

# Research on Criminal Justice Approaches under the Background of Intelligent Justice

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**Abstract:** *The intelligent justice in the situation of the Internet and big data emerged for our attention, and then become the focus of the current judicial reform issues. At the procedural level, intelligent justice can promote efficiency, openness, and standardization of procedures; At the physical level, intelligent justice helps to achieve the same case reference in the context of big data. However, the intelligent justice is not a panacea, there are prerequisites, process, results and essential defects. Intelligent justice constructs a beautiful blueprint for the development of judicial prospects. The disorder in its application process is the pain in the running-in period between the intelligent justice, a new thing and the old judicial system, but it is undoubtedly a positive signal of reform.*

**Keywords:** *Intelligent justice; The Internet; Big data; Judicial fairness; Judicial efficiency*

## 1. Introduction

Intelligent justice refers to the goal of ensuring judicial fairness and efficiency, enhancing judicial authority, and fully utilizing modern information technologies such as the Internet, cloud computing, big data, and artificial intelligence to promote judicial modernization and achieve judicial fairness and justice. Intelligent justice is a new path for criminal justice to achieve judicial fairness. Through Intelligent justice, informatization and intelligence can be implemented throughout criminal justice practice.

## 2. Data Science and Intelligent Justice

The advent of the big data era has given rise to a new discipline - data science.

Data science is an interdisciplinary field that encompasses all elements related to structured and unstructured data. Starting with preparation, cleaning, analysis, and originating from a useful perspective, it combines mathematics, statistics, intelligent data capture, programming, problem solving, data cleaning, different viewing perspectives, preparation, and data alignment. Big Data technology aims to provide efficient production tools for the "massive, high-dimensional, complex, real-time, unstructured" data accumulated in people's production, life and scientific activities.

The development of data science has made big data an emerging social productive resource and strategic resource to which countries attach great importance. For criminal justice, "timeliness and accuracy" are clearly critical indicators. The effective extraction and use of big data as a resource will significantly enhance the overall effectiveness and comparative advantage of criminal justice. [1] Big Data is causing a fundamental change in the traditional criminal justice and crime control model, and the use of Big Data to enhance criminal justice and crime control is both a direction of development and a change in progress. This includes using big data to analyze past historical cases to uncover crime trends and crime patterns; Using information encompassed by big data to discover and find suspects; Setting up programs to prevent and control crime by analyzing various data sources and social network data; Using big data to optimize judicial resource allocation and improve judicial efficiency. In response, the judiciary has increasingly recognized the important value of big data for criminal justice. "In the era of big data, the judiciary should establish the concept of open Internet, the concept of data-led justice, the concept of relevance, and the judicial concept of combining online review with offline review of evidence."

### 3. Data science changes the paradigm of justice

The judicial reform of data technology and wisdom is mainly reflected in the following three aspects:

First, data science changes the paradigm of investigation.

The rapid development of a new generation of information technology represented by the Internet, cloud computing and new communication networks has made people, events and things in the world data at an unprecedented rate, thus generating hundreds of millions of data without interruption, the advent of the era of big data, where everything can be recorded and analyzed, has been hard to resist. The explosive data growth and diversity of data forms not only bring immeasurable impact to people's daily life, but also give rise to high-tech crime types with more intelligent modus operandi and more destructive results, leading to the traditional investigation mode cannot adapt to the severe crime situation in the era of big data. The choice of an era's investigation model depends both on a country's judicial tradition and judicial system, and is closely related to the investigation conditions of a particular era.[2] The era of big data provides criminal investigation with a broad range of investigative ideas, fast data information processing capabilities and criminal intelligence research capabilities, bringing new opportunities and challenges for the transformation of the investigative model, a technology-induced transformation of the investigative model is imperative.

Second, data science and intelligent prosecution.

