

ARTIFICIAL INTELLIGENCE AND THE DISAPPEARING HUMAN ARBITER

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Abstract. *In this age where computers are becoming more powerful day by day, Artificial Intelligence ("AI") has become a fact of life. Computer scientists say that a "well-trained" computer with sufficient data and properly designed algorithms can quickly produce an acceptable arbitration decision. The required dataset includes thousands of transcripts from actual arbitration proceedings. For example: all known judicial decisions embodying the complete state of arbitration jurisprudence, all relevant laws and regulations used by lawyers, arbitrators and arbitral administrators, and all known journals and law review materials.*

Keywords: *artificial intelligence, human arbitration, New York Convention, international commercial arbitration, UNCITRAL model law.*

ИСКУССТВЕННЫЙ ИНТЕЛЛЕКТ И ИСЧЕЗАЮЩИЙ ЧЕЛОВЕЧЕСКИЙ АРБИТР

Аннотация. *В наш век, когда компьютеры становятся все более мощными день ото дня, искусственный интеллект («ИИ») стал фактом жизни. Ученые-компьютерщики говорят, что «хорошо обученный» компьютер с достаточным количеством данных и правильно разработанными алгоритмами может быстро выдать приемлемое арбитражное решение. Требуемый набор данных включает тысячи стенограмм реальных арбитражных разбирательств. Например: все известные судебные решения, отражающие полное состояние арбитражной практики, все соответствующие законы и постановления, используемые юристами, арбитрами и администраторами арбитража, а также все известные журналы и обзоры правовых материалов.*

Ключевые слова: *искусственный интеллект, человеческий арбитраж, Нью-Йоркская конвенция, международный коммерческий арбитраж, модельный закон ЮНСИТРАЛ.*

INTRODUCTION

Arbitration plays an important role in the Alternative Dispute Resolution (ADR) process. Arbitration is the preferred method of dispute resolution for disputing parties who need a binding resolution but do not wish to go to court. Arbitration is often described as a private and consensual method of dispute resolution that results in a binding decision. Instead of state courts, it is a private court appointed by the agreement of the parties and issues a binding decision - an arbitration decision. The court consists of arbitrators who conduct hearings in person. As the development of international commercial arbitration took place in the XX century, human-powered arbitration was the only technologically feasible option. Stakeholders in the arbitration market consider how new technologies and tools can be used to improve the efficiency and quality of the arbitration process is studying. Research has shown that the choice of arbitration over other dispute resolution processes is crucial for parties' Artificial intelligence promises smarter, more consistent and fairer decisions compared to human intervention. The pandemic has accelerated the use of technology to improve the efficiency and quality of arbitrations. For

example, if open court proceedings are not possible, parties and courts will require online conferencing, desktop sharing, and video conferencing software that allows for real-time Internet meetings. Practical needs and constraints help to quickly adapt to the traditional way of "arbitration" by people with the help of technology.

ARBITRATION AND ARTIFICIAL INTELLIGENCE

The technique relies on applying computing power to massive amounts of data—both of which have expanded in recent years. The greatest practical successes to date in machine learning in legal applications have been in the use of "supervised learning" techniques. "Supervised learning" refers to a process that begins with a set of data that is sorted by humans according to a dimension of interest. In this system, a set of data is analyzed and based on other available characteristics of the data, it determines the best way to predict the relevant outcome variable. A "trained sample"—that is, an algorithm with a set of parameters that optimizes performance on the training data set—then shows how well the preview performs outside of the original training sample. is run on a new test data set to achieve These results are delivered via an interface for human arbitrators to review and use. In our analysis, we focus on two general categories of AI applications. First, we look at what AI applications are currently available in the legal technology market to help human arbitrators perform their tasks more efficiently in terms of time and accuracy. Second, we consider in which situations AI systems can be replaced by human arbitrators. In our view, although unlikely, fully AI arbitrators may be brought in for simple matters and disputes in the coming years.

