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THE INVESTOR–STATE ARBITRATION LEGITIMACY CRISIS: COULD AI BE ITS FUTURE SAVIOR (OR RESURRECTOR)?

Abstract: *The world of arbitration has not escaped the all-pervading impact of AI. Stakeholders are not only assessing the current impact of AI on the practice of arbitration but also speculating on its future role. The possibility of AI replacing human arbitrators has also figured in the discussions. This paper focuses on the use of AI in the context of investor–State arbitration, which of late, has been facing fierce backlash for its purported deficiencies. The paper explores whether AI could be used to remedy some of the burning issues in the investor-state dispute settlement system, which have culminated in its “existential crisis”. The paper assesses the extent to which human arbitrators and other relevant factors have contributed to the crisis, and then examines the suitability of AI to act as an arbitrator. The paper lays a road map for the potential role of AI in ISA and attempts to answer the central question – could AI prove to be a resurrector or a disruptor of the ISA system.*

Key words: Artificial Intelligence, Arbitration, Decision Making, Investor–State Dispute Settlement, Investor–State Arbitration.

1. INTRODUCTION

The obsession of humans with the idea to bring to life inanimate objects in the form of intelligent beings is nothing new. One can look back to some of the earliest mythologies and then, in the relatively modern times, glimpse at the science fiction genre, in order to observe and appreciate

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how dreams were portrayed as reality. For instance, in Greek mythology, the “first robot” to mark its presence on the planet earth was a bronze giant called Talos.¹ It was “programmed” by Hephaestus to guard the shores of Crete.² Similarly, a Burmese Buddhist text, *Lokapanatti*, mentions the concept of “bhuta vahana yantras (spirit movement machines)” which possessed whirling swords – deployed to guard Buddha’s Relics hidden by King Ajatashatru beneath a stupa.³ In the recent past, we have come across similar representations in the form of films franchises like *Iron Man*,⁴ which introduced the world to Tony Stark’s comrade, a benevolent super artificial intelligence (AI) named J.A.R.V.I.S. (Just A Rather Very Intelligent System), or *Blade Runner* which featured dangerous “bioengineered ‘repllicants’ indistinguishable from humans, having four-year lifespan, implanted with false memories to make them believe they are human.”⁵

Generally, the mass media have often depicted AIs as sinister and dystopian entities. However, the ground reality remains that they have largely been rather supportive and beneficial to humans – making life more convenient. The widely used navigation systems such as Google Maps or Apple Maps, Amazon’s Alexa, and Apple’s Siri are a few examples that one can immediately think of. AI today is being utilized in almost all industries in some form or other. Its functionality is constantly improving, with greater time and resources being dedicated to AI development and to maximization of their capabilities to aid, or even independently perform, an array of human activities.

As the technological revolution continues to amaze us, the turning point of artificial intelligence seems inevitable. An in-depth analysis of the functioning of AIs is outside the scope of this paper; but to put it simply, an AI is a complex data processing system that has access to a vast quantity of data and algorithms. In other words, when a machine is programmed to “think” and act like a person, reflecting human intelligence, it is referred to as having artificial intelligence.⁶

1 Aayor, A., 2018, *Gods and Robots: Myths, Machines and Ancient Dreams of Technology*, Princeton, Princeton University Press, p. 7.

2 *Ibid.*

3 Sharma, M. S., 2019, Hindu Epics Are Full of AI, Robots. Legend Has It That They Guarded Buddha’s Relics, *The Times of India*, 31 March (<https://timesofindia.india-times.com/home/sunday-times/all-that-matters/hindu-epics-are-full-of-ai-robots-legend-has-it-that-they-guarded-buddhas-relics/articleshow/68648962.cms>, 25. 05. 2023).

4 Created by Stan Lee, Larry Lieber, Don Heck and Jack Kirby, published by Marvel Comics.

5 Hogan, M., Whitmore, G., 2015, The Top 20 Artificial Intelligence Films – in Pictures, *The Guardian*, 8 January, (<https://www.theguardian.com/culture/gallery/2015/jan/08/the-top-20-artificial-intelligence-films-in-pictures>, 25. 05. 2023).

6 Scherer, M., 2019, International Arbitration 3.0 – How Artificial Arbitration Will Change Dispute Resolution, *Austrian Yearbook of International Arbitration*, p. 513.

Imbibing the technological machine knowledge into the process of any domain has become almost a *sine qua non* for its advancement in the recent past. Accordingly, through evolution AI is very much ingrained in the daily lives of humans. For example, AI is used to filter spam emails, social media applications like Facebook, Instagram and YouTube display content and advertisements according to the user search preferences, etc.⁷ Currently, the utilization of AI is progressive wherein AI, for example, is used in field of medical sciences to develop crucial lifesaving vaccines for humans or for running fully autonomous taxis within designated areas.⁸

Similarly, the world of law, including arbitration, is not unfettered from the influence of ingesting the concept of AI into the adjudicatory system.⁹ Technological products like machine learning systems have already reserved their place in the justice delivery mechanisms. For example, the KIRA systems were developed to extract data, clauses and other provisions out of the submitted documents.¹⁰ Products like CARA are used to review cases from legal documents and attempts are being made to create a fully automated AI for the prediction of court decisions.¹¹ To provide assistance to judges in arriving to the decisions, legal analytics tools developed by Lex Machina are relied upon for predicting the results of litigation.¹²

In general, the use of AI in dispute settlement, particularly conventional litigation, is not something unheard of and has largely been dependent on the user, i.e., practitioners of law (attorneys) or the administrators of law (judges). For practitioners, AI has played a significant role in works that require minimal professional intervention, such as pre-proceeding document review or legal research.¹³ For example, AI Ross which has been developed by IBM, has been adopted by many law firms around the world, to make research simpler and quicker, in addition for vetting

7 See, generally, Waqar, M., 2021, The Use of AI in Arbitral Proceedings. SSRN, (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3931233, 25. 05. 2023).

8 See, generally, Baidu, 2021, From Health Care to Infrastructure: How AI Is Changing the World for the Better. *MIT Technology Review*, 20 August, (<https://www.technologyreview.com/2021/08/20/1032358/from-health-care-to-infrastructure-how-ai-is-changing-the-world-for-the-better/>, 25. 05. 2023).

9 Mahnoor, W., 2021, The Use of AI in Arbitral Proceedings, (<https://ssrn.com/abstract=3931233>).

10 Kira Company, What is Kira, (<https://kirasystems.com/how-kira-works/>, 25. 05. 2023).

11 CARA A.I, (<https://casetext.com/cara-info>).

12 Lex Machina, What we do, (<https://lexmachina.com/about/>, 25. 05. 2023).

13 See, generally, Donahue, L., 2018, A Primer on Using Artificial Intelligence in the Legal Profession, *Harvard Journal of Law & Technology*, 3 January; see also, Sourdin, T., 2018, Judge v. Robot? Artificial Intelligence and Judicial Decision-Making, *UNSW Law Journal*, Vol. 41, No. 4, p. 1114, pp. 1114–1133.

legal contracts and briefly summarizing case law.¹⁴ Analysis of contracts of companies is an uphill task especially when they have a huge number of them. The process can be time-consuming and as well as expensive. For analysis of contracts of companies, an AI powered system called COIN is being used at JPMorgan to interpret commercial loan agreements in a matter of seconds.¹⁵

As far as administrators of law are concerned, there have been some significant developments in the recent past. For example, Mexico has started relying on AI for simpler administrative decisions. EXPERTIUS System is currently providing guidance in Mexico in determining whether the applicant is eligible to be granted a pension.¹⁶ In such systems AI provides a decision largely based on the “feeding obligation”.¹⁷ The advice provided by the system is then further determined by the expert legal knowledge elicitation and representation, fed during its development by judicial officers. Predictive coding has also recently come to light as a tool being used in the US to help with sentencing decisions and determining whether recidivism is likely in criminal cases.¹⁸ Bail hearings often warrant the judge to conduct a risk assessment of the defendant, in terms of the danger of them being a flight risk or even re-offending. To make the process and decision making more convenient and foolproof, judges often rely on AI-powered software to generate a score quantifying a defendant’s risk of repeating the offense or fleeing. These systems provide a non-binding but often influential risk assessment with the help of machine-learning algorithms that rely on the available data to extend a prediction about the accused.¹⁹ An example of such a system for predicting re-offending and crime used in the USA is called the Correctional Offender Management Profiling for Alternative Sanctions (COMPAS).²⁰

14 Kini, A., 2020, Artificial Intelligence and the Legal Profession: An “Intelligent” Way Ahead?, *Bar and Bench – Indian Legal News*, 3 June, (<https://www.barandbench.com/columns/artificial-intelligence-and-legal-profession-an-intelligent-way-ahead>, 25. 05. 2023).

15 Donahue, L., 2018, A Primer on Using Artificial Intelligence in the Legal Profession, *Harvard Journal of Law & Technology*, 3 January.

16 Sourdin, T. 2018, p. 1114.

17 See, generally, Cáceres, E., 2008, EXPERTIUS: A Mexican Judicial Decision-Support System in the Field of Family Law, Conference Paper, *Legal Knowledge and Information Systems JURIX 2008: The Twenty-First Annual Conference on Legal Knowledge and Information Systems*, Florence, Italy, 10–13 December 2008, pp. 78–87.

18 Sourdin, T., 2018, p. 1114.

19 See, generally, Surden, H., 2019, Artificial Intelligence and Law: An Overview, *Georgia State University Law Review*, Vol. 35, No. 4, pp. 1306–1337.

