



The Theoretical Analysis and Implementation Path of Artificial Intelligence Embedded in Civil and Commercial Arbitration

Chaojie Ma*

College of Humanities and Law, South China Agricultural University, Guangzhou 510642, China

*Corresponding author: Chaojie Ma, E-mail: 1793094137@qq.com.

Abstract. With the rapid development of artificial intelligence, its embedding in all aspects of civil and commercial arbitration has become an inevitable trend. It is found that artificial intelligence can improve the efficiency, economy and impartiality of arbitral commissions and arbitrators' decisions. However, the application of artificial intelligence in commercial arbitration still faces many difficulties: first, there is no emotional judgment and cultural gene; second, its abuse will undermine the superiority of the arbitration system and weaken the dominant position of arbitrators. Third, there is a large gap in legislative provisions, which makes the technical function of artificial intelligence unable to be transformed into the institutional effectiveness of civil and commercial arbitration. Therefore, we should scientifically plan the perfect path of artificial intelligence in civil and commercial arbitration, foster strengths and circumvent weaknesses, and release instrumental value. Specifically, we should formulate a detailed development path for the application of artificial intelligence in civil and commercial arbitration from four aspects: protecting the basic rights of the parties, strengthening the training of arbitrators, and strengthening the legislative research of artificial intelligence arbitration, so as to realize the deep coupling and mutual benefit of artificial intelligence and commercial arbitration.

Keywords: artificial intelligence, civil and commercial arbitration, ethical value, arbitrator

1 Introduction

At present, the rapid development of artificial intelligence has accelerated the digital upgrading of the legal field, which is unprecedentedly affecting the process of building the rule of law in China. Arbitration, as one of the important ways for people to resolve disputes, will inevitably be impacted. On the one hand, artificial intelligence technology can greatly improve the efficiency of arbitration, reduce the waste of judicial resources, and accelerate the integration of China's arbitration with international standards. On the other hand, the spread of artificial intelligence technology has caused great controversy, and the traditional ethical and moral concepts have been impacted.

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There is no doubt that arbitration is a suitable dispute settlement mechanism, and civil and commercial arbitration cases account for the largest proportion in the field of arbitration. How to resolve the contradiction of artificial intelligence in the field of civil and commercial arbitration is the focus of the moment.

2 The Current Situation of Artificial Intelligence Embedded in Civil and Commercial Arbitration

Nowadays, under the background of the rapid development of artificial intelligence at home and abroad, the trend of artificial intelligence being used in civil and commercial arbitration is unstoppable. In terms of system design, the " Interim Measures for the Management of Generative Artificial Intelligence Services " issued and implemented by the National Network Information Office and seven ministries and commissions has become the first legal regulation on generative artificial intelligence in China. In 2019, the General Office of the Central Committee of the Communist Party of China issued " Several Opinions on Improving the Arbitration System and Improving the Credibility of Arbitration, " and clearly put forward the requirement of " studying and exploring intelligent arbitration. " In 2021, the Ministry of Justice issued a notice on the issuance of the " National Public Legal Service System Construction Plan (2021-2025), " which proposed to promote " smart legal services "; The trend of artificial intelligence embedded in arbitration is unstoppable. It will gradually take over some functions of arbitration practitioners and become a new normal of arbitration reform. In terms of practical application, the Guangzhou Arbitration Commission issued the world 's first intelligent robot ' Yun Xiao Zhong ', which handed over the repetitive work in the arbitration procedure to artificial intelligence. It can grasp the details of case information and electronic service documents in real time, and realize the arbitration process 'handing over as soon as possible ', the extraterritorial law ' finding out as soon as possible ', and the arbitration case ' trial as soon as possible ', which greatly improves the efficiency of civil and commercial arbitration¹;In terms of investigation and research, BRYAN CAVE LEIGHTON PAISNER released the "2023 International Arbitration Investigation Report: Artificial Intelligence in International Arbitration " (hereinafter referred to as the " Report ") to investigate many issues related to arbitration and artificial intelligence. The ' report ' shows that the respondents ' application of artificial intelligence mainly focuses on legal retrieval, legal document drafting, summary generation and non-legal document drafting. The ' report ' also shows that more than 95 % of respondents said they understood the existence of AI-related risks, and 88 % of respondents worried about AI security issues and confidentiality issues. However, the vast majority of respondents have a positive attitude towards the prospects and development of artificial intelligence. [1] In summary, although artificial intelligence still has certain risks in the field of civil and commercial arbitration, if the existing technical problems and ethical dilemmas can be successfully overcome, the

¹ https://www.gz.gov.cn/zwgk/fzzfjs/cxld/content/mpost_9189347.html, visited on May 11, 2024

application prospect and development potential of artificial intelligence in the field of civil and commercial arbitration will be very optimistic.