ARTIFICIAL INTELLECT APPLICATIONS TO ASSIST ARBITRATIONS

The first category of AI applications is those aimed at helping arbitrators perform their duties quickly and efficiently. As mentioned above, the focus, existing applications, not only in digitization solutions or blockchain products, but also in artificial intelligence applications mainly serve three broad supporting purposes for arbitrators:

- 1) in managing their affairs and in the arbitration process;
- 2) collecting and analyzing facts;
- 3) in the functions of decision-making by providing models of provision.

ARTIFICIAL INTELLECT APPLICATIONS FOR REPLACEMENT OF ARBITRATORS

A fully automated "robot" AI arbitration system that replaces human arbitrators requires different tasks. These tasks, which include attributes such as social intelligence, cannot be fully handled by currently available machine learning applications. A full-service AI arbitrator system requires fully automated case management such as case acceptance, dispute review, administration, and processes such as multiple meetings, cases, and hearings simultaneously without human intervention. In addition, he must conduct a factual analysis of a particular case, including electronic fact-finding and document analysis. It should also assess the credibility of witnesses during cross-examination, for example using facial recognition applications capable of detecting the witness's micro-expressions. Based on this analysis, the system must make a final and binding decision, as well as indicate the reasons for reaching this decision. The AI applications described in the previous section address these different functions of the arbitrator, but still require the involvement of a human arbitrator. The human element is especially important when using the findings of AI-assisted applications to reach a final decision. A fully

autonomous, artificial intelligence-based system should perform these tasks without human intervention.

Given the decision-making processes an AI arbitrator must learn, it is not just a matter of the volume and variety of data needed to accurately predict a human decision. It's also a matter of analyzing data, making the necessary connections, identifying existing conflicts, making a decision based on a trained model, and justifying that decision like a human arbiter. To our knowledge, no such system currently exists. The emergence of such an AI-based arbitrator depends on a number of factors. First, the type of conflict is important. Developing an AI-powered arbitrator depends not only on the simplicity or complexity of the dispute. It also depends on the level of human interaction that the conflict is likely to involve. Thus, it would be easier to see such systems at work in simple monetary claims or tax disputes, where the outcome is based on the analysis of facts and the calculation of easily identifiable variables. Conversely, cases involving "hidden variables," such as social or economic considerations that do not appear in legal or factual documents, introduce a degree of uncertainty about the outcome of litigation. This is not properly taken into account by existing systems at the current stage of AI development. Second, integrating different AI applications to create a fully autonomous AI-based arbitrator poses significant interface challenges. As with commercial software applications for different business functions, the various applications must be designed according to a common architecture that allows them to work together seamlessly, and this is not an easy task. Third, the type of legal system in which the AI-based arbitrator operates and the available data are relevant.

FOUNDATIONS FOR INTERNATIONAL COMMERCIAL ARBITRATIONS

This section examines the legal arbitrariness of international commercial arbitrations and lays the foundation for the analysis in the remaining parts of this section. Despite the diversity of substantive and procedural laws of different jurisdictions and legal systems, international commercial arbitration is an area in which considerable regulatory convergence has been achieved. It is primarily the UNCITRAL Model Law relating to two major international legal instruments, the New York Convention and the New York State International Law. Despite the different nature of one being an international treaty and the other being a model legal document, both are widely accepted in the international community. The NYC has been ratified by 116 contracting states, and the Model Law has been adopted in 83 countries in a total of 116 jurisdictions. These figures indicate regulatory convergence in international arbitration and demonstrate the important role of both instruments in the legal architecture. Of particular importance are the New York Rules and the provisions proposed in the Model Law in setting standards for the enforcement of awards. Empirical evidence suggests that such enforceability is a key consideration for parties when choosing arbitration to resolve their disputes.