20 Forrest, K.B., 2021, COMPAS: Case Study of an AI Risk Assessment Tool, *When Machines Can Be Judge, Jury, and Executioner*, Singapore, World Scientific Publishing, p. 65.

Although the technological advancement is something that inspires awe and deserves appreciation, some intriguing questions do arise, such as, can a robot that simulates intellect like humans decide something on its own? And more importantly, what about emotional intelligence, which is also an important aspect to consider? These questions could be raised about many jobs and different sectors of the economy. After all, we are all wondering how our jobs will be impacted by the revolution and evolution of AI. Will machines replace us in our workplaces in the not-so-distant future? Can they ever be an adequate replacement for humans? The impact of AI is expected to be so pervasive and all-encompassing that there is currently no discipline or area of study that is not concerned with assessing AI's current and potential use, as well as implications that will stem from such use.

This paper will limit its analysis to the realm of investor–State dispute settlement (ISDS). Much has been written recently on the use and the role of AI in international arbitration. The aim of the paper at hand is to dig deeper in terms of this intriguing topic, and to shift the focus specifically to ISDS where not only legal issues but political concerns may also be at stake.

Before one delves into the issue of use of AI in ISDS, particularly investor–State arbitration (ISA), it is pertinent to examine whether there is a need for AI in ISA. Therefore, this paper begins with a brief background on ISA and delves into the issue of the purported “legitimacy crisis” thereof. Thereafter, the paper examines the role of AI in ISA with particular focus on whether AI can serve as a viable replacement for human arbitrators. And finally, based on the evaluation and findings, the paper will conclude whether the usage of artificial intelligence will serve as a resurrector or disruptor of ISDS systems. The paper will review the existing use of AI in the general legal systems and international commercial arbitration for comparative rationalization.

2. MAPPING THE INVESTOR–STATE ARBITRATION “LEGITIMACY CRISIS”

Stakeholders across the board have for long been highlighting various issues that plague the existing practice of ISA, which is the most popular form of ISDS.²¹ Countries enter into bilateral (at times also multilateral) investment treaties (BIT or MIT) to promote cross-border investment and

21 Usually, ISDS includes direct methods of settlement through negotiation, or informal methods that employ a third party, such as the provision of good offices, mediation or conciliation. (https://unctad.org/system/files/official-document/iteiit30_en.pdf, 25. 05. 2023, p. 16).

business. BITs essentially help in facilitating investments in “host States” made by foreign investors belonging to the other State party to a particular BIT. Moreover, BITs and MITs typically include two sets of dispute settlement clauses – one that governs disputes between foreign investors and the host State, and the other that governs disputes between the State parties to the international investment agreement. Therefore, ISA as a dispute settlement mechanism allows a foreign investor to claim a violation of the relevant BIT by a host State before a “neutral” arbitral panel. The high stakes, both financially for the investor and internationally for the host State, have incentivized the development of an industry around this practice of ISA. There are international institutions, such as the International Centre for Settlement of Investment Disputes (ICSID),²² that focus largely on ISA, and there are others, such as the New York International Arbitration Centre (NYIAC),²³ the London Court of International Arbitration (LCIA)²⁴ and the Singapore International Arbitration Centre (SIAC),²⁵ to name a few, that also facilitate and provide a “neutral” ISA forum. Despite the included sophistication in this process, it has come under heavy scrutiny. The existing practice of ISA has been labelled as “the lack of consistency, coherence, predictability, and correctness of arbitral decisions by ISDS tribunals.”²⁶ Further, there have been certain systemic problems with ISA that have become the basis of its criticism to an extent that it is, arguably, witnessing a “legitimacy crisis”.

2.1. ARBITRATOR APPOINTMENT

A significant number of BITs that include ISA as the mode of dispute settlement include the procedure for constituting an arbitral tribunal. An average tribunal consists of a total of three arbitrators, where usually each party appoints an arbitrator and the two party-nominated arbitrators appoint the third, i.e., the presiding arbitrator. This appointment of arbitrators is also something that has become a contentious issue as far as the legitimacy of ISA is concerned. Despite the arbitrators being appointed by a specific party, they are expected to be neutral, transparent and confidential.²⁷ These requirements translate into the legitimacy of the arbitral

22 For more details about the variety and extent of services offered, refer to <https://icsid.worldbank.org/>.

23 <https://nyiac.org/>.

24 <https://www.lcia.org/>.

25 <https://siac.org.sg/investment-arbitration>.

26 Knieper, J., 2021, UNCITRAL's Working Group III Discussion on Dispute Prevention, *University of St. Thomas Law Journal*, Vol. 17, No. 2, pp. 455–459, pp. 455–465.

27 *Ibid.*

tribunal and ultimately – of the arbitral award that they pronounce. It is, therefore, worrying that 55% of all known investment-treaty disputes included the same group of individuals in different capacities.²⁸ These people are from Europe, the United States or Canada.²⁹ In some cases they sit on arbitral tribunals; in others, they act as counsel and in some instances also call upon each other as witnesses (“double-hatting”).³⁰

It is argued that, in the hope of being called upon again in the future as a party-nominated arbitrator, human arbitrators might be moved to make biased decisions.³¹ It must be kept in mind that the appointing party is not an employer. Despite the unethical nature of this practice, it has become normalized.³² Although there is no direct evidence to suggest that arbitrators are biased, the fact that the same party keeps repeatedly appointing them is certainly indicative.³³ In view of this rising criticism, the EU has recently proposed the establishment of the International Court System (ICS).³⁴ The ICS aims to replace the ad-hoc procedure of arbitrator appointment with a permanent panel of judges and cut down on friendly appointments.³⁵ It also introduced the concept of allowing access to an appellate mechanism.³⁶ This provision can be found in the EU-Canada Comprehensive Economic and Trade Agreement (CETA), and even the EU-Vietnam Free Trade Agreement (EVFTA). However,

28 Khor, M., A Summary of Public Concerns on Investment Treaties and Investor-State Dispute Settlement, in: Mohamadiéh, K., Ka-Min, L. (eds.), 2015, *Investment Treaties: Views and Experiences from Developing Countries*, Geneva, The South Centre, p. 7, pp. 1–16.

29 *Ibid.*; see also, Harten, G. van, 2012, Arbitrator Behaviour in Asymmetrical Adjudication: An Empirical Study of Investment Treaty Arbitration, *Osgoode Hall Law Journal*, Vol. 50, No. 1, p. 1, pp. 211–268.

30 Harten, G. van, 2012, p. 1.

31 Donaubauer, J., Neumayer, E., Nunnenkamp, P., 2018, Winning or Losing in Investor-to-State Dispute Settlement: The Role of Arbitrator Bias and Experience, *Review of International Economics*, Vol. 26, No. 4, pp. 892–916.

32 Dietz, T., Dotzauer, M., Cohen, E.S., 2019, The Legitimacy Crisis of Investor-State Arbitration and the New EU Investment Court System, *Review of International Political Economy*, Vol. 26, No. 4, p. 750, pp. 749–772.

33 Donaubauer, J., Neumayer, E., Nunnenkamp, P., 2018, pp. 892–916; see also, Franck, S.D., 2009, Development and Outcomes of Investment Treaty Arbitration, *Harvard International Law Journal*, Vol. 50, No. 2, p. 439, pp. 435–489.

34 Kim, J.W., Winnington-Ingram, L.M., 2021, Investment Court System under EU Trade and Investment Agreements: Addressing Criticisms of ISDS and Creating New Challenges, *Global Trade and Customs Journal*, Vol. 16, No. 5, pp. 181–192.

35 Dietz, T., Dotzauer, M., Cohen, E. S., 2019, p. 762.

36 For more details of the ICS system proposed by the EU refer to, Bernardini, P., 2017, Reforming Investor–State Dispute Settlement: The Need to Balance Both Parties’ Interests, *ICSID Review*, Vol. 32, No. 1, pp. 39–41, pp. 38–57.

this does little to decrease the bias of permanent arbitrators. Arguably, it will shift the focus of richer nations and multinational corporations (MNCs) to lobbying for the appointment of friendly arbitrators to such a permanent panel.

2.2. RIGHT TO CLAIM UNDER BITS

Given the possibility of disputes arising between investors and host countries, BITS often provide for compulsory ISA. Since arbitration is based on party autonomy,³⁷ this perpetual agreement to submit to an international forum, side-stepping the possible domestic host-state remedies, is deemed to be a comforting factor for foreign investors. The assumption that domestic courts of the host state might be biased in favor of the host-State government is seen as the foundational rationale for this practice. However, some commentators have also observed that the ISA system is disadvantageous to host nations, for two main reasons; first, only an investor can invoke ISA based on the alleged claim of a BIT violation, and second, richer investors often have more capital at their disposal to arbitrate a claim, compared to a smaller or poorer nation.³⁸ This issue of ISA has also been a subject of political debate. It is seen by some as a violation of the equality principles since domestic investors,³⁹ unlike their foreign counterparts, have to take recourse through the municipal courts of their state.⁴⁰

2.3. INCONSISTENT FINDINGS

The decision of an arbitral tribunal is not binding on another tribunal subsequently assessing a similar dispute. However, glaringly different views of different arbitral tribunals regarding the same concepts have led to a wave of critical academic scholarship on this topic. This has led to scholars arguing that the ISA system is plagued with inconsistent hold-

37 Engle, R., 2002, Party Autonomy in International Arbitration: Where Uniformity Gives Way to Predictability, *Transnat'l Law*, Vol. 15, No. 2, p. 334, pp. 323–356.

38 Laborde, G. 2010, The Case for Host State Claims in Investment Arbitration, *Journal of International Dispute Settlement*, Vol. 1, No. 1, p. 97; see also, Donaubauer, J., Neumayer, E., Nunnenkamp, P., 2018, pp. 892–916.

