The Risks and Regulation of Artificial Intelligence Applied to Criminal Procedure Fact-Finding

Chenfeng Tao[1] Shao Shao[2]

[1,2] *Hangzhou Normal University, Hangzhou, Zhejiang, China*
[2]*Corresponding author.*

ABSTRACTS

In the context of the construction of "intelligent courts" in China, judicial organs at all levels are actively developing and utilizing artificial intelligence products in the field of criminal justice. However, from a technical point of view, legal artificial intelligence has many difficulties in how to datafy facts, how to process data through algorithms and programs, and how to express the results in language output. The development of legal artificial intelligence is still in the stage of "weak artificial intelligence", and there are few regulations on the use of artificial intelligence at the legislative level. The use of artificial intelligence in fact-finding will inevitably lead to the erosion of the power of the legal fact-finder, may hollow out the trial system, and will challenge the prosecution, defense and trial tripartite structure in China's criminal procedure system. Therefore, measures should be taken to strengthen the top-level design to break the data barriers, improve the legal artificial intelligence compliance construction, cultivate composite talents in jurisprudence and computer science, and refine the algorithms and language models, etc., so as to improve and regulate the application of legal artificial intelligence in the field of fact-finding, and to build a hybrid human-machine fact-finding model.

Keywords: Fact-finding, Artificial intelligence, Criminal procedure, Algorithms, Regulation.

1. INTRODUCTION

Since the release of ChatGPT in 2022, generative AI has gained momentum, and the new wave of AI has had a profound impact on society and economy. At present, China's judicial organs are generally faced with the reality of the conflict of "too many cases and too few judges", if artificial intelligence can be applied to the field of judicial adjudication, it can effectively alleviate the work pressure of the judicial organs. Intelligent and digital judicial adjudication has become a development trend. The report of the 20th Party Congress focuses on the development trend of the information revolution and the trend of the times, makes a series of new assertions and new deployments and new requirements for the construction of a strong network state. [1] During the "14th Five-Year Plan" period, courts across the country will promote scientific and technological innovation through judicial services, promote the construction of "smart courts" to a higher level, vigorously build the People's Courts' Informatization Version 4.0, promote the modernization of the trial system and trial capacity, adhere to rule innovation, push profound changes in the trial mode, and strive to build a new model of Internet justice with Chinese characteristics that is the world's leading model.[2]

The trial is divided into two stages: the first is the determination of the facts and the second is the application of the law. This is a process of legal reasoning from "behavioral patterns" to "legal consequences". Factual determination is the premise and basis for the correct application of the law, if the factual determination is wrong, then the correct application of the law can not be talked about. Thus, factual findings are critical to the administration of justice. At present, China's judicial organs at all levels are actively developing and applying artificial intelligence products in the field of criminal justice, and the corresponding guiding policy documents have been issued, in which there is no lack of the practice of utilizing legal artificial intelligence to make factual determinations. However, the application of AI in the field of judicial adjudication will bring a series of technical and legal aspects of the problems and

challenges, the current theory and practice of the application of legal artificial intelligence risk is not yet clear, and its legislation and regulations are not yet perfect. Therefore, the authors focus on the application of artificial intelligence in the fact-finding aspect of criminal proceedings, and explore how to deal with the dilemma of the application of legal artificial intelligence in the field of fact-finding, so that the artificial intelligence can play a good role in the auxiliary role of the judicial referee this position.

2. CURRENT STATUS OF THE APPLICATION OF LEGAL ARTIFICIAL INTELLIGENCE IN THE FIELD OF CRIMINAL FACT-FINDING

Supreme People's Court of the PRC proposes to lead the construction of "intelligent courts" with artificial intelligence, and widely promote the whole process of intelligent assistance; the Supreme People's Procuratorate vigorously implements the construction of "intelligent prosecution", forming a scientific and technological support system; Central People's Government and Ministry of Justice have similar guidelines for building artificial intelligence and information technology.[1] The application of AI by various local jurisdictions is also on the rise. For example, the Beijing Court's "Judge Rui" Intelligent Research and Judgment System, the Shanghai Court's "206" Criminal Intelligent Case Handling System, and the Suzhou Court's "Suzhou Model of Intelligent Trial", etc.[3] Procuratorial organs at all levels nationwide have launched more than two hundred intelligent prosecution applications.[4] In general, regarding the role positioning of legal AI, the mainstream view of domestic and foreign experts and scholars is that legal AI should be auxiliary rather than

aiming to replace natural human judges.[2] Legal AI is complementary in several ways:

The first is the electronic and data-enabled nature of evidence. Through the deep neural network model and graphic recognition (OCR) technical means, all kinds of recordings, paper-based pictures, forms, printed text in documents, handwritten text, signatures, fingerprints and other non-electronic materials are converted into electronic data, which facilitates the access of judicial staff to the whole case evidence as well as the further processing of information. At present, more than one hundred courts nationwide have applied the Smart Court Trial System developed by KDDI. The court hearing voice recognition platform of Suzhou Central Court, for example, can automatically convert voice into text, and automatically distinguish the court hearing speech object and speech content and recorded in the court hearing transcript, the judge, the parties and other litigation participants can see the transcribed text in real time, and the clerk only needs to carry out a small amount of modification to realize the complete record of the court hearing. After comparative testing, the correct speech recognition rate of Mandarin with dialect accent reaches 90%, the court hearing time is shortened by 20%-30% on average, the complex court hearing time is shortened by more than 50%, and the completeness of the court hearing transcript is close to 100%.[5]

Second, it is used for the prediction and supervision of similar fact-finding results. Prediction refers to the legal artificial intelligence to establish some fact-finding models by automatically extracting features and summarizing the results of fact-finding in a large number of similar cases, and to push forward the same kind of fact-finding in other cases similar to this case for the judge's reference according to the key words in the case materials provided. For example, the Beijing Court's "Judge Rui" system, which relies on and taps into the data resources of the unified trial information resource database and legal rules database of the three levels of courts in Beijing, is able to push out information such as case analysis, legal provisions, similar cases, and judgment references for judges.[6] Supervision means that when the system detects that a judge has made a determination that may fall under the category of

---

1. In the "Important Tasks" section of the New Generation Artificial Intelligence Development Plan, the State Council proposes the establishment of "Smart Courts", i.e., "building a smart court data platform integrating trial, personnel, data application, judicial disclosure and dynamic monitoring. The State Council proposed the establishment of "intelligent courts", i.e., "building an intelligent court data platform integrating trial, personnel, data application, judicial disclosure and dynamic monitoring, promoting the application of artificial intelligence in evidence collection, case analysis, and the reading and analysis of legal documents, and realizing the intelligence of the court's trial system and trial capacity. As well as the Opinions on Further Strengthening the Construction of Judicial Administration Informatization issued by the Ministry of Justice on December 30, 2016

2. As Nikolaos Aletras, head of AI legal systems in the Department of Computer Science at University College London, says: "We don't think AI will replace judges or lawyers, but we do think they are useful in deriving definitive results in terms of rapid pattern recognition in cases."

"different judgments in the same case", the system will issue an alert.

The third is to standardize the evidentiary standards. Legal AI can summarize the laws, judicial interpretations and the evidence norms in the trial experience of courts around the world, and clarify the collection procedures, formal elements, content elements and inadmissible circumstances of the checking standards of various types of evidence. For example, Shanghai's "206" Intelligent Auxiliary Case Handling System for Criminal Cases, after uploading the case file of a case in the system, it can immediately display the list of missing materials [7], it has a positive effect on the integrity of evidence collection and due process.

3. THE DOUBLE DILEMMA OF APPLYING LEGAL ARTIFICIAL INTELLIGENCE TO CRIMINAL FACT-FINDING

3.1 Technical Challenges in the Application of Legal Artificial Intelligence to Criminal Fact-finding

Currently, the global development of legal AI technology is in the "weak AI" stage. This phase is characterized by "There is as much intelligence as there is labor."[3][p2], there are problems such as unstable data recognition rates, too few samples, and inaccurate analysis[8]. Each of the three main steps (i.e., data input, model construction, and result output) in the use of AI for fact finding can be analyzed separately.

3.1.1 The Dilemma of Factual Datamining

A fact is that part of existence which becomes the object of the subject's cognizance and is grasped by his senses and mind, and is thus real, empirical, and representable. Wigmore says: "A fact is any act or state of affairs that exists or at present." Only what has happened and is happening is a fact; what will happen in the future is only a possibility.[9]

The facts to be determined in criminal proceedings are that have already occurred. What happened in the past cannot be reproduced, and the judge is not a witness to the facts of the past and cannot experience what happened in the past. Modern justice adheres to the principle of adjudication by evidence, and the Criminal Procedure Law stipulates that the facts of a case

must be determined on the basis of evidence. [3] When a case occurs, certain traces or evidence are always left. Evidence is like a "refraction" of the facts of the case "mirror", the judge through the evidence to determine the facts of this process is Professor Zhang Baosheng called "the moon in the water, flowers in the mirror".[10] What a judge can do is to reconstruct the facts of the past by drawing inferences from the available evidence. Evidence is a prerequisite for fact finding, without evidence it is impossible to achieve fact finding, therefore fact datatization first needs evidence datatization, evidence datatatization is to transform the physical evidence material into digital information that can be analyzed.

