



USING THE ARTIFICIAL INTELLIGENCE IN COMMERCIAL ARBITRATIONS

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Article history:	Abstract:
Received: November 11 th 2023 Accepted: December 10 th 2023 Published: January 18 th 2024	This essay explores the main functions of current AI applications which can be used in the appointment of arbitrators or even in the case management to schedule time of conference and analyze different facts. ¹ Then it explains limitations of AI in the decision-making process by giving different examples. At the end it assures that AI programs cannot take over the place of human arbitrators because of some ethical concerns.

Keywords: Artificial Intelligence, International Arbitration Institutes, case management, AI platforms

INTRODUCTION

Artificial Intelligence has been deployed in all professions. Currently new technologies are disrupting the classical format of arbitration. International Arbitration Institutes are investigating how artificial intelligence can open a new door to deliver process efficiently in the international area. Especially, the COVID-19 pandemic has accelerated using AI programs in international commercial arbitration. This essay explores how AI programs can be widely used in the arbitral process. Currently there are many AI applications which can assist to arbitrators in performing their arbitral functions during the arbitration process. This essay explores the main functions of current AI applications which can be used in the appointment of arbitrators or even in the case management to schedule time of conference and analyze different facts.² Then it explains limitations of AI in the decision-making process by giving different examples. At the end it assures that AI programs cannot take over the place of human arbitrators because of some ethical concerns.

1. ARTIFICIAL INTELLIGENCE TO ASSIST ARBITRATORS

1.1. Using the artificial intelligence to appoint arbitrators.

According to International Arbitration survey, it is argued that the ability of parties to select arbitrators recognized one of the most valuable characteristics of international arbitration.³ Because parties always concern about the casual connection between arbitrators and their decision-making ability. That is why they try to learn the background of arbitrators to make the best choice before the beginning of arbitral process. Artificial intelligence can be used widely in the selection process of arbitrators. Unlike traditional way of appointment, artificial intelligence can provide valuable advantages which are useful for parties. For instance, usually parties try to obtain relevant information about arbitrators before going to solve a dispute

in the arbitration. Because they believe that every arbitrator has own skill and practice to deal with a dispute. Parties usually search information about arbitrators from the different sources. According to the research most parties rely on the opinion of lawyers and their internal colleagues.⁴ Sometimes they prefer to get some information from the online profile of arbitrators. Additionally, they want to know about their merits and faults by analyzing their previous outcomes. However, it is not easy and short process gathering such kinds of information from different sources. It usually requires much time and effort which effects the length of process.⁵ By using artificial intelligence parties can save their time because AI programs can find the most appropriate arbitrator in a few minutes by analyzing pros and cons of legal background of arbitrator. Because these applications gather huge amount of data about the background of arbitrators to recommend an appropriate candidate. This data includes different categories like the duration of prior cases, arbitrators' case management skills, their level of involvement in decision-making process, overall number of proceedings, time spent in previous cases and the consequences of arbitral awards. By analyzing this kind of data AI applications can give to parties the list of suitable arbitrators for their certain dispute.

Another advantage of using AI in the appointment process is connected with independence and impartiality of arbitrators. According to the general rules an arbitrator should be a third party who is absolutely independent and impartial.⁶ The doubt of impartiality of arbitrators is always concerned by parties⁷ in the appointment process because this may lead to challenge them during the process which effects the overall lengths of arbitration.⁸ According to the International Arbitration survey of Queen Mary University, most parties (80 percent) encouraged that there should be some standards of independence and impartiality for arbitrators. These standards

¹ Horst G. M. and Varesis, Faidon, 'What is an Arbitration? Artificial Intelligence and the Vanishing Human Arbitrator' (June 17, 2020) [online] <http://dx.doi.org/10.2139/ssrn.3629145> [accessed 15 January 2021] 8

² Horst G. M. and Varesis, Faidon, 'What is an Arbitration? Artificial Intelligence and the Vanishing Human Arbitrator' (June 17, 2020) [online] <http://dx.doi.org/10.2139/ssrn.3629145> [accessed 15 January 2021] 8

