# THE USE OF AI-BASED TECHNOLOGIES IN ARBITRATING TRUST DISPUTES

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*An important debate has emerged concerning the potential application of Artificial Intelligence ("AI") to the arbitration decision-making process. At issue in this debate is the proper role, if any, of AI in rendering binding decisions. Although, to date, AI is not sufficiently developed to replace human arbitrators in making binding decisions, this has not stopped academics, judges, and practitioners from engaging in heated discourse on the topic. Yet, fervent participants on both sides of this debate have confined the parameters of this discussion to arbitration generically, neglecting any application to specific disciplines of law. Insights from these discussions have limited applicability because—even when AI attains the ability to make binding decisions—AI-based decision-making may not be equally compatible to all types of disputes. For instance, the marginal utility of using AI-based decision-making in arbitration may decline precipitously when the dispute involves complex issues, unique facts, and emotionally-infused conflicts—as is typical in trust disputes. To date, there has been no literature discussing the compatibility of AI-based arbitration to any distinct discipline of law. Therefore, the purpose of this Article is to evaluate the role that AI may play in the arbitration of trust disputes by engaging in both a positive and normative analysis of the interplay between AI literature, arbitration law, and trust law. Although AI's assistance to a human arbitrator in trust disputes might be beneficial, the use of AI as an arbitrator might not.*

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## INTRODUCTION

An important debate has emerged concerning the potential application of Artificial Intelligence ("AI")[1] to the arbitration decision-making process. At issue in this debate is the proper role, if any, of AI in rendering binding decisions. Although, to date, AI is not sufficiently developed to replace human arbitrators in making binding decisions, this has not stopped academics, judges, and practitioners from engaging in heated discourse on the topic. Yet, fervent participants on both sides of this debate have confined the parameters of this discussion to arbitration generically, neglecting

1. "Artificial intelligence" is an umbrella term that encompasses various subjects and techniques, such as machine learning, cognitive computing, and natural language processing. Although a variety of definitions for AI exist, a helpful one is "[t]he theory and development of computer systems able to perform tasks normally requiring human intelligence." *Artificial Intelligence*, OXFORD REFERENCE, https://www.oxfordreference.com/view/10.1093/oi/authority.20110803095426960 (last visited Nov. 6, 2023). For purposes of this Article, though, the term AI refers not only to computer systems that provide simple answers to questions or make predictions about possible decisions, but also to complex, self-learning systems which collect and analyze data and reach decisions without human intervention (such as would be needed for an AI arbitrator).

any application to specific disciplines of law. Insights from these discussions have limited applicability because—even when AI attains the ability to make binding decisions—AI-based decision-making may not be equally compatible to all types of disputes. For instance, the marginal utility of using AI-based decision-making in arbitration may decline precipitously when the dispute involves complex issues, unique facts, and emotionally-infused conflicts—as is typical in trust disputes. To date, there has been no literature discussing the compatibility of AI-based arbitration to any distinct discipline of law. Therefore, the purpose of this Article is to evaluate the role that AI may play in the arbitration of trust[2] disputes by engaging in both a positive and normative analysis of the interplay between AI literature, arbitration law, and trust law. Although AI's assistance to a human arbitrator in trust disputes might be beneficial, the use of AI as an arbitrator might not.

Trusts are no longer merely estate-planning devices. Trusts have evolved, playing a large and growing role in the U.S. economy, holding trillions of dollars of assets, and generating billions of dollars of income and trustees' fees each year.[3] The rising popularity of trusts, though, has led to an explosion of hostile trust litigation. Practitioners have criticized the amount of time and money that is spent resolving these issues[4] and industry professionals have expressed concern about negative publicity associated with trust litigation.[5] As a result, trust law scholars and practitioners

2. The primary focus of this Article concerns private trusts that are created gratuitously for nonbusiness purposes. Although business trusts carry noteworthy transactional and capital-market importance, and charitable trusts play their own significant role in American society and the economy, the primary focus of this Article is the implementation of AI into the arbitration decision-making process of disputes involving private donative trusts.

3. *See* David Horton, *The Federal Arbitration Act and Testamentary Instruments*, 90 N.C. L. REV. 1027, 1070 (2012) (noting that, in 2007 alone, irrevocable trusts in the United States alone "generated $142.5 billion in income and $3.7 billion in trustees' fees"); *see also* John H. Langbein, *Major Reforms of the Property Restatement and the Uniform Probate Code: Reformation, Harmless Error, and Nonprobate Transfers*, 38 ACTEC L.J. 1, 12 (2012) (reporting that, in 2010, "institutions reporting to the Federal Reserve held roughly $870 billion in trust accounts" in the United States). This number does not fully account for the reach of trusts, though, because the Federal Reserve only counts trust assets that are run by insured banks. There are many nondeposit trust companies not reflected in the numbers. Also, the numbers do not include business trusts.