Evidence is rich in probative information. For example, "a bloodied hammer" contains elements such as the victim's blood, the suspect's fingerprints, and the fact that the suspect struck the victim's head with the hammer. A single piece of evidence can also be corroborated with other evidence, such as the shape of the hammer head matching the traces of the wound on the victim's head. An evidence contains which proof information, can be corroborated with which evidence, with what kind of facts to be proved associated with subjective, legal artificial intelligence analysis and perception of evidential information ability currently can not reach the same level as humans, can not be evidence contained in the evidence of the proof information to fully identify, it is difficult to determine which belongs to the key information. In the process of digitizing evidence, it is inevitable that some information will be overlooked, which may lead to the absence of key evidentiary information.

3.1.2 Data Processing Challenges

After the data has been informally entered, the next step is how to process it and derive compelling truths.

Fact-finding is a process of logical deduction from evidence to facts to be proved to inferred facts. The process of proving facts by evidence is not realized by a set of rules formulated in advance by the legislator, but only on the basis of what Sayer calls "logic and experience"[11]. Experience is a high-level model composed of memories, impressions, stories, proverbs, habits and other

---

3. Article 69 of the Interpretation of the Supreme People's Court on the Application of the Criminal Procedure Law of the People's Republic of China.

information, such as "it usually takes 30 minutes to drive from A to B", "the promise of borrowing money that is too high than the same period of the bank interest rate may be suspected of contract fraud", etc., is extremely fragmented and complex, it is almost impossible to make a complete list of these. One of the reasons for the adoption of jury trials in the West is that the jury, although not professionally trained, has a similar empathetic decision-making mechanism between people. In fact-finding, it is not only the result of the finding that is important; the essence of fact-finding is the reasoning process that leads to the conclusion. Modern civil law countries have established the principle of openness of heart evidence, which requires judges to give a reasoned account of the process and reasons for their findings of fact in their sentencing opinions.[12] Historically, it is the process of reasoning about internal value judgments by many judges that has advanced the rule of law and created classic cases.

Artificial intelligence relies on algorithms to process data. Algorithms are problem-solving mechanisms that convert inputs into outputs through formulaic calculations. It is true that algorithms can use complex and sophisticated formulas to represent complex correlations between values, but their essence is still to establish a reasoning model through some kind of probability. This probabilistic reasoning is different from the thinking mode of the human brain, even if the same conclusion can be reached, the path to the conclusion is not the same. Artificial intelligence "knows what it is", but "do not know why". For example, between the statement of suspect A that "A suspected that B was cheating on her husband" and the elemental fact that "A killed B", it is often natural to assume that there is a correlation. However, AI analyzes a large number of similar cases and discoveries that when "suspicion of cheating" increases, the probability of "killing" also increases, and concludes that there is a strain between the two similar keywords "cheating" and "killing".

With the development of digital technology, much of the variety of information on human activities has become electronic, judicial adjudication is no exception. The four major platforms, including the China Open Trial Process Network, the China Open Court Hearings Network, the China Judicial Instruments Network and the China Enforcement Information Network, as well as a series of local online platforms used for judicial disclosure, such as the Zhejiang Open

Court Network, the Jiangsu Court Network and the Beijing Court Trial Information Network, generated tens of millions of tons of judicial data.[13] Artificial intelligence has far more arithmetic power than the human brain in areas such as retrieval. It can make up for the judge's lack of processing of huge amounts of information. Massive electronic information for legal artificial intelligence also provides a source of data, artificial intelligence is mainly extracted from the data processing "deep learning", but a large number of instruments to analyze the evidence, the argumentation process is relatively abbreviated, and the existence of different judicial organs of the data barrier phenomenon leads to the integrity of the data samples there are great defects, so that the quality of the algorithm has been seriously affected.