³ Queen Mary, Univ. London & White & Case, *International Arbitration Survey: The evolution of International Arbitration* (2018) 5

⁴ *ibid*

⁵ Horst (n 1) 20

⁶ Gilles Cuniberti, 'Rethinking International Commercial Arbitration towards default Arbitration' (2017) 27

⁷ Horst Eidenmueller 'Competition between State Courts and Private Tribunals' (2020) Oxford Legal Studies Research Paper No. 3/2020

⁸ United Nations Commission on International Trade Law (UNCITRAL) Model Law art 13



were highlighted in "Guidelines of Conflicts of Interest in International Arbitration".⁹ Using AI-powered system in the selection of human arbitrators can be beneficial to select independent third party because its system is completely separated from parties which meets the important criteria of independence.¹⁰ However, there is no institutional rules which encourage using AI in the appointment process. That is why it is recommended that parties should stipulate some requirements to the general terms of their contract in order to use artificial intelligence in the selection process.

Moreover, AI powered system may solve the issue of gender diversity by appointing women to arbitral tribunals. Although, most parties are unsure that providing diversity in the panel of arbitrators effects the quality of its decision-making, half of the respondents on the survey agreed there should be some progress in the gender diversity in arbitral tribunal.¹¹

Currently there is not such program which helps to parties to choose arbitrators. However, some applications which are used to find job candidates could be used for the selection of arbitrators.¹² There are some organizations like Arbitrator Intelligence which collects and analyzes some information from the previous proceedings of arbitrators by giving different factual and procedural questions to parties and offers them useful information for appointing a right arbitrator.¹³

1.2. Using AI platforms for case management process

Case management is one of the vital process of arbitration and this can be organized efficiently by help of AI programs. Bad organized management may influence the arbitration process even it effects on the arbitral award as well. That's why parties always tend to use new technologies which help to increase the efficiency of arbitral proceedings. According to the international Arbitration survey, technology is widely used in international arbitration and most respondents favored using of "AI" and "virtual hearing rooms" in the future proceedings.¹⁴ Nowadays there are many applications which help to assist arbitrators to manage their proceedings efficiently. For instance, "x.ai" is one of the wide used platforms to schedule meetings with parties by using natural language processing (NLP) technology.¹⁵ According to the inventors of this smart assistant service, this app interacts with humans through emails in order to find most appropriate time for scheduling virtual meetings. This system can identify free and busy slots of parties through accessing user's calendars. This application can help to arbitrators to organize case management conferences and hearings efficiently in short time. Another platform is Webex Assistant which helps to automatically

transcribe the entire meeting in real-time.¹⁶ A voice-automated system allows arbitrators easily control the meeting by using a set of voice commands. Generally, parties want to use transcription services at the hearing but instructing such specialists effects the costs of process.¹⁷ This program provides more affordable service than specialists. Moreover, parties often need to present witnesses who do not know the language of process. In this situation arbitrators need to help of interpreters. It takes time and cost as well. Alternatively, AI powered systems can translate thousands of documents in a few minutes with high quality and accuracy without any delays and extra costs.

1.3. AI platforms for fact gathering and analysis.

In the international arbitration arbitrators should deal different commercial cross-border disputes which are arisen from complex contracts. There are lots of contracts and documents which relate to one certain dispute and these documents require much time and attention to identify relevant information. AI can be used in more analytical tasks in arbitration such as assessing the different piece of evidences.¹⁸ There are some AI-applications which are capable of extensive document processing in a few minutes by using deep learning technologies. For instance, eBrevia¹⁹ uses advanced machine learning to extract key information from contracts within minutes. It also uncovers hidden costs and helps to make better informed awards for arbitrators. According to its developers, it saves 50-60% of the time and increases accuracy while extracting critical information from contracts. Second application which is called ROSS Intelligence²⁰ is capable of finding case law for any text found from contract. It also can read and digest large amount of database of legislation and judicial comments. Third, Kira system²¹ which automatically identifies and highlights any important information through analyzing the provisions of contracts. Usually arbitrators spend most of their time to draft standard sections of their arbitration awards, like the procedural history of parties, the governing law, the arbitration costs. These kinds of platforms may save their time by drafting automatically such time-consuming sections. However, these applications are not specifically for arbitrators but can be used widely in fact gathering process.

