

THE USE OF A MACHINE ARBITRATOR AS AN APPLICATION OF ARTIFICIAL INTELLIGENCE IN MAKING ARBITRAL AWARDS

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ABSTRACT

This article deals with several theoretical and practical legal questions on the use of a machine arbitrator as an application of Artificial Intelligence (AI) in making arbitral awards, noting that the use of a machine in making arbitral awards is not specific to traditional arbitral awards. That is, the use of a machine might also be applicable in making online arbitral awards. In practice, it might be easier to make awards resulting from online arbitration by a machine, because the process is conducted from A to Z by means of technology, aside from the fact that AI programs are deemed part of state-of-the-art technology.

This article excludes addressing courts' decisions by a machine, even though a machine may also be used in such decisions.

This article concludes with findings regarding the main ideas of the topic, and recommendations that draw up the mechanisms for facing the new challenges arising out of the use of a machine arbitrator as an application of AI. This encompasses provisions that might be considered in the future for amendment, including national laws, model laws, international conventions, and institutional arbitration rules.

Keywords: Artificial Intelligence, Making Arbitral Awards, Online Arbitration, Machine Arbitrators, Machine Arbitral Awards, Dispute Resolution of Business to Business and Business to Consumer Disputes.

INTRODUCTION

One of the main challenges facing making arbitral awards in both traditional arbitration and online arbitration is using a machine arbitrator as an application of Artificial Intelligence, considering that most national arbitration laws provide that only natural persons can act as arbitrators, as we will see below. Moreover, there might be some ethical issues arising from the use of a machine arbitrator, such as impartiality, independence, and fairness i.e., ethical v. legal. In addition, one may note that the use of a machine arbitrator will also constitute a challenge for counsels who may not be familiar with presenting their facts, arguing their issues, and making their pleadings before a machine (Nappert & Paul, 2018). This means that using AI may affect the legal profession. Let alone that a machine may not be able to provide reasons in award, considering that providing such reasons is a prerequisite for the validity and the enforceability of an arbitral award under some national laws, especially in civil law countries, where the lack of

reasons in award may constitute a violation of public policy (Amro, 2014). Finally, and possibly most importantly, there is a fear that a machine arbitrator may replace a human arbitrator, which will surely affect the arbitration profession.

Artificial Intelligence, as opposed to natural intelligence, is based on an algorithm, and is defined as “*making a machine behave in ways that would be called intelligent if a human were so behaving*” (Scherer, 2019). AI is also defined as “*intelligence demonstrated by machines, unlike the natural intelligence displayed by humans and animals*”. Apart from that, AI might be defined as “*any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals*”.

In terms of problem-solving functions, AI is “*often used to describe machines (or computers) that mimic cognitive functions that humans associate with the human mind*”. AI is used not only for solving Business to Business (B2B) disputes through arbitration, but also for solving Business to Consumer Disputes (B2C). For example, eBay has created an automated system to solve disputes arising from B2C transactions, through an arbitration procedure. However, one may argue that this may constitute a breach of the “*User Agreement*”, which states in Section 18 (B), entitled ‘Legal Disputes: Agreement to arbitrate’ that:

“Any dispute arises shall be settled through traditional arbitration under the Federal Arbitration Act and conducted by the American Arbitration Association (AAA) under its own rules and procedures”.

Apart from that, one may argue that this automated system is biased, i.e., in favour of the consumer (the buyer), because the trader (the seller) cannot respond until and unless the buyer uses the system. In addition, one may argue that the consumer is not requested to provide any evidence supporting his claim. Finally, it should be mentioned that this automated arbitration system applies a shortened procedure, which may violate due process as an integral part of the procedural public policy¹.

Online Arbitration, also known as e-arbitration, is a major component of online dispute resolution. Because of the increasing importance of information technology in the global economy over the last two decades generally and the Internet in particular, a hybrid system that consists of alternative dispute resolution techniques (ADR) and information technology has been created, known as online dispute resolution, which relates directly to online markets (Amro, 2019). In online arbitration, an award is rendered and notified online.

Some countries have allowed the use of technology in the arbitral process, and accordingly have regulated online arbitration through some national arbitration centers. For example, in Saudi Arabia, the Saudi Centre for Commercial Arbitration (SCCA) has created a protocol on online dispute resolution, which is designed to help parties solve their small disputes online without a physical meeting². Under this Protocol, the arbitral process shall be conducted via the SCCA ODR Portal. Therefore, this protocol is in line with the Saudi national innovation policy strategy, and with the Kingdom of Saudi Arabia’s vision of 2030, also known as, KSA’S vision 2030.