In an empirical survey conducted between January and March 2015, approximately 50 percent of respondents rated enforcement as a very important factor in deciding whether to proceed with arbitration instead of litigation. Moreover, another survey found that "enforceability" continues to be perceived as the most valuable feature of arbitration. Given the number of ratifications; the NYC is rightly seen as the benchmark for setting international standards for the enforcement of disputes. Therefore, it is not surprising that NYC hosting is one of the main considerations when choosing an arbitration venue. This is also one of the reasons why the arbitration community does not expect Brexit to have significant consequences for the

use of London as a venue for arbitrations. The role of these two tools is important in the consideration of AI and arbitrage regulation. The Model Law is significant in that it sets a widely recognized standard for countries seeking to adopt arbitration legislation for the first time or to modernize existing laws. In its current version, as we discuss below, the Model Law is silent on technology- or AI-powered arbitrations and does not oppose them. It would be an important step if the Model Law expressly allowed artificial intelligence, or even artificial intelligence-based arbitrations. This can be achieved at the international level by amending the model law introduced by the United Nations General Assembly resolution in 2006. Based on the technological developments and opportunities analyzed in the previous sections, National legislators are expected to focus their regulatory attention in the future on fully autonomous AI applications that perform arbitration functions.

DISPUTE SETTLEMENT AND ENFORCEMENT UNDER THE NEW YORK CONVENTION.

Based on the above analysis, in this part we consider whether artificial intelligence-assisted or fully autonomous artificial intelligence-based arbitrations can be accommodated in the New York Convention following a teleological interpretation of its provisions. As mentioned above, it is important to analyze the NYC regulations because it determines the application of international standards. If the national rules are inconsistent with the NYC rules, the international currency of the dispute in terms of enforceability is greatly reduced. AI-assisted arbitrations do not pose conceptual challenges and are more easily reconciled with the NYC than fully autonomous, AI-based arbitrations. AI-assisted arbitrage awards are still a human product, assisted by technology. Fully autonomous, AI-powered arbitrations, as well as the resulting awards, require greater scrutiny for compliance with the relevant provisions of New York law. Therefore, they are the main focus of our analysis in this section. Relatively short and minimal in text, the NYC does not include any information about the nature of the arbitrator or the court. The NYC stipulates that Contracting States must recognize and enforce agreements on arbitration and arbitral awards only if there are limited grounds for rejection. In 1958, when the New York Convention was adopted, its provisions specified that arbitrators could only be human beings. developed with a clear understanding of This is reflected, for example, in provisions such as Article IV, which require a duly certified original or certified copy of the decision. This provision has been interpreted to require the signatures of the arbitrators as natural persons.

This serves to show that the implicit understanding of the authors of the project was based on the existing conventions of the time, that is, only humans, and not robots, could be arbitrators. "Robot arbitrators" did not exist then, nor do they exist today. Thus, methodologically, the NYC presents a hidden and unintended loophole in the regulation of fully autonomous, artificial intelligence-based arbitrations. As we have seen in the previous two sections, fully autonomous artificial intelligence systems are expected to become operational at some point in the future, and they may provide more efficient processes and better (quality) awards than human arbitrators. The question is, thus concluding that NYC is open to a teleological interpretation involving the rewards offered by AI-powered systems. More specifically, looking at the various legal issues, this question raises two major doctrinal issues: (a) whether an AI-arbitrator's award can be an "award" by the NYC, and (b) whether V(2)(b) considerations of public policy may prevent cross-border enforcement of such an award under Art. We emphasize from the outset that NYC is a living international document and can be

teleologically interpreted to accommodate such AI-powered systems and awards. First, the NYC must be based on a review of the object and purpose of the NYC, taking into account the basic requirement expressed in Article 1(1) of the "arbitration award". Since the NYC is an international treaty, its interpretation must follow the provisions of Articles of the Vienna Convention on the Law of Treaties (VCLT) of 1960. According to these articles, "the terms of the treaty shall be taken into account in their context and Emphasis is placed on the plain meaning to be given in terms of effect and purpose. Identifying the purpose and object of NYC is functional. Its purpose is to facilitate cross-border enforcement of arbitral awards between Contracting States and to promote international trade. Thus, if a decision emanating from an AI-based system fulfills these functions, interpreting the NYC according to its object and purpose would lead to the conclusion that such a decision is a "reward." Furthermore, pursuant to Article I (2) of the NYC, an arbitral award must be made by an arbitrator or "permanent arbitral bodies designated by the parties".