1.4. AI platforms for predictive justice.

Currently there is not any absolute AI decision-making platform in the legal sphere because these kinds of platforms require much specific data. However, there are some AI applications which help to predict the outcome of awards. Current AI algorithms are capable of automated statistical learning methods which can help to predict outcomes of arbitral awards in advance. These learning methods include deep learning (natural language process) and statistical

⁹ IBA 'Guidelines on Conflicts of Interest in International Arbitration' (2014) [online]

https://www.ibanet.org/Publications/publications_IBA_guides_and_free_materials.aspx [Accessed 15 January 2021]

¹⁰ Horst (n 1) 21

¹¹ International Arbitration Survey (n 2) 2

¹² David Zielinski, 'Recruiting Gets Smart Thanks to Artificial Intelligence' (2017) [online]

<https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/recruiting-gets-smart-thanks-to-artificial-intelligence.aspx> [accessed 15 January 2021]

¹³ FAQ's about the AIQ — Arbitrator Intelligence, [online] <https://arbitratorintelligence.com/faqs/> [accessed 15 January 2021]

¹⁴ International Arbitration Survey (n 2) 3

¹⁵ Instant Meeting Scheduling | x.ai, x.ai, [online] <https://x.ai/> [accessed 15 January 2021]

¹⁶ Meet the new AI-powered Cisco Webex Assistant | Cisco Webex, Webex.com (2020) [online]

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¹⁷ Thomas Snider, Sergejs Dilevka & Camelia Aknouche, 'Artificial Intelligence and International Arbitration: Going Beyond E-mail' (2018) [online]

<https://www.tamimi.com/law-update-articles/artificial-intelligence-and-international-arbitration-going-beyond-e-mail> [accessed 15 January 2021]

¹⁸ Christine Sim 'Will artificial Intelligence take over arbitration?' (2018) Asian International Arbitration Journal 14, 7

¹⁹ eBrevia 'Contract Management & Digitization' (2020) [online] <https://ebrevia.com/contract-management-digitization> [accessed 15 January 2021]

²⁰ ROSS Intelligence (2020) [online] <https://blog.rossintelligence.com/> [accessed 15 January 2021]

²¹ Kirasystems.com, 'Machine Learning Contract Search, Review and Analysis Software' [online] <https://kirasystems.com> [accessed 15 January 2021]



learning models.²² For instance, ArbiLex can predict the outcome of award relying on statistical data analytics supported by previous relevant cases.²³ This kind of platform helps to arbitrators to deliver awards in better quality and speed. However, AI platforms suffer from lack of data to predict qualitative decisions because there is not much available data in the legal sphere. Another main concern is interpretability between certain dispute and prior cases. Most awards of arbitrations are really high-stakes that demand more interpretable and qualitative decisions.

2. WILL ARTIFICIAL INTELLIGENCE TAKE OVER ARBITRATION?

As it has been discussed above, current AI platforms are not capable of replacing human arbitrators *in toto*.²⁴ Although those applications are used efficiently to streamline the arbitration process, human arbitrators still remain as decision-makers. The human element still remains as an important factor in current applications. To replace the human arbitrations AI needs fully automated system which capable of dealing independent case management and making e-awards without human interaction. However, current AI platforms have some limitations to perform such actions. Many lawyers believe that the legal decision-making process is complicated process which requires much attention for understanding the nature of issues to make well-reasoned outcome. They argue that AI cannot achieve such intelligence as humans do. However, some scholars assert that AI can inevitable express such critical requirements and do the job of arbitrators in the future.²⁵

2.1. Limitations of AI

First, AI struggles from lack of data to predict decisions in advance because current available data is not enough to critically analyze and compare different cases in order to solve disputes. Data is fuel of artificial intelligence. The more available data means the more accurate prediction. However, AI programs are data-hungry because of confidentiality.²⁶ According to the international arbitration survey, confidentiality is one of the most believed factors of international commercial arbitration.²⁷ That is why awards of arbitrations are generally not published and this makes some difficulties for AI to predict well analyzed outcome. In spite of confidentiality, arbitral institutions could collect decisions and publish them in an anonymized form.