In dealing with complex cases, human beings, after receiving a pile of evidence that they don't know where to start, can "stay awake, start from experience and common sense, take one step at a time", and by comparing, revising, coordinating, and arranging the position of events in the timeline, go back and forth between the evidence, the legal norms, and the facts (including the social environment, life experience, and common sense), and try to form a version of the story that is closest to the truth. Back and forth between the evidence one after another for cognition and correlation, and strive to form a version of the story that is closest to the truth of the inner conviction, the scattered and diversified local fragments gradually integrated into a logical and coherent whole, and ultimately to achieve the Criminal Procedure Law, Article 55, "the facts are clearly identified, and the evidence is indeed sufficient"[4]. And when the complexity of the evidence exceeds the scope of the design of the AI algorithm, the AI system can only be declared inoperative.

3.1.3 Difficulties in Exporting Identified Results

Facts have linguistic properties that depend on human experience and statements. This is manifested in the fact that facts require human sensory perception and empirical thinking judgment

---

4. Article 55, paragraph 2, of the Criminal Procedure Law of the People's Republic of China: "The following conditions shall be met if the evidence is true and sufficient: (a) the facts on which the conviction and sentence are based are proved by evidence; (b) the evidence on which the conviction is based has been verified by the legal procedures; and (c) by synthesizing the evidence of the whole case, the facts found have been ruled out beyond reasonable doubt."

and are expressed in language. Wittgenstein said, "The boundaries of my language mean the boundaries of my world."[14] After inputting information and calculating and reasoning, the final output of the AI's determination is essentially a numerical value or a set of values. In order to make the conclusion understandable to humans, legal AI needs to transform the numerical values into the form of language and text. At this stage, the artificial intelligence can solve the problem of text conversion, but it is not yet possible to realize the meaning of the language and text and accurate arrangement and combination of processing and application, this transformation is only a result of the operation of the program, and it is difficult to have the same intentional function as human beings. Language is the carrier of information, the human language and writing system has richness and complexity, people still use language to state facts in a way that does not make sense, such as exaggerating, minimizing, or even distorting the facts, AI in the output of factual findings is inevitable that the inaccuracy of the language used.

3.2 Difficulties of Legality in the Application of Legal Artificial Intelligence to Criminal Fact-finding

The application of legal artificial intelligence not only needs to be feasible at the technical level, but also needs to have legality and legitimacy at the legal level. Without legal basis, artificial intelligence technology is more advanced, can not be used in factual determination. At present, China's judicial organs at all levels vigorously promote the application of legal artificial intelligence in criminal trials, but there are few legal regulations on the application of artificial intelligence. In the world, there has been a controversy about the constitutionality of artificial intelligence applied to criminal justice, such as the United States of Wisconsin v. Eric Loomis [15]. Legal AI creates new tools for judicial adjudication, while also challenging established judicial ethics and concepts of justice.

First, the application of legal AI to criminal fact-finding will erode the statutory right to trial. According to the Criminal Procedure Law, trial power is exercised by the people's courts, and the statutory fact-finders are judges and people's assessors[16]. In previous criminal proceedings, there was often a preconceived notion of the defendant's or suspect's guilt at the investigation or prosecution stage before the trial, leading to the

trial being a mere formality. At present, China is trying to build a trial-centered reform of the litigation system, which is "litigation evidence is presented in court, the facts of the case are ascertained in court, the pleadings are delivered in court, and the outcome of the decision is formed in court", and is trying to promote the materialization of the court trial. In court hearings, legal artificial intelligence has a comparative advantage in terms of efficiency in its functions of guiding decisions and verifying evidence, and under the pressure of the number of cases handled and the time limit for trials, judges will inevitably form an inertia or even inertia in their reliance on legal artificial intelligence, which to a certain extent will give rise to the phenomenon of decision-making concessions.

Second, legal AI may challenge the existing criminal trial system. The important value of the existence of the trial level system lies in the opportunity for parties to obtain relief by granting them the right to appeal and absorbing the defendant's grievances with due process. In China, second instance trials are often not held directly in court, but rather in written form, such as through the reading of documents. However, if the courts of first and second instance use the same legal artifacts to deal with the same case file materials, it is impossible for new factual findings to emerge, rendering the appeal system null and void, which will undoubtedly weaken the significance and value of the trial level system.[16]

Once again, our statutory criminal procedure model is a tripartite structure consisting of prosecution, defense and trial. The prosecution, the defence and the trial are all subjects of courtroom awareness, observing issues, analyzing evidence and determining facts from different perspectives and positions. Proof of evidence is the activity of both the prosecution and the defense, i.e., "confirming or refuting a claimed fact with evidence". Authentication is the evaluation of evidence by the finder of fact (judges and people's jurors) as a basis for a case. Due to the conflicting litigation purposes of the prosecution and the defense, from different or even the same point of view may come up with "two or even a variety of factual claims", the prosecution and the defense debates on the exchange of views to a certain extent may make the other side realize the limitations of their own views or even mistakes. Therefore, from a general point of view, this three-party prosecution, defense and trial litigation mode helps the fact-finder to "listen to both sides", and has a positive effect on the accurate determination of the facts.