4. S. I. Strong, *Arbitration of Trust Disputes: Two Bodies of Law Collide*, 45 VAND. J. TRANSNAT'L L. 1157, 1182 (2012) (citing Lawrence Cohen & Marcus Staff, *The Arbitration of Trust Disputes*, 7 J. INT'L TR. & CORP. PLAN. 203, 203–04 (1999)).

5. *Id.* at 1163.

considered to what extent arbitration may be used to solve these disputes more quickly, efficiently, and cost-effectively.[6]

Arbitration has long been the darling of the judiciary, the legislature, and the legal academic community. Generally, arbitration is a private and consensual method of dispute resolution resulting in a binding decision.[7] Commentators routinely discuss the various incentives offered by arbitration: speed and cost-effectiveness; ability to select a neutral decision-maker with expertise in the field; capacity to tailor the procedures used to resolve the dispute to the nature of the claims; and capability of providing a private and confidential process.[8]

But some of the attractiveness of arbitration has waned. Some commentators have noted "widespread dissatisfaction among arbitration users with the time and cost of proceedings and 'the business-as-usual' indifference among the arbitral community."[9] These developments have undermined the utility of the arbitration process.

AI, however, has been heralded as a viable means by which to address these issues.[10] In this regard, AI could benefit arbitration in two ways: (1) AI could assist human arbitrators in performing their arbitral functions and (2) AI could replace human arbitrators in the decision-making process.

First, AI could benefit the arbitration process by assisting human arbitrators. Advantageous AI applications would include assistance with management of cases and/or the arbitration process; gathering and analyzing facts; and providing predictive models to assist decision-making. Thus, AI could be used to improve the speed, accuracy, and quality of the arbitration process. In this scenario,

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6. Although arbitration has grown rapidly in popularity among most legal disciplines, the trust bench and bar have been slow to advocate for arbitration in trust disputes. One reason might be that members of the trust bench and bar are biased against arbitration in general. *See* AMERICAN COLL. OF TR. & EST. COUNS., ARBITRATION TASK FORCE REPORT 4–5 (Sept. 18, 2006), https://www.flprobatelitigation.com/wp-content/uploads/sites/206/2007/09/actec-arbitration-task-force-report.pdf. Another reason could lie in the lack of interaction between arbitration law and trust law. Understanding the disparate jurisprudential underpinnings of U.S. trust law and arbitration law is important because their distinct natures may be the catalyst to the issues concerning the compatibility of AI-based decision-making in trust arbitration.

7. See *infra* Part I.A. for a rudimentary review of arbitration law and policy.

8. *See infra* Part I.A.

9. Paul Cohen & Sophie Nappert, *The March of the Robots*, GLOB. ARB. REV. (Feb. 15, 2017), http://globalarbitrationreview.com/article/1080951/the-march-of-the-robots; *see also* Jack Wright Nelson, *Machine Arbitrators and Machine Arbitration*, YOUNG INT'L COUNCIL FOR COM. ARB. 1 (July 28, 2016), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4338894.

10. Cohen & Nappert, *supra* note 9. See also *infra* Part I.A. for a rudimentary review of arbitration law and policy.

humans are not eliminated but remain at the forefront of the arbitration process.[11]

Second, AI could benefit arbitration by supplanting human arbitrators with a fully automated AI arbitrator.[12] Currently, AI is not technically advanced enough to supplant human arbitrators with AI-based decision-making arbitration systems.[13] But the technology in the field is rapidly progressing. AI-based technology has been developed to assist in dispute resolution and negotiations as well as mimic some of the arbitral functions. For example, SmartSettle is designed for small claims, which reduces a two-party negotiation to a single numerical issue and payment plan.[14] In addition, Adjusted Winner is an algorithm used to divide goods between two parties in an equitable fashion.[15] Mondria, eBay's automated online dispute resolution program, is slated for development and will settle large volumes of disputes without having to litigate.[16] Moreover, several countries have begun to implement AI-based technologies in their dispute resolution procedures. For instance, Estonia is currently developing an AI judge for the purpose of resolving small claim disputes of less than 7000 Euros.[17] Similarly, China has implemented digital courts where millions of legal cases are decided by AI-based courts with nonhuman judges.[18]

Although AI-based decision-making systems are rapidly evolving, the use and effectiveness of AI arbitrators is not entirely known. Simply, AI-based decision-making may not be equally

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11. See *infra* Part I.C.1. for further discussion on how AI could enhance and improve the arbitration process.

12. See *infra* Part I.C.2. for a further discussion concerning how AI could serve as a binding decision-maker in an arbitration proceeding.