Second, AI applications have significant difficulties in providing reasoned decisions and rational explanations.²⁸ There are different objectives for providing explanation of legal decisions. First, it helps the losing party to understand why his argument has not accepted and prevent him not to make such mistakes in the future. Moreover, it allows other arbitrators to follow the same precedent for their decisions.²⁹ However, this ability is not well developed in AI and has raised some concerns.³⁰ For instance, according to the research AI application could guess a person's sexual orientation from their pictures but it lacks to give explanation of obtained results.³¹ However AI programs are better than humans in predicting the outcome of decisions. This can be seen in the study of prediction on upcoming legal decisions of US Supreme Court Justice which computer program predicted more than 20 % accurate results than human group.³² AI developers try to solve this issue by developing Explainable Artificial Intelligence, which is called XAI.³³ This program aims to explain outcomes by comparing with similar previous decisions.

Third, AI programs are widely criticized for being biased. For instance, Google's facial recognition software tagged some African people as gorillas in its photos.³⁴ It means that the predictions of AI models will be influenced by different unexpected analyzes during the decision-making process. For instance, AI programs may predict outcome for the benefit of large companies which have more frequently solved their disputes through arbitration.³⁵

Fourth, due process is considered one of the main fundamental factors of international arbitration.³⁶ AI can provide equal right to be heard during a hearing or give equal time for comment on evidences but it cannot identify the tactics of parties. For instance, parties try to delay the process in order to benefit from time. So, there is one reasonable question that can AI identify the 'guerilla' tactics?³⁷ This is one of main reasons why parties choose the international arbitration by for their disputes. So human factor still remains more reliable than IA programs.

Finally, AI does not feel emotions and other human factors which cannot be broken down into equations. There is large difference between live process and reviewing the hearing after process.

²² ICDR Webinar: Artificial Intelligence and the Changing Face of International Arbitration (2020) [online] <https://www.youtube.com/watch?v=peqWhovuHVg&feature=youtu.be> [accessed 15 January 2021]

²³ ArbiLex 'Predictive analytics for international law, Arbilex.co' (2020) [online] <https://www.arbilex.co/welcome> [accessed 15 January 2021]

²⁴ Horst (n 1) 16

²⁵ M. Scherer 'Artificial Intelligence and Legal Decision-Making: The Wide Open?' (2019) *Journal of International Arbitration* 36, 5, 541

²⁶ *ibid* 555

²⁷ International Arbitration Survey (n 2) 3

²⁸ M. Scherer, 'International Arbitration 3.0 – How Artificial Intelligence Will Change Dispute Resolution', (2019) *Austrian Y.B. Int'l Arb.* 503, 511-512

²⁹ Scherer (n 22) 562

³⁰ C. Bryan, A. Farhangi, V. Roland 'Rethinking Explainable Machines: The GDPR's 'Right to Explanation' Debate and the Rise of Algorithmic Audits in Enterprise' (2019) *Berkeley Tech. L.J.* 34:143

³¹ Cliff Kuang, 'Can A.I. Be Taught to Explain Itself?' *New York Times* (2017) [online]

<https://www.nytimes.com/2017/11/21/magazine/can-ai-be-taught-to-explain-itself.html> [accessed 17 January 2021]

³² G. Roger & M. Sales-Pardo, 'Justice Blocks and Predictability of U.S. Supreme Court Votes' (2011) [online] <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0027188> [accessed 17 January 2021]

³³ DARPA, Explainable Artificial Intelligence (XAI) Program, [online]

<https://www.darpa.mil/program/explainable-artificial-intelligence> [accessed 17 January 2021]