39 Schill, S., 2017, Reforming Investor-State Dispute Settlement: A Comparative and International Constitutional Law Framework, *Journal of International Economic Law*, Vol. 20, No. 3, p. 656, pp. 649–672.

40 UNCTAD, 2010, *Investor-State Disputes: Prevention and Alternatives to Arbitration*, UNCTAD Series on International Investment Policies for Development, New York–Geneva, UN, p. 37.

ings.⁴¹ Inconsistency, as is argued, “has several dimensions: divergent interpretations of provisions; decisions inconsistent with State party intent; and decisions inconsistent with societal objectives or other areas of law.”⁴² An inconsistent approach, for example, in the context of the Most Favored Nation (MFN) clause is quite evident.⁴³ Gabriel Elgi identifies that there are cases in which an MNF clause has been interpreted expansively and there are those as well where it was interpreted narrowly.⁴⁴ A consistent approach is considered favorable as it would include benefits other than reassuring trust in ISA.⁴⁵ For example, it can help parties understand the possible consequences of their intended actions. However, there is also a counter-argument that inconsistency is not as harmful as it is made out to be, especially in the initial few cases when any new doctrine is being developed, because it allows for the proper assessment of the pros and cons, on a case-by-case basis of a particular doctrine.⁴⁶ Nevertheless, the fact of the matter is that inconsistency in ISA does exist.

2.4. COST

The exorbitant costs involved in ISA are also one of the main concerns and areas requiring reform, as has also been highlighted by the United Nations Commission on International Trade Law (UNCITRAL) Working Group III.⁴⁷ The concern is more alarming when powerful MNCs make claims against poor nations through the ISA mode, because FDI rates have been proven to take a hit when host nations face arbitration. This matter

41 See, for example, Arato, J., Brown, C., Ortino, F., 2020, Parsing and Managing Inconsistency in Investor-State Dispute Settlement, *The Journal of World Investment & Trade*, Vol. 21, Nos. 2–3, pp. 336–373.

42 See, generally, Johnson, L., Sachs, L.E., 2019, Inconsistency’s Many Forms in Investor-State Dispute Settlement and Implications for Reform, (https://scholarship.law.columbia.edu/sustainable_investment_staffpubs/32, 25. 05. 2023).

43 Maupin, J. A., 2011, MFN-based Jurisdiction in Investor–State Arbitration: Is There Any Hope for a Consistent Approach?, *Journal of International Economic Law*, Vol. 14, No. 1, pp. 157–190.

44 See generally, Egli, G., 2007, Don’t Get Bit: Addressing ICSID’s Inconsistent Application of Most-Favored-Nation Clauses to Dispute Resolution Provisions, *Pepperdine Law Review*, Vol. 34, pp. 1045–1072, pp. 1045–1084.

45 Gaukrodger, D., Gordon, K., 2012/03, Investor-State Dispute Settlement: A Scoping Paper for the Investment Policy Community, OECD Working Papers on International Investment, 2012, OECD Publishing, p. 59.

46 *Ibid.*

47 Knieper, J., 2021, p. 455.

becomes understandably worse when they lose.⁴⁸ On the other hand, the high costs also deter small investors from proceeding with ISA.

2.5. LACK OF APPEAL MECHANISM

A scathing criticism of the ISA is related to the lack of an appellate mechanism.⁴⁹ The award of the arbitral tribunal is deemed to be permanent and its decision final and binding. While its enforcement may be challenged before local courts where the execution is desired by the award-creditor, there is usually no tribunal of appeal, so to say. This has been identified and accepted as a pitfall of the current system. The UNCITRAL Working Group recently published a report including the suggestion to include a draft on how to design a provision for an appellate arbitral mechanism.⁵⁰ It recommends an appeal in limited cases, such as a manifest error in the appreciation of the facts, inappropriate tribunal selection, corruption, etc., while also suggesting suspending the effect of the first award pending the appeal.⁵¹ An appellate mechanism would arguably allow for greater transparency as well as consistency.⁵² It would also help in assuaging concerns of impartiality, to some extent.

2.6. LACK OF TRANSPARENCY

Transparency serves as a bedrock of any justice mechanism. However, ISA has faced many challenges on the ground of lack of transparency. Firstly, many arbitral awards, particularly non-ICSID UNCITRAL awards, are still not available in the public domain,⁵³ i.e., they remain confidential. This causes concern for future arbitrators dealing with similar issues, who end up having inconsistent holdings, because of the lack of access to the confidential decisions. The complete exclusion of any third party, despite their interests being indirectly decided by the arbitral tribunal, has also

48 Donaubauer, J., Neumayer, E., Nunnenkamp, P., 2018, pp. 892–916.

49 Langford, M., Potestà, M., Kaufmann-Kohler, G., Behn, D., 2020, Special Issue: UNCITRAL and Investment Arbitration Reform: Matching Concerns and Solutions, *The Journal of World Investment & Trade*, Vol. 21, Nos. 2–3, p. 174, pp. 167–187.

50 UNCITRAL, 2022, Possible Reform of Investor-State dispute settlement (ISDS): Appellate Mechanism, 17 November, (https://uncitral.un.org/sites/uncitral.un.org/files/media-documents/uncitral/en/wp_224-e.pdf, 25. 05. 2023), pp. 4–7.

51 *Ibid.*

52 Langford, M., Potestà, M., Kaufmann-Kohler, G., Behn, D., 2020, p. 185.

53 Knahr, C., Reinisch, A., 2007, Transparency versus Confidentiality in International Investment Arbitration – The Biwater Gauff Compromise, *Law & Practice of International Courts & Tribunals*, Vol. 6, No. 1, p. 98, pp. 97–118.

raised some serious concerns.⁵⁴ In all fairness, this criticism has not gone completely unattended; for example, the ICSID Rules were reformed in 2006.⁵⁵ UNCITRAL followed suit by introducing the Rules on Transparency in Treaty-based Investor–State Arbitration in 2014.⁵⁶ Transparency rules and rules on third-party participation in a number of international investment agreements, such as the Canadian–EU CETA, have contributed to the implementation of these principles.⁵⁷

3. THE FUTURE OF INVESTMENT ARBITRATION: THE ROLE OF AI IN TACKLING THE LEGITIMACY CRISIS

As one can clearly discern from the discussion above that the reasons behind the ISA legitimacy crisis are numerous and extremely complex. While various proposals have been put forth to tackle the crisis – with some even being implemented – we are still far from a final solution to this conundrum. It is thus quite sensible to try and think outside of the box, and to ponder what other solutions could be considered in the future, no matter how far-fetched they may seem at this stage. Given that AI is the main buzzword of the day, and that we seem to be witnessing an extraordinary technological revolution unfold before our very eyes, the question then inevitably arises as to what role AI could play in overcoming the legitimacy crisis of ISDS generally, and of ISA in particular.

Before delving into the possibility and challenges of using AI to this end, one must lay the groundwork for this discussion. First, while the capabilities of AI, even at its present level of development, are unquestionably impressive, they are not limitless. For this reason, it is necessary to systematize the causes of the ISDS legitimacy crisis, and to separate those causes which could potentially be tackled by employing AI from those that would simply fall outside of AI's sphere of impact.

Second, decision making in dispute settlement is a highly complex task for human judges or arbitrators as it entails fact-finding, recognizing evidence, interpretation of laws, etc.⁵⁸ It undoubtedly becomes even more complex in international investment dispute cases, given the wide web of applicable laws and stakes involved. Such being the case, it is fun-

54 Schill, S., 2017, p. 658.

55 ICSID Rules of Procedure for Arbitration Proceedings, 2006, Art. 37.

56 UNCITRAL Rules on Transparency in Treaty-based Investor-State Arbitration, 2014.

57 Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union, Articles 8.36 and 8.38.

58 *Ibid.*

damental to evaluate the feasibilities and efficiencies of AI models that could potentially be used in the decision-making process to overcome the prevailing challenges.⁵⁹ Further, it is also imperative to analyze the two primary expert models of AI to foresee the greater chances of AI becoming an autonomous arbitrator in the world of ISA.

3.1. SYSTEMATIZATION OF CAUSES OF THE ISA LEGITIMACY CRISIS

The causes of the ISA legitimacy crisis can be divided into three broad groups: (a) political causes, (b) structural causes, and (c) human factor. While it should be acknowledged that there may be significant overlaps between these groups (i.e., one cause may very well fit in more than one of these groups), this approach still provides a workable systematization, enabling us to distinguish the causes for which an AI could prove to be useful as opposed to those for which its utility would be questionable, at best.

3.1.1. Political Causes

When one uses the term political or politics, one inevitably refers to the process of accommodating conflicting interests. In the context of ISDS, there are various stakeholders whose interests are aligned at times, but sometimes are diametrically opposed. For example, take the very controversial issue of transparency in ISA. Stakeholders such as the general population of a State party to arbitral proceedings would have an interest in the highest level of transparency possible. The same would hold true, for instance, if arbitral proceedings affected the rights and interests of an indigenous community, i.e., its members would understandably prefer the highest possible level of transparency.