3 Research on The Existing Problems of Artificial Intelligence Embedded in Civil and Commercial Arbitration

3.1 Ethical Value: Artificial Intelligence has no Emotional Judgment and Cultural Gene

First of all, although artificial intelligence can complete most of the mechanical work based on massive data and algorithm models, it cannot replace the real emotional expression of human beings, understand the original intention of legislation, and accurately apply the law. The validity of the arbitration agreement is based on three basic conditions: arbitrability, a clear place of arbitration, and the true meaning of both parties. The first two are easy to judge, but whether the meaning is true or not is an emotional judgment. Only human beings can clarify the deep meaning implied behind the text through their conscious processing, because value judgment is difficult to follow a fixed formula, and it is difficult to be accurately structured and algorithmized. Take the case of Yihai International Co., Ltd. (hereinafter referred to as Yihai Company) applying for recognition and enforcement of the arbitration award of the Hong Kong International Arbitration Center as an example.²After receiving the four draft contract texts, Lianshun Company raised objections to three of the draft contracts respectively, but did not raise objections to the arbitration clauses contained therein. Does this mean that Lianshun Company endorses the arbitration clauses contained therein and shows Yihai Company that it is willing to resolve subsequent disputes through arbitration. According to life experience, Lianshun Company raises an objection after receiving the draft contract, indicating that it recognizes the department that does not raise an objection. Then the arbitration clause can be deemed as the true meaning of both parties. In addition, the mainstream values in the field of arbitration in China are more inclined to support the validity of the arbitration agreement. Therefore, it can be concluded that the award made by the Hong Kong International Arbitration Center is valid and should be enforced. However, according to the requirements of the establishment of the contract, Lianshun Company and Yihai Company did not sign the contract in the end, the contract was not established, and the arbitration agreement should be invalid. Whether it is to comply with the mainstream, regard the signing of the contract as a formal requirement for the establishment of the contract, and determine that the arbitration agreement can take effect as long as it meets the three basic conditions, or strictly abide by the basic theory of the contract law, and believe that the re-signation is the substantive requirement for the establishment of the contract. Artificial intelligence, as the carrier of data collection and analysis, is difficult to make a choice between two tendentious value judgments. [2]

² See Hangzhou Intermediate People's Court of Zhejiang Province (2021).

Secondly, the Tianli Renqing Guofa should be weighed. At present, artificial intelligence cannot grasp the balance between the objective ruling and the legal provisions, and it is easy to fall into the trap of routine. Taking the arbitration agreement as an example, if the arbitration agreement is decided by artificial intelligence, the decision of the arbitration agreement is based on the artificial intelligence algorithm. In other words, the artificial intelligence arbitration agreement is still a multi-party contract between the parties and the human arbitrators, but the content of the contract has changed fundamentally, that is, the obligation of the human arbitrator is to undertake all other arbitration procedures other than the arbitration award, but the final arbitration award is made by the artificial intelligence algorithm, and the main obligation of the parties is to implement the arbitration award made by the artificial intelligence algorithm.[3]

3.2 Replacement Award: The Abuse of Artificial Intelligence will Undermine the Superiority of the Arbitration System.

First, the abuse of artificial intelligence will weaken the legal basis of arbitrators and reduce the quality of arbitration results. According to the law, arbitrators are generally engaged in arbitration or lawyer work, the judge has worked for 8 years, or has a senior title, the same level of personnel to serve. Under the high standard screening system, the arbitrator's legal retrieval ability and legal knowledge must be sufficient, so that it can quickly and accurately find the applicable legal provisions and precedents in a large number of civil and commercial arbitration disputes, and meet the parties' willingness to resolve disputes as soon as possible. This is also one of the advantages of arbitration compared to litigation. However, when artificial intelligence is over-reliant, arbitrators will gradually form the illusion that 'intelligence' understands arbitration better than themselves, resulting in the loss of legal retrieval and independent thinking ability in the process of enjoying the convenience brought by intelligent technology, and will only arbitrate according to the instructions given by artificial intelligence, instead of going deep into 'why this arbitration' and 'what is the impact of arbitration results on society'. [4] For a long time, more than 8 years of work experience of arbitrators has been wiped out by each other's growth and decline, with empty names and inability, and even the phenomenon of 'machines replacing people'. The legal relationship and dispute focus of civil and commercial arbitration are mostly complex, especially in cross-border cases, which will affect the fairness and authority of China's arbitral awards and shake the foundation of the arbitration system.

Second, the abuse of artificial intelligence will encourage arbitrators to be lazy and weaken the dominant position of arbitrators. In the process of arbitration, arbitrators need to invest a lot of time and energy to study, analyze and adjudicate cases. If the arbitrator simply pursues speed or simplicity, he will unconsciously 'transfer' the right of 'trial thinking' to artificial intelligence, and the subjective status is gradually weakened and deprived, resulting in the arbitrator becoming more and more like a machine. The traditional boundaries between man and machine have been blurred and gradually become an integral part of the operation of artificial intelligence systems, thus obscuring the subjectivity of human beings. [5] In this case, the artificial intelli-

gence is based on the procedures that have been set up before, and makes the ruling in accordance with the old rules, which is bound to damage the legitimate rights and interests of the parties. At the same time, arbitrators will also fall into the dilemma of "information cocoon," focusing only on the legal views provided by artificial intelligence and ignoring other important theories. Because the deviation of law understanding may come from the incompleteness of artificial intelligence data collection, the incompleteness of data analysis and the unsystematic use of data, and may also come from the designer's own legal value orientation.[6] In other words, the arbitrator's logical thinking is limited to the designer's legal point of view, which may lose independent thinking and judgment ability, resulting in the lack of sufficient reasons and basis for the outcome of the award. Worse, over-reliance on artificial intelligence will affect the professional ethics and responsibility of arbitrators. When an arbitrator makes a major mistake in the award, he may have the psychology of 'shirking responsibility' and attribute the responsibility to artificial intelligence rather than himself. Over time, slack and sloppy will affect the arbitration system itself, resulting in adverse consequences.

