enters this stage, the judge will truly enter the trial process of the case and carry out work online. Moreover, the activities of the online court are carried out asynchronously, and everyone does not need to join at the same time. The binding force and enforcement of the judgment of the online judge are no different from that of the traditional court.

In terms of its function,online courts can solve the points of network social governance and inject fresh vitality into social governance through the innovative mode of judicial operation. On the one hand, online courts can provide relief for Internet-related disputes and promote rule governance through rule exploration; on the other hand, online courts empower governance through the integration of justice and technology and promote the collaborative governance of network society [2].

2.3. Questions and Potential Problems of Online Courts

Online mediation is an important part of online dispute resolution, but it has always been controversial. Proponents argue that it can significantly improve the overall service level of dispute resolution by avoiding complex jurisdictional issues; However, opponents believe that online mediation has obvious problems such as limited application field, impersonal interaction process, flaws in the technology itself, and effectiveness of privacy protection.These theoretical disputes can be roughly summarized as the confrontation between "efficacy" and "functionalism" [3].

Although online court can significantly improve the overall effectiveness of diversified dispute resolution mechanism through technology in the case management dimension, in the functional dimension of dispute resolution, this system arrangement also encounters many difficulties in China's judicial practice. The most obvious problem is that, compared with the extensive discussion heat and institutional innovation of online court, the actual implementation of these ideals is not in place,or just a formality, sometimes will develop into going through the motions.

For online courts potential problems, Richard Susskind also introduced a view of "economy-class" justice, which means that online courts are essentially for people with few means [1]. The services

available to those people in online courts are not as good as those available in traditional courts, and the "authentic" quality old-style courts will be reserved only for those who are more capable. In other words, the poor will be confined to an "economy class" service, while the rich will continue to enjoy first-class travel. From this standpoint, even if online courts can improve access to justice, they will actually solidify and deepen the wealth gap between socioeconomic classes.

Another more fundamental issue is personal information protection in online courts.Online court's trial activities can directly understand the trial process through the Internet and digital communication. The freedom and openness of the Internet greatly facilitates the dissemination of information, but it also increases the risk of personal information disclosure and the damage of legitimate rights and interests. Judicial openness promoted by the Internet publishes information on trial procedures, court hearings, judgment documents, execution work, etc [4]. In addition to the content that the public can know, there are also many personal information and even privacy of parties, witnesses, and other litigation participants, which can be conveniently copied, downloaded, edited, and disseminated by anyone. All the information can be stored on the Internet for a long time, may cause individual privacy insecurity. How to deal with the relationship between online open justice and personal information protection is a problem that must face carefully.

3. Law and Technology under Digital Governance

3.1. Online Court and Digital Governance in China

Among China's attempts at digital governance and online courts, the most representative should be the judicial blockchain. As a result of scientific and technological innovation, it provides a new perspective for judicial practice.The electronic data proof under the judicial blockchain platform opens a new level of judicial proof of the online proof of the whole process of electronic data by coupling legal rules and technical consensus, and forms a unique socialist judicial system with Chinese characteristics.

In 2018, in the case of Hangzhou Huatai Company and Shenzhen Daotong Company infringing on the right of network communication of works information, the Hangzhou Internet Court reviewed and confirmed the blockchain record of infringement facts formed through a third-party platform, which affirmed the effectiveness of blockchain electronic deposit for the first time in judicial practice [5]. Up to October 31, 2019, 27 nodes of 22 courts, National timing centers, multi-dispute mediation platforms, notary offices and judicial authentication centers in Beijing, Shanghai, Tianjin, Jilin, Shandong, Shaanxi, Henan, Zhejiang, Guangdong, Hubei and other provinces have been built nationwide. A total of more than 194 million data on-chain storage certificates and solid certificates have been completed to support on-chain forensics verification [6].

On June 17, 2021, the Supreme People’s Court promulgated the Rules for Online Litigation of the People’s Courts, and implemented from August 1, 2021, 16th to 19th of the Rules confirmed the depository function of the judicial blockchain as a whole, stipulated the scope of validity of the blockchain depository, and clarified the judicial blockchain depository and review standards. It regulates the application procedures of judicial blockchain technology.

3.2. Innovation of Judicial Methods in The United Kingdom

In February 2015, Richard Susskind, the Civil Justice Commission for England and Wales’ Online Dispute Resolution Unit, chaired by Professor Susskind, has published the report Online Dispute Resolution for Law Value Civil Claims. The report eventually recommended the creation of a “Her Majesty's Online Court (HMOC)”, which would deal with civil disputes under £25,000 [7]. The United Kingdom has started an online court ODR Experimental project based on this [8]. The online court is efficient, direct and convenient to replace the cumbersome, time-consuming and expensive traditional court, and its operation has brought multiple benefits [9].