As for the State and the investor, one should be very careful not to paint their positions as black and white. For example, the government of a State may have an incentive to keep the proceedings, and the resulting arbitral award, as far as possible from the view of the public, if they may have an adverse impact on the government's image. An arbitral award requiring the State to pay an exorbitant amount in compensation to a foreign investor could be a dangerous weapon in the hands of the opposition. Even if the State is not a democratic one, the government would most certainly prefer the details of such proceedings, and the resulting award, to be kept confidential. If, on the other hand, the State is successful in defeating the investor's claims, it may then have an incentive for more transparency in

59 *Ibid.*

the given case, but not necessarily. After all, the case may involve sensitive information that the State may still have an interest to keep outside of the public purview. And of course, it would be difficult for the State to know in advance whether it will win the case or not. Given all these considerations, it is safe to assume that the interest of States, overall, is to have less transparency in ISA. That being said, States are also under constant pressure to ensure more transparency in ISA, and this pressure comes from stakeholders, such as media, think-tanks, etc. demanding more transparency.⁶⁰ Moreover, States should not be perceived as a homogenous body comprising homogenous interests. In other words, different States may be influenced by different considerations and different interests.

Speaking of the investors, they too prefer greater confidentiality, and lesser transparency.⁶¹ After all, they would not like their business activities to be scrutinized by the media and competitors at large. In essence, it is the commonly accepted position that parties whose business interests are the subject of proceedings would prefer those proceedings to be as confidential as possible.

All the conflicting interests between different stakeholders will continue to exist irrespective of the technology used in investment arbitration. The solution to the transparency conundrum is to find the right balance between the conflicting interests, and the acceptance of all stakeholders that they cannot get the entire cake for themselves. Thus, when the causes of ISA legitimacy crisis are political in nature, the usefulness of AI would be extremely limited.

3.1.2 Structural Causes

The structural causes of the ISDS legitimacy crisis are causes that stem from how the ISDS system is actually put in place. In other words, a mere change of a rule or a concept that represents a stumbling block between various stakeholders would eliminate that cause of the legitimacy crisis. Take, for example, the criticism that the BITs are feature various

60 Shirlow and Caron observe that “[b]eginning in the mid-2000s, however, arbitral institutions came under increasing pressure to provide for greater procedural transparency.” See, Shirlow, E., Caron, D. D., 2020, *The Multiple Forms of Transparency in International Investment Arbitration: Their Implications, and Their Limits*, in: Schultz, T., Ortino, F. (eds.), 2020, *The Oxford Handbook of International Arbitration*, Oxford, Oxford University Press, p. 478.

61 It is taken as truism in the world of arbitration that business entities, and this includes investors, appreciate the high level of confidentiality that is inherent in arbitration. See, Deli, M. B., *Transparency in the Arbitral Procedure*, in: Gattin, A., Tanzi, A., Fontanelli, F., 2018, *General Principles of Law and International Investment Arbitration*, International Investment Law Series – Vol. 12, Leiden, Brill–Nijhoff, p. 45.

vague substantive standards that often tilt in favor of the investors at the expense of the States.⁶² If their vagueness is problematic, then tackling this cause of legitimacy crisis would simply require a change in the structure. For example, if the States agree that extending the MFN clause to dispute settlement clauses in BITs is an undesirable outcome, then they may simply change the wording of the BIT, ensuring that dispute settlement falls outside of the scope of the MFN.⁶³

A challenging situation arises when and if a structural cause exists as a result of political considerations, i.e., opposing interests of the stakeholders. In such a case, making changes to the ISDS structure is only possible with the shift in positions of the relevant stakeholders who have the power and the influence to make the changes to the structure (e.g., the States themselves or those entities that can exert influence on the States). If, however, the structural deficiency is not a politically charged issue, then resolving it may simply be a matter of logistics. In the former situation, the usefulness of AI would again be quite limited since AI simply cannot alter or shuffle the political interests of the stakeholders. As for the latter, the question is whether it would be possible to utilize AI to pinpoint problematic aspects of the structure and accordingly put forth adequate solutions.

A telling illustration comes in the form of a 2016 study conducted with the idea to explore the potential of AI in drafting international investment agreements.⁶⁴ The data set comprised 1682 BITs in English language, and the program was supposedly trained to determine the provisions reflecting the best practice.⁶⁵ In the end, the program performed quite well in terms of drafting individual clauses and provisions of international investment agreements.⁶⁶ It was practically impossible to distinguish AI-drafted provisions from those drafted by humans. However, in terms of drafting a full-blown and coherent international investment agreement, the AI simply failed.⁶⁷ The end result consisted of randomly ordered clauses, with some crucial clauses being omitted. Even though the AI could not be used to single-handedly draft more balanced international

62 For a detailed discussion on vagueness of international investment agreements (IIAs), see, Kleinheisterkamp, J., 2015, Investment Treaty Law and the Fear for Sovereignty: Transnational Challenges and Solutions, *The Modern Law Review*, Vol. 78, No. 5, pp. 793–825.

63 See, EU–Canada Comprehensive Economic and Trade Agreement, Art. 8.7, para. 4.

64 Scherer, M., 2019, p. 513.

65 *Ibid.*

66 *Ibid.*

67 *Ibid.*

investment agreements, the conclusion was that it could still play a role in terms of aiding the drafters in the drafting process.⁶⁸

3.1.3 Human Factor

Lawyers have the difficult task of working with words which can be interpreted differently by different people. They do not have the luxury of those working in exact sciences, who often will reach one single result, irrespective of who undertakes the laborious job of calculation. So, when arbitrators are given extremely vague, open-ended and ill-defined terms – such as fair and equitable treatment – it is hardly surprising that they come up with varying interpretations and applications. Add to this the fact that arbitrators tend to come from different countries and different legal systems, and variety in their legal thought and approaches become simply inevitable. On top of this, the practices that have developed over time regarding double-hatting and arbitrator appointment, are certainly morally and ethically dubious. All of this serves to showcase how the human factor in the ISA system contributes to the legitimacy crisis.

How could AI be of help? Studies in the area of outcome predictions – specifically on predicting how the courts are going to decide cases – have triggered speculation on the possibility of having AI replace humans as judges as well as arbitrators.⁶⁹ Two prominent studies in this respect focused on the decisions of the European Court of Human Rights (ECtHR) and the Supreme Court of the United States.⁷⁰ A major limitation of these studies was that they focused on binary decision making. In other words, the AI was “asked” to determine whether the court found a violation of a specific article of the European Convention on Human Rights (in the context of the ECtHR), or whether the US Supreme Court affirmed the decision of the lower court, and whether the individual justices voted one way or the other. Thus, these studies were criticized on the ground that their findings cannot be readily applied to the decision-making process of trial courts and arbitral tribunals whose decisions often cannot be simplified into a binary as they involve complex determinations of facts and

68 *Ibid.*

69 *Ibid.*

70 Alteras, N., Tsarapatsanis, D., Preotiuc-Pietro, D., Lamppos, V., 2016, Predicting Judicial Decisions of the European Court of Human Rights: A Natural Language Processing Perspective, *PeerJ Computer Science*, Vol. 2, (<https://peerj.com/articles/cs-93/>, 25. 05. 2023); Katz, D.M., Bommarito, M.J. II, Blackman, J., 2017, A General Approach for Predicting the Behavior of the Supreme Court of the United States, *PLoS ONE*, Vol. 12, No. 4, (<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0174698>, 25. 05. 2023).

fact-driven decisions. They were also criticized for the input features used. Examples of input features used in the US study included background and aspects of the substance of the cases (manner of taking jurisdiction, issue, etc.), the Circuit Court from which the case came, the chronological aspects of the oral hearings, and case timings, as well as the political leanings of individual justices.

As for the study on the decisions of the ECtHR, it focused on three articles of the ECHR: Article 3, which prohibits torture, Article 6, which protects the right to a fair trial, and Article 8, which protects the right to respect for private and family life.⁷¹ Equal number of decisions that found a violation and no violation of the said article were used. The study was particularly criticized for the input features because they comprised selected parts of the decisions themselves, such as the factual background. The data set comprised 584 ECtHR decisions on the three aforementioned articles. The objective was to use selected parts of the decisions (e.g., facts of the case) to train the model on a 10% data subset. The model was then used to predict the outcomes for the remainder of decisions, yielding an accuracy of 79%.

The US study yielded a somewhat lower prediction accuracy of 70.2 % for the decision outcomes, albeit it should be noted that the data set employed was much more impressive than in the study of the ECtHR decisions.⁷² The data set comprised more than 28,000 cases and 240,000 votes by individual justices. The objective was to use the sample data to train the model and then use it to predict outcomes as regards the out-of-sample data.

This relatively high accuracy of results in both studies has, as mentioned previously, prompted speculations as to the possibility of having AI judges and arbitrators in a not-so-distant future.

4. UNDERSTANDING AI MODELS

Initially, the development of the AI technology focused on replication of the human cognitive behavior⁷³ which has lately transformed into what is mostly construed as a forward approach (first AI model). The forward approach AI model is designed to use logic and the algorithm fol-

71 *Ibid.*

72 *Ibid.*

73 Russell, S., Norvig, P., 2010, *Artificial Intelligence: A Modern Approach*, 3rd Ed. London, Pearson, p. 693.

lows the rule-based normative principle.⁷⁴ The said model is curated by humans with the pre-defined set of rules, variables, data sets, and features that are coded in the fixed set of algorithms. Normally, the algorithm uses *if-then* logic and deduces its reasoning to produce the desired result.⁷⁵ In another words, it can be said that this approach is not fully automated AI wherein the algorithms that are the foundation of the AI model are entirely injected with the human inputs and intelligence. However, the core system of the first AI model used *ex ante* rules; it lacked the proficiency in dealing with diverse data, dynamic features and real time predictions. Further, it often required strenuous intervention of humans. Later the game-changing concept of *big data* transformed the algorithmic base of AI coding and enabled the AI system to self-learn from the data fed in.⁷⁶

This evolution gave birth to the second AI model, popularly referred to as *machine learning models*, which are also construed as an *inverse approach*. Unlike the first AI model, here the model code does not contain any pre-defined rules but the algorithm is curated by the use of *pattern recognition* and based on *probabilistic methods*. Essentially, the model formulates the algorithm from huge sets of data that are stored within the system. Also, the approach is predictive wherein the AI model develops its own algorithm with the available big data and it automatically improvises its learning with additional data over the time.⁷⁷ Comparatively, the present system is considerably more intelligent than the first AI model as it does not seek the assistance of the human intellect. However, both of these AI models are relevant in the context of assessing the decision-making ability of an autonomous AI arbitrator and in ameliorating the overall efficacy of the investor–State arbitration process.