3.3 System Analysis: There is a Big Gap in the Legislative Provisions of Artificial Intelligence in the Field of Arbitration.

At present, China's legislation in the field of civil and commercial arbitration is generally based on the traditional arbitration system. There are few specific legal provisions on the embedding and application of artificial intelligence. There is a lack of clear legal guidance on artificial intelligence. The principle of artificial intelligence governance was proposed in the 'New Generation of Artificial Intelligence Development Plan' promulgated in 2019. In October 2022, standards such as 'Information Technology Artificial Intelligence Terminology' were issued to lay standards for technology in the field of artificial intelligence. However, there is still no special artificial intelligence law at the legal level, and no special artificial intelligence regulatory body has been established. [7] The fundamental reason is that the development speed of artificial intelligence technology far exceeds the pace of legislation. In addition, as a special dispute resolution mechanism, the construction of its legal system needs to take into account many factors, such as the voluntariness, flexibility and confidentiality of arbitration, which limits the application of artificial intelligence in the field of arbitration to a certain extent. At the same time, based on the complexity and uncertainty of artificial intelligence technology, the National People's Congress needs to take into account various possible legal consequences and social impacts when formulating relevant legal provisions.

4 The Perfect Path of Artificial Intelligence Embedded in Civil and Commercial Arbitration

4.1 On the Basis of ' people ' to Protect the Basic Rights

On the one hand, it is necessary to protect the right of informed consent of both parties. In the context of the use of artificial intelligence, the arbitration commission or arbitrator should inform the parties in advance of this fact and seek the consent of the parties. When purchasing, installing and using intelligent systems, the arbitration commission should make necessary public explanations on the use, configuration and performance of artificial intelligence, and can only apply artificial intelligence for case management after obtaining the consent of the parties. On the other hand, for important decisions involving personal interests or trade secrets, the ruling results output by artificial intelligence should be given the right to refuse and resist, so as to resist the unreasonable and illegal decision-making of the algorithm, and fundamentally avoid the algorithm decision-making to derogate from the legitimate rights and interests of both parties. If the parties believe that artificial intelligence decision-making has caused discrimination and differential treatment, the parties can reject their arbitration results. At this time, arbitration institutions and arbitrators should abandon intelligent decision-making and adopt manual arbitration. Before the full development of artificial intelligence, the final rule of one arbitration cannot be applied to artificial intelligence arbitration for the time being.

4.2 Take ' reason ' as the Foundation to Make Arbitration Impartially

It is necessary to strengthen the training of arbitrators, deepen their understanding of artificial intelligence technology, and cultivate compound talents. Artificial intelligence has high requirements for users' scientific and technological quality. Arbitrators need to have certain knowledge as the starting point for the application of artificial intelligence. It is far from enough to only have daily understanding. Generally speaking, only on the premise of understanding the ability and logical mechanism of AI arbitration, can arbitrators effectively supervise and critically examine intelligent decision-making, so as to identify and deal with the risks of using AI in commercial arbitration.

4.3 To Promote the Improvement of Legislation with the Goal of ' full '

Facing the dilemma of artificial intelligence in the field of arbitration, we should do a good job in the positioning of artificial intelligence in this field, design a multi-dimensional, all-round and sustainable legal plan, and strengthen the top-level design. At the same time, we should summarize the innovation experience in time. If the legislative construction within a province can achieve unity and balance, it can help promote the construction of national legislation and achieve national unity. In addition, we can also realize the transformation of artificial intelligence arbitration in China from global industry participants to innovation leaders to rule makers by participating in the

formulation of international standards, building cross-border platforms, sharing cooperation mechanisms and other ways, so as to build and improve the artificial intelligence arbitration system.

5 Conclusion

The integration of artificial intelligence into civil and commercial arbitration is the general trend, and its popularity has benefited from the continuous optimization of big data and algorithms. However, artificial intelligence is difficult to perfectly replicate human thinking, and its limitations need to be further studied. In practice, we should foster strengths and circumvent weaknesses, scientifically plan the development path of artificial intelligence in arbitration, ensure the rights and interests of the parties, improve the quality of artificial intelligence arbitration and the ability of arbitrators to control, prevent abuse from causing psychological dependence, and build supporting laws to regulate AI, effectively deal with the risk of bias and algorithmic loopholes, and improve the efficiency and quality of arbitration.

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