We should adhere to the combination of highlighting the main role of prosecutors in handling cases and strengthening supervision and restraint, Actively promoting the construction of smart procuratorial work, Continuously deepening the application of artificial intelligence and big data in case management, Vigorously improving the level of internal supervision and management, Better serve the scientific development of procuratorial work. Intelligent prosecution should achieve the participation of all types of intelligent elements in the procuratorial field, with a focus on promoting the application of big data in judicial cases. Through the human intelligence-based, artificial intelligence-supported mode of work, the generation of new data elements to guide future work will be the future development trend of intelligent prosecution in the field of case handling. For example, in the case of the Tianjin Pinghe District People's Procuratorate reviewing and prosecuting the bribery of company managers, the defendant refused to admit the criminal fact that he had taken bribes.[3] Thus, the prosecution conducted data analysis by means of data technology, using the electronic data laboratory of the Prosecutor's Office to analyze data on Liao's office computer, technical personnel use the laboratory's professional accounting analysis system, the accounts, bills and financial transactions data in Liao's computer automatically generated charts, in the chart, it is clear who the suspects are most closely connected to and how much money is exchanged between them. After analysis, the prosecutor finally locked the bribe-giver and confirmed the criminal fact that Liao was suspected of accepting bribes, and prosecuted him for accepting bribes.

Third, data science and intelligence court.

Intelligent court construction to help promote criminal justice reform, in the information age, justice is facing the transformation from traditional justice to intelligent justice, traditional justice and intelligent justice each have different characteristics, how to combine the two organically, to promote their strengths and avoid their weaknesses, aiming to promote the construction of smart courts, the use of big data and artificial intelligence, making justice towards standardization. In this process, how to handle the relationship between standardization and personalization, as well as between overall justice and case justice, is a deep-seated issue that should be paid attention to. The application of "Internet plus" in the judicial field is to create a "smart court", which is directly expressed as "online court". For example, the Zhejiang Provincial Higher People's Court started building online courts in 2015, and the first batch of grassroots courts in Hangzhou, including West Lake, Binjiang, and Yuhang, and the Hangzhou Intermediate Court were identified as pilot units.[4] In August 2017, the establishment of the Hangzhou Internet Court can be described as the "integrator" of smart court construction.[5] The "Internet+Court" focuses on the information and network construction of the court, using modern technology as a means to improve the quality and efficiency of court trials and judicial administration, but does not change the traditional organizational structure, management principles and litigation rules of the court; The Internet Court is not simply applying modern technology to the traditional judicial model, but constructing a new online trial model based on the Internet, optimizing or even reshaping the litigation procedures and judicial rules in the online scenario in order to better achieve judicial justice. "Technology is only a tool, justice is fundamental," The basic concept of smart court

construction is to make positive efforts in "transforming the way courts produce justice and the way parties achieve it."

The intelligent court is an information system that aims to achieve judicial justice and efficiency, based on open sharing and secure and trustworthy data, and uses information technology such as big data and cloud computing to promote the fairness of judicial trial and execution and the efficiency of court management. Currently, there are problems in the construction of intelligent courts in practice, such as limited local pilot significance, weak data-based foundation, and closed loop circulation of judicial data, resulting in insufficient intelligence and difficulty in achieving intelligent application goals. The elimination of judicial significance by instrumental rationality, the weakening of judicial autonomy by intelligent management, the differentiation of judicial equality by intelligent application, and the threat of service outsourcing to judicial credibility are the jurisprudential dilemmas existing in intelligent courts. Adhering to the concept of people-oriented and technology-neutral and the pursuit of judicial fairness and justice is a rational attitude towards the intelligent court. The deep integration of information technology and trial execution plays an important role in ensuring judicial fairness and efficiency, and unifying judicial standards. For example, in the field of blockchain, the Supreme People's Court has built a "unified platform for the judicial blockchain of the People's Court", completing over 180 million pieces of data for online storage and fixed certificates.[6]

#### **4. Intelligent justice: a new path to achieve judicial justice**

The main purpose of deepening judicial openness is to make fairness and justice visible and to allow the people to participate in the administration of justice. The search for facts and laws must be visible, palpable and felt by the people. The Supreme People's Court has built four major platforms: the China Judgment Document Network, the China Trial Process Information Open Network, the China Court Trial Open Network, and the China Execution Information Open Network, to satisfy the people's right to know to the maximum extent. Through judicial openness, it is also conducive to exerting the educational, evaluation, guidance, and normative functions of adjudication, and promoting the core socialist values. In recent years, the Supreme People's Court has actively demonstrated to the international community the achievements of China's rule of law construction, held a series of major judicial and foreign affairs activities, told a good story of China's rule of law, and disseminated the voice of China's rule of law. The possible paths for intelligent justice to achieve judicial justice are developed in the following three aspects:

First, intelligent justice: the realization of judicial justice provides a new path.