This paper’s investigation revolves around the aforementioned two expert models to determine the viability of an AI arbitrator in decision making and proving whether it could convert the challenges into solutions, possibly being the resurrector of the ISA system. It is vital to mention that in general, AI models (including the above two) are capable of easing the burden and significantly increasing the coherence of the dispute settlement system, which again depends on how carefully the world considers which AI model would efficiently benefit the settlement of disputes.⁷⁸

74 See, generally, Scherer, M., 2019, Artificial Intelligence and Legal Decision-Making: The Wide Open? Study on the Example of International Arbitration, Queen Mary School Law Legal Studies Research Paper 318/2019, SSRN, (<https://ssrn.com/abstract=3392669>, 25. 05. 2023), p. 8.

75 *Ibid.*, p. 6.

76 *Ibid.*

77 *Ibid.*, p. 8.

78 *Ibid.*, p. 31.

5. AI ARBITRATORS AND DECISION MAKING

5.1. LEGAL REASONING

In the area of judging, the process of adjudication and decision is wholly premised on the rationale/reasons that are provided. Also, the legitimacy of the decision is recognized from the rationale because it tries to communicate what the decision intended. Arguably, the rationale is present in the entire process of decision making: firstly, in identifying the facts, determination or identifying the applicable legal rules, doctrines, precedents, and other principles, and secondly, in the decision makers analyze the facts and the laws to determine the legal nexus to deliver the decision. Hence, the process of rationalization is evaluative. This process of evaluation demands the decision maker to weed out the irrational factors in every step of the adjudication to weigh which are the reliable factors to reach the most “rightful” conclusion. For example, if the law dictates a mandate but the situation demands otherwise in such cases, the rationale would justify the decision rather than the law itself. Therefore, one could evaluate whether it is “good” or “bad” judgment based on the adequate rationale of the decision.⁷⁹

5.1.1. The Concept of AI Arbitrator and Reasoning

The above hypothesis is relevant in the context of investigating the existing infamous criticism of the AI arbitrator (machine decision making), which suggests that the existing AI decision-making systems are not capable of providing reasoned decisions.⁸⁰ Considering the workability of second AI models, such as machine learning systems, they predict the decision with the existing data rather than deducing the outcome with the deep cognitive and analytical intelligence that humans naturally possess.⁸¹ In general, the second AI model classifies existing data based on probabilistic calculations in forming the necessary patterned algorithm to produce the desired decision. Ultimately, the concept of AI systems in decision making does not follow the conventional process of rationalization which legitimizes the decisions as it provides judgments that are mechanically drawn from functional learning of the data and using a probabilistic method.⁸²

79 Gagnon, V. N., 1966, Legal Reasoning in Judicial Decision Making, *Portia Law Journal*, Vol. 2, p. 123.

80 Scherer, M., 2019, p. 23.

81 *Ibid.*, pp. 23–25.

82 *Ibid.*

Further, the process of legal reasoning cannot be at arm's length in relation to the inclusion of moral reasoning in judgments. Justice Jon O. Newman of the United States stated that the decision of the case is followed by an analysis the definite principles and the personal or other preferences, such as political, economic or social values, and the middle ground of such analogy possibly might explain the reasoning of the decision.⁸³ It is apparent that the decision maker will responsibly deduce the analogy considering the existing facts, principles and social reasons (moral values) in the process of decision making. It is highly subjective that any AI systems will be able to devise a mechanism and distinguish societal morals using probabilistic deductions of reason to arrive at a decision. For example, in international investment disputes, the aggrieved investors can possibly claim “moral damages” against the host State. Moral damages are well recognized by few domestic laws and under the principles of customary international law. To begin with, there is no definition what actions would cause moral damages. However, if the State causes intangible injuries – such as mental, emotional and psychological distress to the foreign investors – that can be construed as moral damage.⁸⁴

Generally, the query of moral damages revolves around the non-financial and non-economic loss of the foreign investor. The primary issue in addressing the claim of moral damages is reparations by quantifying monetary compensation and restitution of claimants to the pre-damaged condition. ISA tribunals face substantial hardship in identifying the reparations for moral damages caused by the State because, arguably, international investment law exists only to protect “foreign investments” and not to safeguard the morals or reputation of the investors. Exceptionally, investment tribunals grant monetary compensation in moral damages claims and account the “morals” under the purview of investment protections.⁸⁵

The scenario of the autonomous machine learning-based AI systems adjudging claims of “moral damages” in international investment dispute, raises several foundational questions. Moral damages in investment claims are of a subjective nature, concretely dependent upon the circumstances

83 Gordley, J. 1984, Legal Reasoning: An Introduction, *California Law Review*, Vol. 72, No. 2, p. 138, pp. 138–177.

84 See, generally, Cabrera, J., Moral Damages in Investment Arbitration and Public International Law, in: Laird, I.A., Weiler, T. J. (eds.), 2010, *Investment Treaty Arbitration and International Law* – Vol. 3, p. 203.

85 See, generally, Webber, S., 2020, Demystifying Moral Damages in International Investment Arbitration, *The Law & Practice of International Courts and Tribunals*, Vol. 19, No. 3, pp. 417–450.

of each case and the nature and scope of the intangible harm caused.⁸⁶ Currently, the machine learning systems are incapable of processing the dynamic realities and of thinking cognitively.⁸⁷ Machine learning systems learn through experience rather than considering the set of rules, morals, social values, etc. Moreover, AI systems are filled with enormous quantities of existing data. When the data related to “morals and reputations” is being stored in the machine, for it to learn and develop its own algorithm to settle the moral claims, then there are high chances of the AI arbitrator predicting the decision irrationally through the use of its probabilistic methodology. The nature of moral claims raised is arguably unique and can differ from case to case, therefore there is the possibility that a particular kind of claim is entirely novel and thus never considered by any previous arbitral tribunal.

Evidently, in this context of ISA, the AI machine learning decision making seems highly detrimental to the disputing parties, considering the uniqueness of claims and divergent interpretations of international law doctrines. Dworkin opined that the theory of law, as an interpretative process, and the participants should understand the meaning of the law as it is derived from the legal context.⁸⁸ The AI machine learning system has cognitive difficulties in processing the contextual meaning of laws.⁸⁹ Consider, for instance, AI models such as Natural Language Processing (NLP), which were developed exclusively to translate legal documents from one language to another. The service providers of NLP advise the users to be cautious because the translation may not be always accurate. When there are multiple languages with different semantics and dialects, and when one language contains similar words to those of other language, the AI system is more prone to producing inaccurate results. This follows the proposition that simply converting the words literally from one language to another is futile, but the contextual analysis is requisite to giving meaning to the translation.⁹⁰ Since AI systems use probabilistic methods in deducing results, they would not satisfy the causal explanations for the decision as they predict logic from the existing data, which may have different contextual meanings. This also indicates that the process of rationalization of legal reasoning is not fulfilled, causing the lack of legitimacy of the AI decision. After all, the purpose of providing the causal

86 *Avena and Other Mexican Nationals (Mexico v. United States of America)*, 2004, ICJ Reports 12, p. 119.

87 Scherer, M., 2019, pp. 20–25.

88 Dworkin, R., 1986, *Law's Empire*, HUP, p. 365.

89 Scherer, M., 2019, pp. 24–25.

90 Waqar, M., 2021.

explanations, i.e., legal reasoning for the decision, is to satisfy the disputing parties and inform the losing party why it lost the case.⁹¹ Therefore, the concept of AI arbitrator massively suffers from lack of understanding of the true meaning of the laws and “contextual misunderstanding”, which, in turn, directly affects the outcome of the dispute.

In cases of ISA, the facts and legal issues are largely unique. AI decision makers, such as machine learning systems, cannot form the algorithm to produce the desired results as the machine learns from the existing data; it classifies and forms the pattern to sketch the algorithm. If the existing data, such as previous cases, doctrines and laws, are not repetitive and if the variety of inconsistent data is fed into the AI, the machine might detect patterns that are not suitable for providing the desired decision and would create code scientifically, using mathematics and probabilistic calculations, which are not relevant to decide the question at hand. Feeding asymmetrical and inconsistent data into the system consumes a lot of time for the machine to learn and determine the patterns among the data, which in most cases are fallible.⁹² For example, in *Dow Chemicals Co. and others v. ISOVER Saint Gobain*, the International Chamber of Commerce tribunal propounded the group of company doctrines.⁹³ Generally, even though third parties to the arbitration agreement cannot be impleaded in the process of arbitration, in this case the tribunal created a new principle, considering the doctrine of equity to include the interested parties who directly or indirectly fall under the purview of the arbitration agreement. If such cases appear before an AI arbitrator, the machine learning systems would not be able to devise the algorithm to address the novel circumstances and propound the required doctrines, which are imperative in the delivery of justice.⁹⁴

5.1.2. The Black Box Issue

An alarming issue that may arise with the implementation of an AI arbitrator in the course of international investment arbitration is that the AI systems and its functions are inexplicable.⁹⁵ The parties to arbitration choose the forum with an enormous amount of faith and trust in the in-

91 Miller, T., 2019, Explanation in Artificial Intelligence: Insights from the Social Sciences, *Artificial Intelligence*, Vol. 267, pp. 17–20, pp. 1–38.