The legal artificial intelligence does not reach its fact-finding conclusions through the trial mode described above, but rather on the basis of established algorithms, which loses the advantage of the trial in which the prosecution and the defence discover the truth from different perspectives.

In addition, the functions of public security, procuratorates and courts in criminal cases are "division of labor, mutual coordination and mutual restraint"; if the three organs use the same legal intelligence, the output of factual findings will be the same, which will strengthen the "mutual coordination" function, and there is no way to talk about the "mutual restraint" mechanism. If the three organs use the same legal AI, then the output of factual findings will be the same, which will strengthen the function of "mutual coordination", and the mechanism of "mutual constraints" will be out of question. If the three organs use different legal artificial intelligence, the results may be different, the use of which factual findings will affect the distribution of power and discourse between the judicial organs. If the judicial staff want to exclude a certain finding, they may fall into "Collingridge's dilemma" [5] [17], the so-called "algorithmic black box" problem: people usually think that algorithms will be more accurate, neutral, and consistent than other algorithms, and they will be more accurate than other algorithms. It is commonly believed that algorithms do better than humans in terms of accuracy, neutrality, and consistency, but algorithms are written by programmers, and some personal values and wills will be mixed into the programming, leading to the phenomenon of "algorithmic discrimination". Because the code and algorithms designed by the developers and designers of legal artificial intelligence systems are protected by trade secrets or intellectual property rights, the intermediate analysis process of legal artificial intelligence to make decisions is not visible to the user. Machines are not God, and their findings can be wrong when there are data supply errors, algorithmic construction deviations, etc. It is difficult for judicial staff to find out why "the machine made a mistake" because of the lack of access to the mechanics of how artificial intelligence works.

4. SPECIFIC PATHS FOR THE APPLICATION OF LEGAL ARTIFICIAL INTELLIGENCE IN CRIMINAL FACT-FINDING

4.1 Technical Aspects

4.1.1 Eliminating Judicial Data Deficiencies

Some judicial resources have already been data-enabled, but data sharing and interoperability between different authorities is not yet perfect, and artificial intelligence often faces the problem of insufficient data samples and low quality when learning in depth. In order to avoid such a situation, the following means can be adopted: first, strengthening the top-level design, breaking down the information barriers between different regions and departments, and promoting data sharing and interoperability; second, increasing the sources of data. One of the purposes of the evidence law is to encourage the adoption of evidence, the "any tendency" standard established by Rule 401 of the United States Federal Rules of Evidence [6] may be drawn upon [18], as long as the evidence has "any tendency", the evidence will be allowed to enter the database; third is the database in the Third, the data information in the database is constantly supplemented and updated and improved, especially the theoretical evidence part of the factual determination, so as to provide real, comprehensive and complete judicial data for the deep learning of artificial intelligence. At the same time, it is necessary to focus on strengthening targeted and hierarchical security protection measures for judicial data. The establishment of dedicated judicial network lines physically isolated from the Internet, the deployment of firewalls and anti-virus software, and the establishment of a monitoring mechanism for the use of judicial data should be adopted to avoid information leakage due to virus attacks or theft by hackers [19], so as to maintain the information security of judicial databases.

---

5. The Collingridge Dilemma demonstrates the information and capacity dilemma that humans face in regulating technology, where it is possible to control it but not know how, due to the difficulty of recognizing its harmful consequences. When undesired outcomes occur, it is difficult to correct them.

---

6. Evidence is relevant if: (a) it has any tendency to make the existence of a fact more likely or less likely than it would be in the absence of the evidence; and (b) it is material to the determination of the action.