Based on this vision, Saudi Arabia has launched in late 2020 a national artificial intelligence strategy, which aims at making it a global leader in this specific domain³. Under “*The National Strategy for Data and Artificial Intelligence (NSDAI)*”, Saudi Arabia seeks to

attract \$20 billion in local and foreign investment by 2030. The Saudi Data and Artificial Intelligence Authority (SDAIA) will spearhead this strategy. To achieve the goals of this strategy, a multi-face plan will be implemented, including policy and regulations, investment, research and innovation, among others. This strategy is in line with the Kingdom's efforts to become a global leader of the alternative economy by 2030, as part of the Saudi national policy on the digital economy as adopted by a decision of the Council of Ministers "*The Cabinet of the Kingdom of Saudi Arabia*" in late 2020⁴.

ANALYSIS AND LEGAL QUESTIONS

Can a Machine Make an Enforceable Award under National Arbitration Laws and International Arbitration Rules?

It is important to mention first that a machine arbitrator, as one of the AI applications, means AI computer programs or systems based on machine learning. It may also mean a "*robot-arbitrator*". A machine will provide a final decision outcome based on the data provided by the developer, programmer, or arbitrator.

On one hand, under some national laws, only a human arbitrator can make arbitral awards, including the Arbitration Act of 1996 in the UK, the Arbitration Law of 2011 in France, the Arbitration Act in the Netherlands of 2015, and the Arbitration Law of 1994 in Egypt (Wahab & Katsh, 2018).

On the other hand, it should be emphasised that some international arbitration rules do not prohibit the use of a machine to make an arbitral award. For example, the UNCITRAL Arbitration Rules, as Amended in 2013, do not prohibit the use of machine in arbitration that is under Section IV, entitled "*The Award*". In other words, the above Rules do not require that an arbitral award be made by a human arbitrator as enshrined by some national laws, as noted above. In addition, the UNCITRAL Model Law, as Amended in 2006, gives, in Article 19(1), parties the right to agree on the procedure to be followed by the arbitral tribunal in conducting the proceedings (Law, 2006). According to a certain commentator, this may allow for use of AI tools in the arbitral process, including the decision-making process (Aditya, 2020).

This may mean that the use of a machine in making an arbitral award, including an online arbitral award, might be possible and admissible under the above international instruments.

Similarly, some institutional arbitration rules do not require that a human render an arbitral award, including the ICC International Court of Arbitration Rules of 2020 in Article 13 thereof. However, one may argue that it might be difficult in practice to expect the use of machine arbitrator under the above rules for some substantive, legal, ethical, and procedural reasons, including the writing requirement, the signature requirement of an award, the lack of due process, and the requirement of the provision of reasons in award in some jurisdictions.

Also, one may argue that it might be difficult to enforce arbitral awards rendered by a machine in national jurisdictions, considering that some national laws require that an arbitral award be made by a human arbitrator, as noted above.

Despite the above challenges facing the use of machine arbitrator as an application of AI in the arbitral process, including making an award, Veronika Pavlovskaya, has noted that AI might be beneficial for parties, arbitrators, and counsels, stating that:

“Such cooperation between artificial intelligence (AI) and arbitration is beneficial for all participants involved in arbitration. It provides both parties and arbitrators with additional tools that help to make dispute resolution more effective. Though machine arbitrators now seem fantastic and taken from the Matrix movie, they are not an illusion and will become our reality very soon, and we shall be ready to implement them into the existing system to make this system better. The use of machine arbitrators will face problems like hackers, and difficulties with the enforcement of the awards in national courts before they get used to new technologies, but digitalization of arbitration is still worth trying (Pavlovskaya, 2018).”

Both the arbitration community and the business community should anticipate more developments in the field of arbitration in the next decade for legal, logical, and practical reasons because of the rapid technological evolution, which relates directly to the digital economy, including the online markets. Also, it should be emphasised that some unexpected ‘extraordinary’ circumstances may dictate the use of a machine arbitrator in the next decade such as the current Coronavirus pandemic.