92 Scherer, M., 2019, pp. 18–25.

93 *The Dow Chemical Co. and others v. ISOVER Saint Gobain*, Interim Award of 23 Sep. 1982, 9 Y.B. COM. ARB., pp. 131–137.

94 Soukupova, J., 2021, AI-Based Legal Technology: A Critical Assessment of the Current Use of Artificial Intelligence in Legal Practice, *Masaryk University Journal of Law and Technology*, Vol. 15, No. 2, pp. 289–296, pp. 279–300.

95 *Ibid.*

stitution of arbitration to receive a well-reasoned decision. However, the highly sophisticated machine learning systems are opaque in nature with respect to their formation, structure, and functionality. Generally, the opaqueness of the AI systems are highlighted by the members of arbitration communities as the AI decision making process is highly complex – therefore, lawyers and non-technical people consider that the process of machine learning lacks transparency and the decisions arrived may be without the adequate reasoning.⁹⁶ The existing term for this paradoxical form of AI is the *black box* issue or in the legal literature it is called as *legal black box* as there is no pre-defined rule or sets in the machine learning systems but it use the pattern recognition of the data to formulate the required algorithm on its own.⁹⁷

This black box issue directly connects with the legitimacy of the AI decision, as it is possible for the AI system to formulate hidden patterns in coding the algorithms, which would lead to a black-box decision, as the prediction of the result is achieved using hidden probabilistic prediction methods. Normally, the rationale behind the decision should be explainable to the disputing parties, but in case of black-box decisions the AI systemic formations are vague and not comprehensible, secondly, the prediction of the outcome using probabilistic methodology, rather than deriving the analogy and logic and non-causal explanation of the applicable principles and facts of the relevant case, makes the AI system “non-trustable”.⁹⁸ It is also relevant to highlight that the software processes are also subject to intellectual property rights and can be safeguarded by the inventor, which would raise several concerns regarding the lack of transparency in the entire AI-based arbitration.⁹⁹ Ultimately, the “black box” and “legal black box” issue boils down to the fact that the lack of transparency and the inexplicable AI arbitration system would quell the credibility of the entire institution of arbitration in resolving disputes without human involvement.

5.2. REQUIREMENT OF EMPATHY, EMOTION AND COGNITION IN AI ARBITRATION

It is quintessential in the sphere of decision making that the mere mechanical analyses of existing facts and relevant laws are inadequate, and

96 Scherer, M., 2019, pp. 3, 5, 8–11.

97 *Ibid.*, p. 8.

98 *Ibid.*, pp. 18–25.

99 Yu, R., Spina Ali, G., 2019, *What's Inside the Black Box? AI Challenges for Lawyers and Researchers*, Cambridge, Cambridge University Press, pp. 2–8, (<https://www.cambridge.org/core/journals/legal-information-management/article/whats-inside-the-black-box-ai-challenges-for-lawyers-andresearchers/8A547878999427F7222C-3CEFC3CE5E01#article>, 25. 05. 2023).

the process will involve human emotions, the empathetic element of understanding, and human critical thinking in determining the rights and obligations of the parties in the scheme of adjudication.¹⁰⁰ The implementation of an AI arbitrator in the process of ISA will create a mechanical adjudicatory system where all the abovementioned human cognitive elements are absent. The existing literature views the structure of ISA as *sui generis* and hybrid in nature wherein it inducts various institutional rules, such as International Centre for Settlement of Investment Disputes (ICSID) Rules, the United Nations Commission on International Trade Law Rules, etc.¹⁰¹

This explains the extent of diversity of rules that are applicable in the ISA scheme, apart from other domestic and international laws. The investment tribunals are normally asked to decide complex issues, which begins with ascertaining the proper/applicable laws for the investment dispute to be settled. The choice of appropriate law of the investment dispute is therefore imperative because inappropriate laws are capable of de-functioning the investment tribunal or diluting the definition of “investment” itself. It clearly manifests that the implications of picking the inappropriate law has a detrimental effect on the procedural and substantive rights of the parties under the appropriate laws.¹⁰²

It is possible that the relevant applicable laws are not clearly identified in investment treaties, hence, the substantial burden of choosing the feasible applicable law is dealt with in accordance with the agreed institutional rules.¹⁰³ For example, Article 42 of the ICSID convention reads that the investment tribunals are required to adopt the laws opted for by the parties and in the absence of such a prior agreement on applicable laws, the tribunal is required to apply the laws of the host State (including its rules on conflict of laws) and the relevant rules of international law.¹⁰⁴ As simple as it may sound, the choice of law gets complicated when the relevant instrument opts for application of both domestic and international law or where the tribunal has to apply host State law and international law as a default rule under the provision – and there is a possibility of conflicting outcomes in the application of both. The choice of applicable law can

100 Fabian, S., 2020, Artificial Intelligence and the Law: Will Judges Run on Punchcards?, *Common Law Review*, Vol. 16, No. 4, pp. 4–6.

101 Pinsolle, P., 2000, The Annulment of ICSID Arbitral Awards, *The Journal of World Investment*, Vol. 1, p. 243.

102 Ishikawa, T., 2010, Third Party Participation in Investment Treaty Arbitration, *The International and Comparative Law Quarterly*, Vol. 59, No. 2, pp. 373–412.

103 See, generally, Giorgetti, C., 2014, *Litigating International Investment Disputes: A Practitioner’s Guide*, Leiden, Brill–Nijhoff, pp. 261–286.

104 International Centre for Settlement of Investment Disputes Convention, 1966, Art. 42.

be even more complex in non-ICSID ISA where the tribunal might have to choose from more options. The arbitral tribunals, therefore, are being entrusted with choosing the appropriate applicable laws in exceptionally complex cases and this gives wide powers to the tribunals to adopt the appropriate applicable laws to adjudicate and settle the investment dispute. It is important to highlight that such discretionary powers of the investment tribunals come with the caveat that the investment tribunals will also be extremely careful in choosing the appropriate applicable laws because, if the adopted laws are illogical or inappropriate for the investment claims, then the award can run the risk of being annulled or refused enforcement.¹⁰⁵

Therefore, human factors, such as cognition and critical thinking, are indispensable in the process of ISA and the machine learning systems cannot, at this stage, be equated with the human critical thinking ability. Therefore, the existing first (pre-defined rules AI) and second (machine learning systems) AI models are incapable of exhibiting the cognitive or critical thinking levels of humans in ascertaining the applicable laws in the process of investment arbitration. In the first AI model, the pre-defined rules may not necessarily involve the inclusion of all the possible interpretations of laws (both domestic and international laws). New circumstances and choosing the applicable laws to decide the investment claims cannot be binarily decided without critical human thinking and reasoning. Furthermore, in the second AI model, the discretionary powers of the tribunal in choosing the appropriate applicable laws are based on pattern methods. The machine curates its own algorithm from the existing data and by extending the scope of this AI method to include the AI arbitrator deciding the applicable laws for the investment disputes, the machine learning system may arrive at a conclusion to choose appropriate applicable laws from the existing data rather than critically thinking about the recent circumstances, the recent legal interpretation trends, etc.

It is also fundamental that while the investment tribunal adopts particular law as the appropriate applicable law for the adjudication of investment disputes, the investment tribunals are required to provide a strong rationale for such decision. In the cases of AI arbitration, the issues like the black box, hidden pattern algorithms, and lack of transparency,¹⁰⁶ raise critical concerns regarding whether to trust the AI-arbitrator in investment disputes, as it lacks the capacity of critical thinking, human emotional intelligence, adaptation to versatile circumstances, processing

105 Giorgetti, C., 2014, pp. 261–286.

106 Scherer, M., 2019, p. 8.

nature of hybrid legal interpretations and meanings of domestic and international laws.¹⁰⁷

The requirement possess intuition in the course of decision making is a paradoxical expectation. However, it is imperative to consider that intuition could possibly impact the adjudicating process in its entirety. Furthermore, human intuition and emotional intelligence in the process of rationalization ameliorate the efficacy of the decision-making process. It is also argued that emotionless adjudication leads to an irrational outcome.¹⁰⁸ Additionally, human intuitive knowledge sources logical, rational, and statistical factors in the decision-making sphere. Subsequently, this concept of intuitions largely involves substantiating, learning, and processing assigned tasks. Moreover, it can also be said that learning experiences exhibit some form of human intuition.¹⁰⁹

In the above context, it is clear that adjudication without intuition or emotion might provide irrational decisions. Therefore, decision making in the field of ISA warrants the involvement of human intuition and emotion. For example, complex investment disputes that involve human rights issues, environmental damage, and public interest violations demand human intuition and emotion to understand the concerns of the host state and the impact of foreign investments. It is relevant to invoke the ICSID case of *Urbaser v. Argentina*, wherein the investor brought the claim against the state of Argentina for violating the existing treaty obligation and breaching fair and equitable treatment, and expropriating the investment through the termination of the concession contract.¹¹⁰ In this case, the respondent State, Argentina, submitted a human rights-based counterclaims stating that the foreign investment had caused substantial damages to the socio-economic and basic fundamental rights of its population to water. The tribunal interestingly considered the contents of the counterclaim filed by the host state – although it did not allow it. It further discussed in detail the positive obligations of the individuals, such as foreign investors, under the United Nations Declaration of Human Rights, the International Convention on Civil and Political Rights, etc., and finally held that the State of Argentina had acted in the interests of its public, which was dealing with the fundamental human rights problem of provid-

107 Waqar, M., 2021.

108 See, generally, Gicquello, M., Artificial Intelligence in International Arbitration, in: Schultz, T., Ortino, F. (eds.), 2020, *The Oxford Handbook of International Arbitration*, Part IV, Chapter 25, Oxford, Oxford University Press, pp. 591–605.