On the criminal side, each project is based on a system called the “Common Platform”, which is being developed jointly by the police, the Prosecution Service and HMCTS. In general, this effort is

aimed at achieving the long-awaited goal of case management throughout the criminal process, from start to finish. A more concrete example of this technological innovation is the "Single Justice Service", which is based on the idea that in minor, non-custodial cases, where there are no mitigating grounds, defendants can plead guilty online through a system [1]. Online confessions are reported electronically to the magistrate for adjudication via an automated case tracking system.

In terms of legislation, the United Kingdom has also enacted corresponding laws for the implementation of online courts. For example, in the UK Bill 2021 (HL Bill 146) Pt 2 c. 2 s. 19 Rules for online procedure in courts and tribunals, rules for online procedure in courts and tribunals have been regulated in detail [10]. For example, "Where Online Procedure Rules require a person to participate in proceedings, other than a hearing, by electronic means, Online Procedure Rules must also provide that, if the person is not legally represented, the person may instead choose to do so by non-electronic means."

3.3. Comparative Analysis

As to the framework, in the British HMOC model, the functions of the court have been expanded, and the procedures of the online court have been processed by "block", with layers of progressive funnel structure between each "block" [11]. As a comparison, China's current online court embryonic model mainly includes: First, the online mediation mechanism. In judicial practice, the online mediation mechanism has the nature of pre-pleading mediation.Second, Hangzhou Internet court model. The establishment of Hangzhou Internet Court has specimen value and sample significance. However, such innovation is only a framework innovation [12]. The formation of panoramic Internet justice and the pilot of asynchronous trial cannot change the essential attributes of justice in the embedded process of Internet and justice.

As to characteristics of development, the UK has introduced online projects in the criminal, family, judicial, civil and other fields, and HMCTS fully discloses the progress of reform, the vision is to build a large-scale modern system, and technology is at the heart of the reform. China's "Smart Court 3.0" model is constantly being laid out and constructed,using data as centre. Reforms such as online trial under China's "smart court" system focus on the characteristics of technology implantation, while online mediation mechanisms and mobile Internet courts have certain characteristics of model innovation [11].

In general, both the UK and China are pioneers in the mode innovation and technological reform of the judicial system, and the reform is still in its infancy, and the continued support and participation of the judicial authorities is crucial.

4. The Future of Justice and Global Challenges under Digitization

After entering the Internet era, all countries in the world have realized the great potential and value of information technology application in the judicial field and have joined the team of exploring and developing Internet justice.

Future justice benefits from many emerging technologies. In this article, consider the possible forms of future justice. The first is telepresence and augmented reality technology. With the emergence of three-dimensional holographic telepresence technology, the sense of gathering on the scene is strengthened. Court appearance through holographic telepresence technology may become a routine way in the future, and augmented reality technology will build a system called hybrid reality through intelligent devices, so that court personnel can be supplemented by machine-generated perceptual information. Therefore, the real-world information is more sensitive and convenient to accept and understand.

The second possibility is "AI judges", with a new generation of machines also replacing humans in many types of "brain work", including jobs related to legal practice. In Lola v. Skadden, the U.S. Court of Appeals for the Second Circuit, the court held that "in the process of reviewing legal

documents, a human undertaking a task that could have been performed entirely by a machine does not constitute the practice of law" [13].

However, as technology becomes smarter, the increasing technicalization of the law will make it vulnerable to being replaced by technology. And if both focus on instrumental rationality with no value, humanity will be headed for an unknowable future that is likely to be an irreversible disaster [14]. Therefore, in the field of justice, the use of intelligent technology should be limited to areas that do not require human value judgments. From the field of law, it can see the global digital governance and future human development, and artificial intelligence also brings challenges and risks. Big data analysis technology and artificial intelligence are changing the governance structure and order generation mechanism of society.

Another global challenge is the global lack of law. In 2018, the United Nations reported that, "armed conflicts and other forms of violence between societies and within States have led to unspeakable conditions in many parts of the world. Progress in promoting the rule of law and access to justice has also been uneven". There are too many sticking points, examples include unjust laws, disregard for human rights, arbitrary legislation, biased judges, corrupt officials, citizens' inability to understand their rights, overly expensive or complex rights protection systems, massive delays and backlogs in court cases, excessively slow and expensive courts, violence and armed conflict, unfair procedures and disregard for international law [1].

5. Conclusion

In summary, the model innovation of online court is the natural choice of technology-driven justice, and the controversy accompanying scientific and technological innovation cannot prevent the deep integration of science and technology and justice, although it is still in the embryonic stage, it is also a transformation and progress. The article believes that man and intelligent machine are not either one or the other, but a symbiotic relationship. But whether this new relationship is conducive to the interests of humanity depends on the choices made now, including legal choices.

Developing and providing a standardized, adaptable and global online court platform is an ideal vision. The benefit of online courts to the world needs the joint efforts of the whole world, just as the concept of "a community with a shared future for mankind" proposed by China, judicial innovation and future judicial development need the cooperation of the international community to achieve a win-win situation.

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