The use of a machine arbitrator in the foreseeable future will mainly depend on the developments of the business sector, which may dictate some legislative amendments at the national level and at the international level as well. However, the use of a machine arbitrator should not replace a human arbitrator; rather, a machine arbitrator should help a human arbitrator in both regular and extraordinary circumstances to reduce the cost, to save time, and to accelerate the arbitral process, including making an arbitral award. A machine arbitrator can help not only in making an award but also in drafting an award to save time (Snider & Dilevka, 2018).

On that basis, national laws and institutional arbitration rules should change to meet state-of-the-art developments of business and technology. Once national laws have been amended, courts will not be reluctant to enforce machine arbitral awards, especially that online arbitral awards might be recognised and enforced in the same manner and to the same effect as traditional awards in some jurisdiction, as explained earlier.

On this matter, it should be emphasised that some national courts, either in common law or in civil law countries, have created online court systems (facilities) that allow filing of lawsuits and submission of documents online. This may facilitate the enforcement of arbitral awards in national jurisdictions, including online arbitral award, and machine arbitral awards in the future.

For example, in Australia, a common law country, the Federal Court of Australia has created an electronic filing facility (eLodgment) where all documents must be lodged, to the extent possible, through this online platform. The creation of this platform has come as part of the arrangements for the continued operation of the Federal Court during the Covid-19 outbreak in Australia, noting that only registered users can use this facility (Law, 2020).

In this, it should be mentioned that international arbitration is regulated in Australia under federal law, i.e., International Arbitration Act of 1974, which has been amended in 2010 and in 2015 (Law, 1974). This means that the Federal Court exercises original jurisdiction over

international arbitration matters. However, state courts retain jurisdiction in some circumstances that is based on Section 18 of the above Act (Law, 1974).

Does the Use of Machine in Making an Arbitral Award Raise Ethical Issues?

The use of a machine arbitrator in making an arbitral award may raise some ethical issues such as impartiality, independence, fairness, and equality.

In international commercial arbitration, ethical issues are of importance for many reasons, including that the duty of an arbitrator to treat parties equally constitutes a legal right of parties, as enshrined by national laws and by international arbitration rules as well. An additional reason is that the good reputation of arbitrators would help the arbitrators themselves, and the arbitration institutions alike. That is because any conflicts of interest may contradict the general ethical principles of international commercial arbitration. On that basis, an arbitrator must refrain from accepting an appointment, or continuing to act as an arbitrator in case of any doubts as to his/her impartiality or independence that is based on the General Standard 2 of the IBA Guidelines on Conflicts of Interest in International Arbitration. On this matter, one may note that arbitration in practice has become more transparent, and subject to more specific rules (Rogers, 2008).

Veronika Pavlovskaya has linked the above IBA Guidelines to the use of a machine arbitrator in making an arbitral award, stating that:

“There are some situations from the lists which might be applicable to machine arbitrators. For instance, if the arbitrator had a prior involvement into the dispute, it falls under cl. 2.1.2 of the IBA Guidelines (Waivable Red List). In case, any of the parties used certain algorithm for initial prediction of the outcome of the case, and this algorithm later serves as a machine arbitrator, it means that this machine arbitrator is predisposed, because it has already analysed the same circumstances and documents. It is possible to avoid such bias by using different software for predictions and decision-making (Pavlovskaya, 2020).”

Most international arbitration laws, institutional arbitration rules, and national arbitration laws require arbitrators to treat parties impartially and equally. Absent impartiality, independence, and equality, parties may have the right to challenge the arbitrators, as well as to challenge an award before a national court based on the New York Convention of 1958, based on international regulations, and based on national laws.

For example, the UNCITRAL Model Law, as Amended in 2006, provides in Article 12(2) that:

“An arbitrator may be challenged only if circumstances exist that give rise to justifiable doubts as to his impartiality or independence, or if he does not possess qualifications agreed to by the parties. A party may challenge an arbitrator appointed by him, or in whose appointment he has participated, only for reasons of which he becomes aware after the appointment has been made”.

At the institutional level, the Rules of the German Arbitration Institute, Deutsche Institution für Schiedsgerichtsbarkeit, provide in Article 9, entitled Impartiality and Independence of the Arbitrator, Duties of Disclosure, that:

“Every arbitrator shall be impartial and independent of the parties throughout the entire arbitration and shall have all of the qualifications, if any, that have been agreed upon by the parties”

At the national level, the Dutch Arbitration Law provides in Article 1033 that:

“An arbitrator may be challenged if circumstances exist that give rise to justifiable doubts as to his impartiality or independence”.