109 *Ibid.*

110 *Urbaser S.A. -and Consorcio de Aguas Bilbao Bizkaia, Bilbao Biskaia Ur Partzuergoa v. Argentine Republic*, ICSID Case No. ARB/07/26.

ing water to its people and it changed its governmental policy to safeguard the fundamental rights of its citizen.

This decision highlights the importance of human intuition and emotion in dealing with investment disputes. In the case of the human rights-based counterclaims filed by the host State, it is fundamental to understand that the ISA cannot be mechanical in considering such counterclaims, rather it requires human intuition and emotional intelligence to empathize with the host state's concerns about human rights issues and decide the investment claim at hand. If the same case were to be decided by an AI system, the human rights-based counterclaims and arguments would most likely not be considered because international investment law does not, generally, deal with human rights issues at large and it would be given less importance while deciding the investment dispute, especially when the existing data does not involve such issues. Such non-consideration of human rights issues would go unaddressed and it would not be a counting factor in measuring the impact of the host State's action against the investor, where the demarcation of the State's regulatory powers in cases involving public interests is faded and the obligation towards the foreign investors may supersede the human rights concerns of the host State.

Another criticism of AI-based decision making is that the machine learning systems basically lack "common sense" as the machine learning systems are designed to digest the meanings of the data fed in but not the common sense that prevails within humans. It is impossible to expect that every process of adjudication involves clear definitive laws and tools to arrive at the rightful decision. Most often, the commonsensical meaning of the words differ from what is actually intended. Such being the case, AI systems are alien to the commonsensical meaning and understanding of the words (being facts or laws). Therefore, it is clear that when AI systems are incapable of processing the commonsensical meaning used in the real world, it may affect the case at hand as it would become cumbersome to derive the true meaning during the fact-finding process, evidence administration, providing reasonings, etc.

Also, the role of expert witnesses and *amicus curiae* in the investment arbitration process are considered as quintessential assisting the tribunals in understanding the facts, evidence and materials, etc. In the process of investment arbitration, the human arbitrator having empathy and emotion, positively evaluates the statements, materials or reports submitted by the expert witnesses and *amici curiae*. In the absence of expert witnesses and *amici curiae*, it would be almost impossible for an investment arbitrator to understand the complexities that are present in each unique case,

involving different knowledge materials belongs to various domains, such as scientific, social, medical, intellectual property, environmental projects, finance, etc. However, the induction of an AI arbitrator, without empathy/emotion, in the adjudicatory system would question the authenticity and weightage that should be given to the submissions made by the expert witnesses and *amici curiae* in ascertaining the true facts and evidence in investment arbitration.

In the case *Chemtura Corporation v. Government of Canada*,¹¹¹ the issue concerned the Canadian State's ban on a pesticide product due to its hazardous nature. Since the investor engaged in similar business it was claimed before investment tribunal that the ban substantially affected its investment. After careful considerations of the submissions made by the State agencies, the tribunal held that it would not be appropriate for the tribunal to judge the correctness or adequacy of the scientific results based on the superior specialized national regulatory agencies.¹¹² In this case, the investment tribunal empathized with the scientific agencies of the host state which had concluded in their report that the pesticides developed by the investors were hazardous chemical and caused an imminent danger to the people of the host state and its environment. Clearly, the tribunal employed empathy and emotion when considering the scientific reports that were submitted by the state regulatory authorities. Arguably, the AI systems, without the ability to empathize, unlike humans, would not benefit from ascertaining, weighing and the consideration that should be given any scientific or other detailed reports that are presented by expert witnesses and *amici curiae* on behalf of the investor or host State before the investment arbitral tribunal. This would ultimately impact the entire process of investment arbitration, from fact finding and evidence to the rendering of the final award.

Supplementing the abovementioned remarks, it has already established that as a process, the decision-making process lacks credibility without the human touch in it. The human ability to empathize stimulates them to comprehend the true intentions of others and reasons behind for any behavior. Also, emotional intelligence allows humans to recognize the experience of other people's situation and react accordingly. This ability of possessing emotion and empathy makes human arbitrators put themselves in the parties' place to deduce the rational/causal explanation for arriving at the decision from the existing facts and relevant laws.¹¹³ The expected

111 *Chemtura Corporation v. Government of Canada*, Ad Hoc Arb (2010).

112 *Ibid.*

113 Lindquist, D. H., Dautaj, Y., 2021, AI in International Arbitration: Need for the Human Touch, *Journal of Dispute Resolution*, Vol. 1, p. 39, pp. 39–64.

primary quality of the arbitrator, especially in the sphere of investment arbitration, is a highly empathetic personality, which would ultimately allow the arbitral parties to understand the true conditions of the disputing parties and consider the relevancy of the facts and evidence that are suitable to reach the conclusion of the arbitration process. Furthermore, empathetic abilities incite the humans to think critically when making decisions, since human cognitive ability, along with empathy and emotions, make them anticipate or resolve dynamic realities.

Contrary to this, in completely autonomous AI arbitration the important prerequisite values for decision making would be absent and that would frustrate the entire gamut of decision making, because machine learning systems cannot be supplied with human qualities, especially not through data. For example, in certain cases the voidness occurs at the start or during the adjudicatory process, in such cases the discretion is given to the decision maker to fulfill the void by rationally relying on the laws that are provided. In order to illustrate this, under the ICSID Convention, the jurisdiction of the tribunal and the *locus standi* of the claimant are based on proving whether the dispute arises out of the investment and whether the claimant's business will satisfy the definition of "investment" to begin the investment arbitration.¹¹⁴ In order to be adjudicated under the purview of the ICSID Convention, the case has to satisfy the double criteria. In the process of identifying the jurisdiction, the tribunal must examine the claimants' position at par with the international convention mandates and agreements, and while doing so a peculiar situation may arise in the understanding of the meaning of the laws/rules under the conventions. For example, in *Salini vs Morocco*, the tribunal had to interpret the jurisdictional clause under Article 25 of the ICSID Convention to ascertain whether the claimant's business in the host state actually constitutes an "investment" in line with the mandate of the Convention. In furtherance to determine the locus, the tribunal propounded a four-factor test for the claimants to classify the claimant's business as falling under the umbrella of the meaning "investment" under Article 25 of the ICSID Convention.¹¹⁵ Assessment of the correctness of the four-factor test falls outside of the scope of this paper, but it is fundamental to understand the requirement of the tribunal to propound such factors in order to satisfy the mandate of the law when assuming jurisdiction to adjudicate an investment dispute. Therefore, the gap-filling tests that are propounded

114 Giorgetti, C., 2014, pp. 261–286.

115 *Salini Costruttori S.p.A. and Italstrade S.p.A. v. Kingdom of Morocco*, ICSID Case No. ARB/00/4.

by the investment tribunals require high cognitive critical thinking and empathy to understand the importance of the parties that bring investment claims before it – which basically deals with both procedural and substantial aspects of laws.

The 1969 Vienna Convention of Law of Treaties (VCLT) provides guidelines for international bodies, such as international investment tribunals, in interpreting treaty provisions, mandating that the treaty be interpreted in good faith, with its literal meaning in the context of the treaty and in light of its object and purpose.¹¹⁶ This reiterates the fact that AI-based systems learn from existing data and that, in accordance with the VCLT, interpretation of treaty provisions in good faith may be done by an AI arbitrator. However, the contextual meanings for the treaty may vary if the AI system develops an algorithm considering existing data that follows a certain approach in interpretation of a particular provision. The possibility of repetition or non-repetition may or may not necessarily be relied on by the AI systems for the curation of suitable algorithms. This suggests that in cases like the one mentioned above, the AI arbitrator cannot critically analyze the existing gap and fill the same with cognitive and empathetical abilities, which are believed to be exclusively features of humans. Hence, international investment adjudication and arbitration requires the human touch for it to be a fair and just resolution process and a pure AI arbitrator, lacking the above-mentioned human capabilities, cannot surpass and replace the involvement of human arbitrators.

5.3. BIAS AND DISCRIMINATION IN AI DECISION MAKING

The ISA as a system is construed as a unique form of adjudication wherein the investment disputes deal with the sovereign prerogative(s) and the interests of the foreign investors. If the investment tribunal, in its adjudication, exhibits any sign of biasness or partiality, the repercussions would directly inflict the rights of the disputing parties under both domestic and international law, and repaying costs are immensely higher,¹¹⁷ not to mention the impact that such bias and discrimination may have on the institution of arbitration. In light of this, it is fundamental to analyze the concept of biasness or impartiality in AI-based decision making.

In the process of AI decision making, there is a possibility of machine learning systems gathering particular data that is already biased. Therefore, AI-based systems can be capable of providing biased decisions,

116 Vienna Convention on the Law of Treaties, 1969, Art. 31.

117 Harten, G. van, 2016, p. 540.

which may lead to discrimination in the long term. For example, in the case of the Amazon.com Inc. company, its AI-based system irrationally discriminated against women in its hiring process.¹¹⁸ The machine learning system curates the algorithm based on pre-existing data by forming the hidden pattern in the process of decision making, which is invisible to the human eye.¹¹⁹ It is also referred to as *algorithmic bias*. The decision-making process is fair and just when the entire process of adjudication involves transparency and impartial determinations of the submissions made by the parties. However, in the case of machine learning systems, the decision-making process involves the fundamental concern for the “black box issue”,¹²⁰ where in the machine learning systems form their own algorithms based on probabilistic and mathematical calculations in its deduction. That being the case, AI systems raise serious concerns with respect to the transparency of the adjudication process, as they provide no reason to rely on a particular set of data to form the patterns in curating the algorithm for decision making.