Big data thinking is already changing the way the judicial field works, with one party to a lawsuit looking for evidence through the strong correlation between big data and blockchain technology, and the judicial field recognizing this type of evidence.[7] Especially the blockchain evidence advocated by the current criminal procedure jurisprudence scholars, in the judicial field, judicial justice "is the last barrier to maintain social justice, is the window reflecting social justice, is the soul and lifeline of the judiciary".[8] The development of the Internet, big data, artificial intelligence, blockchain and other technologies have outlined the prospect of wisdom for the judicial system and provided a new path for the realization of justice.

Second, Intelligent Justice: enhancing judicial credibility.

Intelligent court refers to the goal of ensuring judicial justice and efficiency and enhancing judicial credibility, fully using information technology such as the Internet, cloud computing, big data and artificial intelligence to promote the modernization of the trial system and trial capacity and to achieve highly intelligent operation and management of the work of the people's courts. Some scholars point out that intelligent justice and intelligent court are substantially equivalent concepts.[9] Intelligent justice and intelligent courts, which have the same objectives and technical means; However, at the subject level, the subject of intelligent justice, in addition to the courts, should also include public security organs, procuratorial organs and other judicial organs. The current reforms such as "intelligent prosecution" and "intelligent investigation" are also the product of the integration of scientific and technological innovations with judicial activities. From this, it can be seen that intelligent justice refers to the full use of the Internet, big data, cloud computing, artificial intelligence, blockchain and other information technologies by the public security judiciary to achieve justice and efficiency, in order to promote the informationization, intelligence and modernization of the judicial operation and management system. Judicial impartiality is the highest pursuit of justice, which requires both the judicial process to follow the due process of law and the outcome of justice to reflect the spirit of

fairness and justice.

Third, intelligent justice: the ultimate goal of justice is fairness

#### ***4.1 Procedural Fairness***

Judicial behavior is an activity of independent judgment in accordance with established rules and procedures, and procedures are necessary to achieve just results from this judgment process. If we want judicial activities to be free from the domination of arbitrariness, we can only bring judicial procedural activities into the track of fair procedures and exclude the interference of non-legal factors. Procedural fairness is, in some cases, the measuring stick for determining whether a case is substantively fair. Only by achieving procedural justice can the people feel just about a particular judicial act. Procedural justice is a standard of justice that is actionable and can be judged and achieved. As long as such standards are scientifically designed and reasonable, procedural justice should be achievable; and as long as the procedures are fair, then the results are usually just or should be considered just.

New initiatives such as live online court hearings, Internet courts, and smart courts allow us to see new models of criminal trials that are constantly emerging in the information technology network era. Through the live broadcast of the whole process on the Internet, network TV platform, WeChat platform and microblogging platform, on the one hand, the information held by the judiciary is effectively and publicly conveyed to the public, and on the other hand, the public gives a good feedback to this information, forming a benign two-way communication pattern, and eventually the public holds a positive evaluation of the trial process of the case.

The public's right to information, participation and supervision of criminal justice is not a new topic, and the development of the information society continues to broaden information dissemination channels and promote the openness and transparency of criminal justice. From the initial publication of court verdicts on the website to the live broadcast of court hearings through various channels today, the public's right to information and supervision has been increasingly and effectively safeguarded. The current situation of China's criminal justice activities and the social background, compared to other links, the trial of Bo Xilai case and the social phenomenon it triggered are important inspirations for re-understanding the relationship between China's criminal justice activities and public opinion in the information society.

#### ***4.2 Substantive justice***

Substantive justice, the essence of justice is equality. At the level of substantive justice, one of the important aspects of equality in the judicial field is the same sentence for the same case. Substantive justice is the most enthralling pursuit of the rule of law. Substantive justice connotes the determination of facts and the correct application of law by judicial officers in accordance with the law to ensure that the substantive rights and obligations of the parties are realized in a fair manner. For the determination of facts according to law, the emphasis is on the pursuit of legal truth, and the determination of facts that can only be proven by evidence as the basis for the decision. Based on the facts and the law, the guideline is the correct application of the law, which is the essence of the rule of law of substantive justice and the value of the socialist concept of the rule of law.