The second part of this provision was included in the New York law (as it existed at that time) at the special request of the USSR and Czechoslovakia. The historical notion that only humans can be arbitrators should not be construed as an intentional exclusion of non-humans as potential "constituents" of awards under the NYC. Thus, it follows from the requirements of New York law and its purpose that a self-governing corporation has the power to administer the arbitration process and make an award that is final and binding on the parties. If at some point AI arbitrators are able to conduct the process more efficiently and achieve higher quality results than human arbitrators and therefore increase legitimacy, this interpretation of the NYC is teleological and not the technology available at the time of its adoption rather, it takes into account its object and purpose. Thus, he sees the NYC as a living medium capable of regulating the needs of commercial relations in an era far more technologically advanced than in 1958. For example, NYC Article II (2) refers to the exchange of letters or telegrams. In 1958, this was considered the pinnacle of technological progress.

Such tools are now a relic of the past (at least telegrams) and contracts are often made via e-mail or other instant communication applications. In 2006, UNCITRAL issued a recommendation on the application of Article II (2) of New York, "recognizing that the circumstances described therein are not exhaustive," to cover electronic communications. E-mail and other means of communication serve as a formal writing requirement as set forth in Article II, Section 2, which provides sufficient certainty in the formation of arbitration agreements. With respect to electronic communications, the NYC may be interpreted in light of developments in AI technology. Final and binding decisions made by AI-based self-governing corporations shall be deemed to be "arbitral awards" rendered by "arbiters" within the meaning of the Convention. Another obstacle to the recognition and enforcement of an award rendered by an AI arbitrator may be the grounds for non-enforcement of awards listed in Article V of the New York Act. Specifically, we are concerned about the potential impediments arising from the public policy exception to Article V (2) (b) of the NYC. According to this provision, "recognition and enforcement of an arbitral award may be refused if the competent authority of the country in which recognition and enforcement is sought determines that: ... (b) the recognition or enforcement of the award is contrary to may be against.

Thus, an AI arbitrator's award may generally be denied enforcement because of a violation of the public policy of the enforcement forum. In some forums, such as France, where

there is a directive that arbitrators must be natural persons, decisions rendered by AI arbitrators are likely to be found to be contrary to public policy. In other forums, such as England or other model law countries, where the human arbitrator's requirement is only an implicit understanding of the local arbitration rules, the award will likely be based on evidence of fairness or equity presented by the court. If AI-based arbitrageurs become technically feasible, they will be able to perform the same functions as traditional arbitrageurs. As such, decisions made by AI-based systems should be subject to the same level of scrutiny as decisions made by humans. If artificial intelligence-based arbitrations become a technical possibility and market participants demand such services, it is reasonable to assume that such processes will perform judicial functions more efficiently than human arbitrators and result in higher quality awards. Consequently, AI-powered arbitrations and awards will benefit from increased legitimacy – the process will be equally fair and potentially more efficient than traditional arbitrations, and the awards will be more accurate.

CONCLUSION

Arbitration has long been the preferred method of dispute resolution for international businesses. For example, if the court system in a particular jurisdiction does not work well, or if the parties cannot agree to submit to the jurisdiction's courts for fear of nationality, the preferred method of dispute resolution - at least mediation or conciliation - will not result in a settlement. Arbitration has the image of an old-fashioned and confidential process. The process can be quicker and often more expensive than going to court. However, they love the quality of service. But the world of arbitration is changing, as is the practice of law in general. AI applications based on machine learning (especially supervised learning) can now assist arbitrators in their duties. At some point in the future, it will be possible to conduct arbitration entirely without human intervention through artificial intelligence-based arbitrator systems.

By its Functional Features, Arbitration is a dispute resolution process administered by an independent, impartial third party, in which the third party renders a final and binding decision. Functionally, this task can be performed by an AI application that manages the integrated arbitrage business without human intervention. In practice, the boundaries within which this occurs are technological and legal rather than conceptual. We believe that the legal frameworks of international commercial arbitrations, in particular the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (NYC) and the UNCITRAL Model Law on International Commercial Arbitrations, are capable of adapting AI-driven technological advances in practice. We showed in principle, countries around the world are free to determine the degree of openness to new technologies in general and AI applications in particular in arbitral disputes. However, in practice, regulatory competition affects the degree of freedom enjoyed by states.

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