Moreover, the foremost problem with AI-based decision-making systems is that they rely solely on data to derive their conclusions. When that is the case, data that is inherently biased also raises a concern of a biased decision that the AI system would render. Also, one cannot rule out the possibility of data being inaccurate and incomplete in certain cases. In cases where the data are inaccurate or if it is insufficient for adjudication, the machine learning system will have to form a pattern within the confines of the provided data to reach the decision. As discussed above, machine learning systems are not capable of providing causal reasoning for a decision and in absence of providing the reasons, the parties to the investment disputes may not even realize the hidden inherent bias that may exist within the machine learning system in the process of AI-based arbitration.¹²¹ Therefore, it can be understood that AI-based arbitration, in its current form, can result in systemic bias that may arise either from the existing data, or in the case of first AI model, through human intervention where the organization or a person who created the AI may have injected their own bias – consciously or unconsciously.¹²²

118 Soukupova, J., 2021, pp. 285–287.

119 Scherer, M., 2019, pp. 9–25.

120 *Ibid.*

121 *Ibid.*, pp. 18–19.

122 Rafique, M., Why Artificial Intelligence Is a Compatible Match for Arbitration, in: Brekoulakis, S. (ed.), 2022, *Arbitration: The International Journal of Arbitration, Mediation and Dispute Management*, Kluwer Law International, Vol. 88, No. 2, pp. 310–320.

5.4. IS A CHANGE OF PARADIGM NEEDED?

Another way of looking at the issue is to appreciate that the current framework is developed with the human decision maker in mind, and trying to fit the groundbreaking use of AI arbitrators into the existing framework would probably be a futile exercise, as illustrated by the discussion above. For example, the criticism about the potential lack of reasoned decisions or arbitral awards can be viewed from an entirely different angle. A good starting point for this discussion is to ask why we require reasoned decisions. We actually have this requirement for several reasons, applicable both to litigation and arbitration: (1) preventing arbitrariness and/or bias, (2) preventing errors of judgement, (3) ensuring the parties can adapt their behavior in the future accordingly, (4) easier acceptance of the outcome by the parties, and (5) enabling decision makers to rely on previous decisions by the same or other authorities, regardless of whether they be binding or merely persuasive.¹²³ Judging by these rationales, the primary reason why we have reasoned decision making is to have a safeguarding mechanism against errors, intentional misconduct, and even biased decision making on the part of the decision maker. If the decision in its concreteness does not reflect the law in abstract, with the accompanying logical justifications being flawed, the adversely affected party will be able to assess the decision or award, and resort to the appropriate recourse against the decision or award.

In the context of AI as arbitrator, the question becomes whether the concerns that the reasoned decisions are meant to address can be addressed in a different way. Can they be addressed *ex ante* by ensuring the appropriateness of the dataset used to train the AI and ensure transparency to this end? Can they be addressed by implementing quality control or a system that ensures that the award is appropriate to the facts and the applicable law? In such a scenario, perhaps the parties themselves would be willing to forgo the comfort of having fully reasoned and explained arbitral awards. After all, the disadvantage of not having a fully reasoned award could be counter-balanced by the advantages that the AI as arbitrator would bring to the table.

For instance, given that humans are no match for AI in terms of processing data, the consequence of this would probably be that the final decision – the AI award – could be produced much faster than the arbitral award rendered by human arbitrators. Moreover, in terms of costs, the expense of obtaining an AI award would probably be substantially lower

123 For a general discussion on reasoned awards in ISA, see, Cheng, T.-H., Trisotto, R., 2008, *Reasons and Reasoning in Investment Treaty Arbitration*, *Suffolk Transnational Law Review*, Vol. 32, No. 2, p. 409, pp. 409–434.

than the funds currently required by the disputing parties. In terms of consistency of arbitral awards, if the pursuit of consistency were to be a matter that all the stakeholders agree on, the AI arbitrator could be set up to ensure a high level of consistency of the awards it renders. This, of course, would bring more certainty for parties *ex ante*, in terms of knowing what would constitute a violation of their obligations. One should also not ignore that double-hatting and other ethically dubious practices related to arbitrator appointment would be confined to history.

Let us assume for a moment that the outcome prediction capabilities of AI have improved to such an extent that its accuracy is above 90%, and that the sophistication of prediction allows for even fact-based determinations in terms of outcome to be made by an AI. Let us also assume that an AI, in spite of the improvements in technology, is still unable to produce reasoned awards in the way that human arbitrators can. However, the way that the AI machine is set up, the room for error is minimal. Within this scenario, if a dispute arises between the investor and the State, the assumption is that the parties can choose to have their dispute resolved by either a human arbitrator or an AI arbitrator. If they choose the former, they face the long-lasting traditional procedure with high costs, at the end of which the parties do get a reasoned arbitral award. If, however, the parties opt for the latter, i.e., the AI arbitrator, in more than 90% of instances they get the same outcome as in the traditional, human-led arbitration, but without specified reasons or justifications as to why it is so. Would parties be attracted to this mode of decision making, which would of course be subject to the AI being programmed to address *ex ante* concerns that reasoned arbitral awards seek to address? Some of them probably would, but empirical research would be needed to test the parties' openness to this possibility.

At this stage, we do not have definite answers to these questions, but the topic of reasoned awards does show the importance of switching or changing the paradigm, thinking outside the box, and seeing how the framework can be designed with AI in mind, and not simply by trying to find ways to add a puzzle piece to the picture that it originally does not belong to.

6. CONCLUSION

AI is the buzzword of the day, and the game changer of tomorrow. Its impact and influence are omnipresent. In this paper, we addressed the issue of what role AI may come to play in ISA, and particularly given ISDS (and thus ISA) legitimacy crisis. Dubious practices in relation to arbitra-

tor appointments, asymmetries favoring investors, inconsistent arbitral awards, prohibitively high costs of arbitration, and transparency deficiencies are the core reasons why many have come to view ISA, and thus ISDS in its totality, as suffering from a legitimacy crisis. While the causes of the legitimacy crisis are indeed varied, they generally fall in one of three (sometimes overlapping) categories: (1) causes fueled by the human factor, (2) causes stemming from structural deficiencies, and (3) causes of a political nature. Based on the current understanding of AI, as well as its present and potential future capabilities, the argument put forth in this paper is that AI does not seem to be well suited to tackle the political causes of the crisis. Its potential lies rather in tackling the other two causes, primarily the human factor.

The pertinent question, however, is whether AI can fit into the existing framework of ISA so that its full potential may be reached in the future. At present, AI is utilized primarily as a research tool, and this use, while facilitating the arbitration process, is still nowhere near the technology's revolutionary promise. The legal literature has recently become swamped with futuristic discussions about AI, with many scholars speculating about having AI as the decision maker in the future. This trend has also caught on in the arbitration world.

Given that the human factor plays a significant role in the ISA legitimacy crisis, would having an AI arbitrator contribute to solving this difficult conundrum? At least on paper, this seems to be the case. Arbitral proceedings with an AI arbitrator would likely involve lower costs, the technology could be set up to improve the consistency of the arbitral awards, and the dubious practices in appointment, such as the infamous double-hatting, could become a thing of the past. However, even if AI technology were to reach the level of development whereby it could act as the decision maker, a major obstacle would be the legal and philosophical framework of arbitration, which was organically developed with a human decision maker in mind. Given AI's limitations such as its inability to produce fully reasoned awards, the black box issue, as well as its lack of empathy and cognition, it seems questionable whether this kind of a decision maker could fit into the existing legal and philosophical framework. In essence, this means that any revolutionary use of AI in ISA – such as AI as the arbitrator – would require a change in many of the most basic paradigms that underly ISDS in general, and ISA in particular. Only time will tell whether the arbitration world will be willing to embrace a 180-degree shift in many of its most basic paradigms.

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KRIZA LEGITIMITETA U INVESTICIONOJ ARBITRAŽI: VEŠTAČKA INTELIGENCIJA KAO POTENCIJALNI SPASILAC?

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APSTRAKT

Sveobuhvatni uticaj veštačke inteligencije (VI) nije izuzeo ni arbitražu. Zainteresovane strane već nastoje ne samo da izuče trenutne posledice upotrebe veštačke inteligencije u arbitraži nego i da diskutuju o njenoj budućoj upotrebi. U raspravi se često može čuti o mogućnosti da VI u nekoj doglednoj budućnosti zameni čoveka u ulozi arbitra. Fokus ovog rada je na VI u kontekstu investicione arbitraže. Ovaj vid rešavanja sporova između država i investitora se suočava sa nizom kritika zbog svojih navodnih nedostataka. Cilj ovog članka je da ispita mogućnost upotrebe VI u budućnosti sa ciljem da se otklone navodni nedostaci zbog kojih danas mnogi govore o egzistencijalnoj krizi investicione arbitraže, ili krizi legitimiteta. U svetlu svega navedenog, ovaj rad prvo analizira doprinos kako ljudskog, tako i drugih faktora koji su doveli do krize legitimiteta. Zatim, rad ispituje podobnost VI da deluje u ulozi arbitra. Zaključci ovog rada će ne samo postaviti osnovne postulate za upotrebu VI u investicionoj arbitraži nego će dati i spekulativni stav o tome da li će VI na kraju iz korena izmeniti celi sistem investicione arbitraže.

Ključne reči: veštačka inteligencija, arbitraža, odlučivanje, ISDS, investiciona arbitraža.

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