4.1.2 Hierarchical Algorithmic Modeling with Elemental Factualism

The elemental fact theory is to further subdivide the case according to law and fact, entity and procedure, etc., to realize the matching from case type similarity to element similarity.[20] For example, the artificial intelligence algorithm model is constructed from the elements of substantive law, evidence eligibility conditions and probative power, respectively. For complex cases, the facts can be categorized in layers and types, and the facts of the case can be decomposed into multiple types, such as essential facts, indirect facts, and auxiliary facts. For example, for witness interrogation transcripts, legal artificial intelligence can determine whether to comply with the statutory procedural requirements of the interrogation; for the list of evidence listed in the book evidence, physical evidence and other specific evidence can be identified whether it has been attached to the case, etc.. In the case of complexity, evidence, even if the legal artificial intelligence can only be engaged in this basic auxiliary work on behalf of the judge to handle the case also plays a great role in helping.

4.1.3 Cultivating Composite Talents at the Intersection of Law and Computer Science

The judiciary must conduct criminal proceedings "on the basis of facts and in accordance with the law"[7]. Accordingly, judicial personnel need to have knowledge of evidence science and legal science. And China's higher education institutions that offer evidence science courses are still relatively few. The arrangement of the curriculum structure of the law school is also one of the core competitiveness of the law school, from the perspective of improving the knowledge structure of legal talents, it is necessary to accelerate the updating of the curriculum structure of legal education, and people can open more courses on evidence law and the intersection of law and computer disciplines, such as digital law and artificial intelligence law, to cultivate composite talents in law and computer disciplines, so that the judges, prosecutors, lawyers, and other legal practitioners that people cultivate can master the knowledge about artificial intelligence law. practitioners can master knowledge about AI law, empower legal AI construction with legal

professional intelligence, and strive to realize the anthropomorphism of legal AI algorithms and the accuracy of output language expression. For example, East China University of Political Science and Law has recently reorganized the China Rule of Law Strategic Research Institute as a cultivation and incubation base for emerging interdisciplinary disciplines, and digital jurisprudence is one of the emerging interdisciplinary disciplines that it focuses on cultivating. Universities and colleges can jointly cultivate composite rule of law talents by cooperating with AI companies and practical departments such as law inspectors, to serve the construction of the rule of law in the context of the AI era.

4.2 Legitimacy dimension

4.2.1 Providing a Legal Basis: Strengthening Legal AI Compliance Regulations

Compliance construction for AI applications can be carried out through the introduction of an AI law, technical specifications for AI-assisted judicial adjudication, normative documents to encourage technological development, and judicial interpretations to protect the security of relevant private data, in order to clearly regulate and constrain the use of legal AI by judicial personnel. The flexible regulation model of the United States can be borrowed, i.e., to incentivize the innovative development of AI as the value orientation, and to build a coordinated mechanism of ex post discipline and ex ante constraints. The results of the determination made by the legal artificial intelligence can only have the authority of "suggestion" for the judge, no matter whether it is correct or not and whether it is adopted or not, the judge needs to carry out a strict examination and bear judicial responsibility. The U.S. federal government's 2020 Guide to the Regulation of Artificial Intelligence Applications proposes to build an elastic and flexible regulatory approach [21], assess the impact of potential regulation on AI innovation and development, continue to promote technological innovation and progress, and set up different regulatory requirements oriented to domain segmentation and risk prevention management. In addition, reference can be made to China's practice of establishing a tiered regulatory and approval process for AI applications in medical and other fields, in response to special factors in the

---

7. Article 6 of the Criminal Procedure Law of the People's Republic of China.

field.[8] At the same time, it can be required by law or in the form of an agreement that the technology company moderately publicize the algorithm or source code to enhance the interpretability of the legal artificial intelligence fact finding process for the judge's reference judgment.

4.2.2 Risk Management: Limiting the Use of Legal AI

First, legal AI can be applied to "batch cases", i.e., those recurring facts of the case for which there is little or no individualized treatment. This type of case processing does not need to fully reflect the dynamism of judicial activity. For example, in the crime of illegally absorbing public deposits, the number of victims may be in the tens of thousands, which requires repeated similar processing of the basic information of the victims, the amount of losses and other factual circumstances. Confirmation and return of stolen goods by judges or bank staff one by one through traditional means will theoretically take years, which is far beyond the cognitive and acceptance range of ordinary people. Legal artificial intelligence can be used to replace judges in mechanical, replaceable work such as this, so that judges can intervene in a timely manner even when the facts of a case present a relatively special situation.