From the existing judicial practice, the Supreme People's Court has set up a relevant platform to realize the intelligence of legal data. For example, the "LawInfo" platform uses two main big data engines: Referee Profiling Big Data Engine and Same Case Intelligent Push Big Data Engine. Referee Profiling Big Data Engine's operating model is a multidimensional combination and analysis of the adjudication documents themselves, Same Case Intelligent Push big Data Engine, on the other hand, use the clustering analysis and intelligent sorting functions of big data, in order to achieve the comparison of legal facts, matching of legal relationships, verification of legal basis and reference of sentencing by judges. In which, Referee Profiling Big Data Engine firstly pushes legal knowledge and rules with the help of deductive logic; and later, match cases and summarize the corresponding rules by the alternate use of legal expertise service and case big data service. Under this logical structure, any element, can find its own position. Within the framework of the progressive knowledge tree of the Law Letter syllabus, the reference will be able to reach the required content by following the flow of the branches. Same Case Intelligent Push Big Data Engine's function is based on the function of Referee Profiling Big Data Engine's engine. After Referee Profiling Big Data Engine dissects the adjudicative instrument itself, Same Case Intelligent Push Big Data Engine calculates the statistics of affinity between individuals or variables based on the available data. According to some criteria, the differences

within the same class are small, while the differences between classes are large, and eventually the target individuals or variables are divided into several classes. In this way, the definition of "same case" and "same judgment" can be achieved.[10]

From the effectiveness of the engine's operation, after using the LawInfo system, judges can draw on the ideas of decisions already in force when exercising their discretion, and then work backwards to make their own views, thus making more just and fair decisions. It can be seen that the wisdom of justice in the field of the same case with the same sentence, there is a huge space to play. Therefore, I believe that: procedural justice does not guarantee the inevitable realization of substantive justice, but can largely prevent the occurrence of physical injustice. Judicial justice requires the achievement of substantive justice and procedural justice, both of which are indispensable.

## 5. Conclusion: The future outlook of intelligent justice

In the context of the "internet plus" era, the intelligent justice has its huge space to play. As far as justice is concerned, the normative effect generated by data retention and the efficiency property of the Internet itself are the goals that justice wanted to achieve in the former intelligent stage. However, intelligent justice also has its shortcomings. The inherent shortcomings of the Internet make it necessary to maintain the necessary prudence when integrating it with justice.[11] In the process of setting up the system, the consideration and handling of conflicts such as openness and secrecy, efficiency and fairness, intelligence and discretion will directly affect the depth and breadth of the functions that intelligent justice can play. "If you take the top one as a guideline, you can only get the medium one. Intelligent justice has constructed a beautiful "utopia" for the prospect of judicial development. The disorder in the implementation of the law is a painful period of integration between the new "Internet + intelligent justice" and the old judicial system.

## References

- [1] Hu M., "Big Data, Information Society and Criminal Justice Transformation," in *Research on the Modernization of the Rule of Law*, No. 3, 2017.
- [2] Yang Ting, "On the Transformation of China's Criminal Investigation Model in the Era of Big Data," in *Legal and Business Studies*, No. 2, 2018.
- [3] Xiao Minshu, "Tianjin Heping District Procuratorate Laboratory Makes Electronic Data "Speak"", in *Tianjin Political and Legal Daily*, January 8, 2019, p. 3
- [4] Chen Oufei, "The Construction and Development of Online Courts," in *People's Justice (Application)*, No. 13, 2016.
- [5] Xiong QiuHong, "Intelligent Court Construction Boosts Judicial System Reform," in *Guangming Daily*, Dec. 7, 2017, p. 15.
- [6] Lu Yue, "Over 180 million data deposited and fixed in judicial blockchain," *Daily Worker*, November 9, 2019, p. 3.
- [7] Wu Jun, *The Age of Intelligence: Big Data and the Intelligent Revolution Redefine the Future*, CITIC Publishing Group, 2017, p. 310.
- [8] Chen Guangzhong, *Criminal Procedure Law*, Beijing University Press, 2016 edition, pp. 12, 108.
- [9] Tang Weijian, "The "Intelligent Court" Makes Justice More Just and Efficient," *People's Tribune*, No. 4, 2017.
- [10] Feng Jiao and Hu Ming, "Intelligent justice: a new path to achieve judicial justice and its limitations," *Zhejiang Social Science*, No. 6, 2018.
- [11] Yu Zhigang and Li Yuanli, "Ideas for Sanctioning Data Crimes in the Era of Big Data," in *China Social Science*, Vol. 10, 2014.