³⁴ Maggie Zhang, 'Google Photos Tags Two African-Americans as Gorillas Through Facial Recognition Software' (2015) *Forbes Tech* [online] <https://www.forbes.com/sites/mzhang/2015/07/01/google-photos-tags-two-african-americans-as-gorillas-through-facial-recognition-software/?sh=203a8e12713d> [accessed 17 January 2021]

³⁵ Christine (n 15) 10

³⁶ Matti Kurkela, Santtu Turunen 'Due Process in International Commercial Arbitration' (sec edn, Oxford University Press 2010)

³⁷ Sam Karim 'Artificial intelligence: an undiscovered future of arbitration' (2019) *International Arbitration Law Review Int. A.L.R.* 22(2), 7



Although AI has dramatically developed in recent years, it still suffers to make decisions based on "bona fide and good faith"³⁸

2.2. Legal framework for AI arbitrators.

It is surprising that there is not any arbitration rule which deals with the legal status of AI arbitrator. Many arbitration rules encourage the use of technology to conduct the proceedings efficiently.³⁹ However, there is not any explicit prohibition that arbitrators must be humans. There for it is up to parties to decide in their agreements which kind of arbitrator should solve their dispute. An arbitration agreement could technically be recognized under the rules of UNCITRAL Model Law⁴⁰ and its resulting awards could be enforced under the New York Convention.⁴¹ However, the domestic arbitration legislation has the power to prohibit the appointment of AI arbitrators within their jurisdiction by defining arbitrator as a human person. For instance, UNCITRAL Model Law states that an arbitrator should disclose any circumstances of his or her impartiality or independence.⁴² Similarly, the English Arbitration Act states that the authority of arbitrator ceases by his death⁴³ by meaning that an arbitrator should be human. In spite of such requirements arbitration rules should be open to accept using AI arbitrators in international arbitration. The future framework of using AI programs may be changed by taking into account of its potential because European Parliament have already pondered to give legal status to robots, as "electronic people" by providing responsibility for their conducts.⁴⁴ This resolution would encourage arbitration rules to implement new articles for AI arbitrators.

Ethical concerns

Despite the development of AI, parties still think that AI programs cannot solve the disputes like human arbitrators do. There are several reasons why parties do not prefer to choose AI for their dispute. First, they believe that AI programs have not full independence to decide some unexpected situations. For instance, AI can provide equal rights in hearings but they do not feel the emotions of parties. Sometimes arbitrator should take account the emotions of parties because decision-making process is not only connected facts but also explanation of evidences. This phenomenon is more complex which cannot be broken down into parts. Another, concern is that AI programs can be biased. According to some researches that AI is widely criticized for being prejudiced against minority racial groups. For instance, on some AI applications women are more frequently advertised less paid job than men.⁴⁵ In another example, AI software which is used to predict future criminals is biased against blacks.⁴⁶ Finally, security problems may influence to preferences of parties because most people believe that AI programs can be hacked or damaged through malicious viruses. As a result, AI arbitrators can be manipulated by hackers to render biased awards. The European Commission has recognized these kinds of ethical concerns and tried

to implement some principles which are more trustworthy, robust and unbiased.⁴⁷

CONCLUSION.

International Arbitration has been developing considerably in recent years by the help of new technologies. Artificial intelligence plays a significant role to this development because it can provide various programs which can help to streamline the arbitral process. Currently, AI applications can be used to assist arbitrators in different stages of process. First, it helps to choose an impartial arbitrator for certain dispute by analyzing different categories of arbitrator's background. Moreover, AI system can extract relevant information from inside thousands of documents in a few minutes. It also can predict the outcome of decisions by comparing with previous cases. However, current data is not enough to predict qualitative decisions. So, confidentiality still remains one of the basic obstacles of predictive justice. Furthermore, AI applications cannot provide reasoned decisions like human arbitrators do. Due to these limitations it is unlikely that AI can replace human arbitrators in the near future.

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⁴¹ Convention on the Recognition and Enforcement of Foreign Arbitral Awards 1958 ('New York Convention') art V

⁴² UNCITRAL Model Law on International Commercial Arbitration, 2013 art 11

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