As far as the use of AI in arbitration is concerned, a question may be raised on the possibility to challenge a machine arbitrator in case of a lack of due process, i.e., a lack of equal treatment of both parties. An additional question that may be raised pertains to the possibility to challenge a machine arbitral award in case of a lack of impartiality and fairness when making a final decision.

To answer both questions, it should be referred first to the EU Ethics Guidelines for Trustworthy AI. According to these Guidelines, trustworthy AI should be lawful, ethical, and robust. The Guidelines explain the meaning of ethical as respecting ethical principles and values. This may include, inter alia, fairness, and equality.

One may note that a machine arbitrator should not be biased, i.e., it should be fair and impartial. Otherwise, a machine arbitral award might be challenged before a national court, if national law allows such a challenge. This may dictate amending national laws to meet state-of-the-art developments of law and technology, including the use of a machine in arbitration, which will surely be useful for businesses, and for consumers, if consumer arbitration is applicable. A machine arbitrator may also be useful for the arbitration institutions, especially when several cases are filed while a few arbitrators are listed so that natural arbitrators may not be able to handle all the cases filed within due course.

However, others may note that AI programs do not have “*cognitive biases*” in comparison to humans. In practice, a machine arbitrator might not be independent or impartial in cases where the developer/programmer of such a machine provides data in favour of one of the parties for some immoral and illegal grounds, including nationality, economic benefit, colour, and race. In that, one may note that AI programs are learning human biases and exaggerating them (Scherer, 2019).

To solve this practical problem, one may recommend that a machine should learn itself having the access to information based on machine learning mechanism (Pavlovskaya, 2019).

On the differences between a human arbitrator and a machine arbitrator in relation to impartiality and independence, Veronika Pavlovskaya provides a practical example, stating that:

“In LCIA case No. 122053, the arbitrator was successfully challenged because 5 years before that dispute, the arbitrator represented the respondent in the case against the claimant’s group of companies. If the parties agreed to use the machine arbitrator, the issue with the previous client-counsel relationships would be excluded (Pavlovskaya, 2020).”

Finally, and most importantly, a question that may be raised of whether the general standards of impartiality and independence apply to a machine arbitrator. To answer this question, I must refer to the same commentator who concludes that:

“Both impartiality and independence standards are applicable to the machine arbitrators. However, in regard to the impartiality, machine arbitrators could help to remove the majority of human biases, but they would not be able to overcome the systemic bias in certain situations, the human involvement would be necessary” (Pavlovskaya, 2020).

CONCLUSION AND RECOMMENDATION

This article has examined deeply and extensively the possibility of using a machine in making arbitral awards, especially arbitral award resulting from cross-border Business to Business (B2B) disputes, from different perspectives, including technological, legal, and practical perspectives.

This article has also examined the possibility to amend national laws of arbitration and institutional arbitration rules to allow, or not to prohibit, the use of a machine arbitrator in the arbitral process generally, and in making an arbitral award.

Apart from that, this article has examined whether the use of a machine arbitrator in making an arbitral award violates the procedural public policy, including due process, i.e., equality, fairness, and independence.

This article concludes that the use of a machine arbitrator in making arbitral awards, including online arbitral award, is possible from both technological and practical perspectives. Therefore, amendment of national laws and institutional arbitration rules is a must to match both the practical and the technological state-of-the-art developments of both law and technology.

Also, this article concludes that using a machine arbitrator would provide several opportunities for the business community and for the arbitration community as well. This may include, *inter alia*, speed, variety, creativity, accuracy and efficiency.

Moreover, this article concludes that using a machine arbitrator in making arbitral awards, including online arbitral awards will face some legal, practical, and technological challenges. However, there is no doubt that AI will play a role in the efficacy of dispute resolution generally, and of online dispute resolution, in the foreseeable future. This will dictate using a machine arbitrator as an application of AI in the resolution of cross-border commercial disputes, especially B2B e-commerce disputes, and in making arbitral awards.