Secondly, the application of legal AI in appeal cases should be prohibited. This is because on the one hand, China's implementation of the system of two trials, the second trial as usually the last procedure of the litigation, the number of appeal cases is relatively small and most of the cases are complex, more need to be treated carefully by the judge; on the other hand, the legal artificial intelligence has been applied in the first instance procedures, and the defendant filed an appeal means that the factual findings of the first trial or the results of the application of the law is not convinced, at this time, the application of the legal artificial intelligence in the second trial to reach the same results will not help. Artificial Intelligence to arrive at the same determination does not help, but requires the judge to give full play to the role of its

free conscience, and to make full use of the adjudication of reasoning and due process to achieve the absorption of the dissatisfaction of the parties, to ensure that individual cases of justice and other procedural and substantive values.

Again, AI can be piloted for fact finding in summary cases. This is because the People's Republic of China Criminal Procedure Law, article 214 provides that the application of summary procedures to hear the case of the formalization of the standard for "the case of the facts are clear, the evidence is indeed sufficient," and in practice the application of summary procedures in criminal cases accounted for as much as 30% of the total number of cases. [9] The scope of application of simplified cases in criminal cases is large, and the situation of cases heard under simplified procedures is more suitable for the operation of legal AI. "Complexity and simplicity of streaming" is the judicial practice in China in the face of "more cases, fewer people" under the circumstances of the judges to refine the wisdom.

4.2.3 Not Forgetting the Beginning: Adherence to a Human-centered Philosophy

In applying legal artificial intelligence to the process of fact-finding, judicial power is in fact indirectly exercised by the artificial intelligence, so it must be made clear what the jurisprudential basis for doing so is. The purpose of human beings using legal artificial intelligence is to improve efficiency and make up for the limitations of human beings themselves, not to create an alienated subject above human beings to the detriment of human beings' own interests. Therefore, should be in the artificial intelligence algorithm model design level to leave enough space for human decision-making, to give full play to the judicial staff in the judicial activities of the independence and subjectivity of the role of human beings to guide the use of empathy, a sense of justice, intuition and imagination, and other human beings are good at the ability of the machine's determination of the facts of the step of the bold questioning and reasonable evidence. The

---

8. "On February 14, 2017, the General Office of the National Health and Family Planning Commission issued the "Specification for the Management of Artificial Intelligence-Assisted Diagnostic Technology (2017 Edition)" which clearly stipulates that AI-assisted diagnostic technology is an auxiliary diagnostic and clinical decision support system, and cannot be used as a final clinical diagnosis, but only as an auxiliary diagnosis and reference for clinical purposes, and that the final diagnosis must be made by a qualified clinician determine."

9. By checking the China Judicial Instruments Network, from January 1, 2020 to November 6, 2023, courts nationwide made public 1,323,793 criminal judgments, of which 4,865 were from Zhejiang Province, 65,459 were from Jiangsu Province, and 36,277 were from Shanghai Municipality; 500,624 were subject to summary procedures, of which 541 were from Zhejiang Province, 26,664 were from Jiangsu Province, and 18,075 were from Shanghai Municipality. Date of access November 6, 2023.

fact-finding conclusions reached by legal artificial intelligence shall not be used as the basis for a decision without human participation or recognition. The erosion of human power by "intellectualism" and "dataism" should be avoided. The participation or endorsement of judges in the process may explain why the factual findings made by legal AI are so convincing.

5. CONCLUSION

Scientific and technological progress will promote changes in the social institutions, and the judicial proof method has experienced two major transformations from divine to human sentence and from human to evidence sentence [22]. The introduction of artificial intelligence into the field of fact finding is of far-reaching significance for improving judicial efficiency and standardizing judicial procedures. Artificial intelligence has a comparative advantage over natural human judges when dealing with some bulk complex cases, such as writing formatted court records and legal documents. The processing of digital information by artificial intelligence can make the fact-finding process procedural and definitive.

In the context of the construction of China's intelligent courts, artificial intelligence has been introduced into judicial adjudication with the support of political authority. In fact, whether people are willing to accept it or not, legal artificial intelligence as a judge's adjudication aids, has become a judicial power "sharer", to a certain extent, involved in the determination of facts. However, the application of legal artificial intelligence did not change the traditional "factual determination - legal application" judicial decision-making mode, legal artificial intelligence in the factual determination of the role should be auxiliary, to adhere to the main position of human judges. Legal artificial intelligence is still difficult to replace the human brain to complete the fact-finding reasoning process. It can distinguish between the objective, standardized, process-oriented facts of the case and the subjectivity, flexibility, elasticity of the case facts of the stronger space, will be suitable for artificial intelligence to deal with the work of artificial intelligence in due course to give the burden of the artificial intelligence, the judge from the many redundant, mechanical repetition of trivia to liberate, and optimize the allocation of judicial resources. Uncertainty of the facts of the determination of the work is still carried out by the judge. The formation

of a "complicated and simple streaming" of the judge independently exercise the right to trial and artificial intelligence to participate in the trial of human-machine hybrid trial mode. It can save a large amount of judicial resources, and is conducive to judges concentrating their efforts on a few difficult and complex cases to make more careful deliberations and decisions that are in line with human values and interests.

REFERENCES

[1] Zhuang Rongwen, "In-depth study, publicity and implementation of the spirit of the twentieth CPC National Congress Endeavoring to open a new era of network power building a new situation", in People's Republic of China National Internet Information Office Official Website, January 20, 2023, http://www.cac.gov.cn/2023-01/20/c_1675849957312140.htm.

[2] Zhou Qiang: "Scientific and Technological Innovation Drives the Construction of Intelligent Courts and Judicial Service Guarantees Scientific and Technological Innovation - Speech at the Forum on the Frontiers of Science and Technology (excerpts)", in People's Court Website, May 16, 2021, https://www.court.gov.cn/jianshe/xiangqing/302421.html.

[3] Zuo Weimin, "Some Thoughts on the Prospects of Legal Artificial Intelligence Use in China," in Tsinghua Law, No. 2, 2018.

[4] Jin Honghao, Introduction to Intelligent Prosecution - The Scientific and Technological Wisdom of Procuratorial Legal Supervision, China Procuratorate Press, 2018 edition, p. 2.

[5] Ding Guofeng, "Jiangsu's 'Smart Court' Construction Injects New Momentum into Modernization of Judicial Capacity," in Legal Daily, March 20, 2017, p. 1.

[6] Cao Yajing, "Building a Modern Information Bridge to Promote the Construction of "Smart Courts"", in People's Court Daily, December 15, 2016, p. 4.

[7] "Uncovering '206': a picture of AI in the future of courts," in Sina.com, July 11, 2017, https://news.sina.com.cn/c/2017-07-11/doc-ifyhweua4759687.shtml.

[8] Yang Min, "Research Report on Shanghai's Intelligent Auxiliary Case Handling System for Criminal Cases," in Rule of Law Blue Book: China's Court Informatization Development Report No. 2 (2018), edited by Li Lin, Tian He, and others, Social Science Literature Publishing House, 2018 edition, p. 198.

[9] Zhang Baosheng, "Facts, Evidence and Factual Findings," in Chinese Social Sciences, No. 8, 2017.

[10] Zhang Baosheng, Jurisprudence of Evidence, China University of Political Science and Law Press, 2009 edition, pp. 15-16.

[11] Ronald J. Allen et al: The Law of Evidence: Texts, Issues and Cases, translated by Zhang Baosheng, Wang Jinxi et al, Higher Education Press, 2006 edition, pp. 151-152.

[12] Mirgian R. Damasca, "Free Evidence of the Heart and the Challenges it Faces", translated by Wu Hongyao and Wei Xiaona, in Evidence System in the Perspective of Comparative Law, People's Public Security University of China Press, 2006 edition, p. 214.

[13] Zheng Ge, "Between Law and Technology - Intelligent Courts and the Future of Justice," in China Social Science Evaluation, No. 1, 2021.

[14] [Austrian] Wittgenstein, A Treatise on the Philosophy of Logic, translated by Guo Ying, Commercial Press, 1962 edition, pp. 22, 79, 97.

[15] State v. Loomis, 881 N.W.2d, 761.

[16] Li Xunhu, "Inclusive Regulation of Artificial Intelligence in Criminal Justice," in Chinese Social Sciences, No. 2, 2021.

[17] David Collingridge, The Social Control of Technology, London: Frances Printer, 1980, p. 19

[18] Explanation of the United States Federal Rules of Evidence (2011 Remodeling Edition), China Law Press, 2012 edition, p. 56.

[19] Liu Yanhong, "Practical Application and Prospect of Artificial Intelligence Technology in the Construction of Intelligent Courts," in Comparative Law Research, No. 1, 2022.

[20] Gao Xiang, "Auxiliary Decision-Making Model for Intelligent Justice," in Journal of East China University of Political Science and Law, No. 1, 2021.

[21] Shi Fenglin and Zhang Zhiyuan, "On the Public Law Regime of Artificial Intelligence: U.S. and European Models and China's Path," in Theory Monthly, No. 8, 2023.

[22] He Jiahong, Judicial Proof Methods and Presumptive Principles, Law Press 2018, p. 36.