In addition, this article concludes that it is not intended that a machine arbitrator will replace a human arbitrator entirely. Rather, a machine will assist a human arbitrator in the arbitral process, and in the decision-making process. To put this into a practical context, a machine shall not be used in all cases, i.e., a machine might be used for making decisions pertaining to small or medium claims. In this, an arbitrator may have the final word on the award rendered by a machine, especially those awards arising out of disputes that reflect commercial interests between businesses or private commercial entities.

This article recommends using a machine arbitrator as an application of AI for solving small claims first to make sure that this use will promote the efficacy of the arbitral process generally, and the efficacy of the decision-making process.

Also, this article recommends that national laws need to change to allow making arbitral awards not only by a human arbitrator but also by a machine arbitrator, i.e., AI programs, especially that some international regulations do not prohibit the use of a machine in arbitration,

including the UNCITRAL Arbitration Rules, as Amended in 2013.

Moreover, this article recommends that institutional arbitration rules need to include provisions that allow, or not prohibit, the use of a machine in arbitration, either explicitly or implicitly.

In addition, this article recommends ensuring that a machine arbitrator will behave fairly when making an arbitral award through adopting neutral AI applications or programs by the developers/programmers.

ENDNOTE

1. <https://www.ebay.com/help/buying/resolving-issues-sellers/using-resolution-center-buyer?id=4636>
2. Protocol on Online Dispute Resolution of the Saudi Centre for Commercial Arbitration, <https://sadr.org/ADRServices-arbitration-ODR?lang=en>
3. The National Artificial Intelligence Strategy in Saudi Arabia. <https://www.usnews.com/news/world/articles/2020-10-21/saudi-launches-national-artificial-intelligence-strategy>
4. <https://sabq.org/Tv3QmP>

REFERENCES

- Aditya, S.H. (2020). *Future of AI in arbitration: The fine line between fiction and reality*. Kluwer Arbitration Blog.
- Amro, I. (2014). *Recognition and enforcement of foreign arbitral awards in theory and in practice: A comparative study in common law and civil law countries*. Cambridge Scholars Publishing, UK.
- Amro, I. (2019). *Online arbitration in theory and in practice: A comparative study of cross-border commercial transactions in common law and civil law countries*. Cambridge Scholars Publishing, UK.
- Law. (1974). *International arbitration act of Australia*. Retrieved from http://www6.austlii.edu.au/cgi-bin/viewdoc/au/legis/cth/consol_act/iaa1974276/s18.html
- Law. (2006). The UNCITRAL model law on international commercial arbitration. *The United Nations Commission on International Trade Law*. Retrieved from https://www.uncitral.org/pdf/english/texts/arbitration/ml-arb/07-86998_Ebook.pdf
- Law. (2020). *The federal court of Australia electronic filing facility*. Retrieved from <https://www.fedcourt.gov.au/online-services/elodgment>
- Nappert, S., & Paul, C. (2018). Case study: The practitioner's perspective. In M. Piers, & C. Aschauer, (Eds.), *Arbitration in the Digital Age: The Brave New World of Arbitration*, Cambridge University Press, UK.
- Pavlovskaya, V. (2018). Young approaches to arbitration. *The 10th ICC YAF-YAAP Joint Conference*. Vienna.
- Pavlovskaya, V. (2019). *Machine arbitrators: Ethical issues*. Baltic Arbitration Days, Riga.
- Pavlovskaya, V. (2020). *Machine arbitrators: Technology and ethics in international arbitration*. Arbitration Bulletin of the Court of Arbitration, No. 26, Poland.
- Rogers, C.A. (2008). *The ethics of international arbitrators*. Legal studies research paper series. Boccioni University, Institute of Comparative Law (IDC). Italy.
- Scherer, M. (2019). *Artificial intelligence and legal decision-making: The wide open? Study on the example of international arbitration*. Queen Mary School of Law Legal Studies Research Paper No. 318/2019.
- Snider, T., & Dilevka, S. (2018). *Saudi Arabia: Artificial intelligence and international arbitration*. Retrieved from <https://www.mondaq.com/saudi-arabia/new-technology/703064/artificial-intelligence-and-international-arbitration-going-beyond-e-mail>
- Wahab, M.A. & Katsh, E. (2018). *Revolutionizing technologies and the use of technology in international arbitration: Innovation, legitimacy, prospects and challenges*. In M. Piers, & C. Aschauer, (Eds.), *Arbitration in the Digital Age: The Brave New World of Arbitration*, Cambridge University Press, UK.