13. *See* Cary Coglianese & Lavi M. Ben-Dor, *AI in Adjudication and Administration*, 86 BROOK. L. REV. 791, 795 (2021) ("[N]o judicial or administrative body in the United States has yet instituted a system that provides for total decision-making by algorithm, such that a computer makes a fully independent determination (that is, a human 'out of the loop' decision).").

14. *About*, SMARTSETTLE, https://www.smartsettle.com/about-us/vision-speech/ (last visited Nov. 6, 2023).

15. Steven J. Brams & Alan D. Taylor, *Adjusted Winner*, N.Y.U., http://www.nyu.edu/projects/adjustedwinner/ (last visited Nov. 6, 2023).

16. *See* Victor Li, *Tyler Technologies Acquires Online Dispute Resolution Company Modria*, ABA J. (June 12, 2017, 3:25 PM), https://www.abajournal.com/news/article/tyler_technologies_acquires_online_dispute_resolution_company_modria.

17. Eric Niiler, *Can AI be a Fair Judge in Court? Estonia Thinks So*, WIRED (Mar. 25, 2019, 7:00 AM), https://www.wired.com/story/can-ai-be-fair-judge-court-estonia-thinks-so/.

18. Weidong JI, *The Change of Judicial Power in China in the Era of Artificial Intelligence*, 7 ASIAN J.L. & SOC'Y 515, 516, 519–20, 523–24 (2020); Tara Vasdani, *Robot Justice: China's Use of Internet Courts*, LAW360 CAN. (Feb. 5, 2020, 11:07 AM), https://www.lexisnexis.ca/en-ca/ihc/2020-02/robot-justice-chinas-use-of-internet-courts.page.

applicable to all legal disputes. This Article is at the forefront of the literature concerning the use of AI-based technology in arbitration in that AI decision-making systems have not been developed yet, let alone used in arbitration. AI technology, though, is evolving quickly and AI decision-making systems will be available for arbitration in the near future. Yet, scholars have ignored examining specific applications of AI decision-making systems to specific areas of arbitral disputes. Therefore, this Article will explore AI's potential application to trust disputes. Moreover, this Article will examine something more profound than the mere use of AI technology in trust arbitration: this Article will suggest that a fundamental change in the approach to arbitration will be necessary for the integration of AI into trust arbitration.[19]

Before discussing the effectiveness and efficiency of implementing AI to questions surrounding arbitration of trust disputes, the boundaries of the examination must be established. First, this Article does not opine on the desirability and benefits of arbitrating trust disputes as opposed to litigating or using other alternative dispute resolution methods. These issues have been exhaustively explored.[20] Second, this Article does not provide a detailed examination of the technological aspects on any AI decision-making system; however, it will provide a basic overview of how AI-based technology may be implanted into the arbitration process.

So, is an AI-based arbitration process compatible with trust disputes? It stands to reason that AI will be beneficial in assisting human arbitrators in improving the trust arbitration process. When considering the viability of an AI arbitrator in trust disputes, though, it is vital to consider the distinct attributes of trust law, the nature of trust policy, and the characteristics of trust disputes. Although an AI arbitrator may provide useful benefits in certain types of disputes—such as commercial law disputes or small claims disputes—the normative value of AI-based decision-making rapidly declines when applied to complex, highly emotional disputes with unique facts. Therefore, AI-based decision-making may be of limited value in trust disputes.

Accordingly, this Article provides a substantive exploration of the adoptability and efficiency of implementing AI into trust arbitration

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19. *See* D. Daniel Sokol, *Technology Driven Government Law and Regulation*, 26 VA. J.L. & TECH. 1, 4 (2023) ("Such processes may not work without a change in approach.").

20. *See* Strong, *supra* note 4, at 1187 & n.153 (listing authorities that explore the benefits of arbitrating trust disputes). For an interesting and important discussion exploring the possibility that arbitration may not be beneficial in trust disputes, see generally Jessica Beess und Chrostin, *Mandatory Arbitration Clauses in Donative Instruments: A Taxonomy of Disputes and Type-Differentiated Analysis*, 49 REAL PROP., TR. & EST. L.J. 397 (2014).

decision-making.[21] Part I sets the stage of the analysis by reviewing the basic concepts of arbitration; briefly defining and describing AI; and introducing potential avenues in which AI may be applied to arbitration in general. Part II explores the special nature of trusts in order to examine effectively the use of AI in trust arbitration. With the framework of trusts explained, Part III analyzes whether AI-based decision-making is advantageous to the emotionally-infused and complicated nature of trust arbitration. Finally, this Article concludes.

## I. THE USE OF ARTIFICIAL INTELLIGENCE IN ARBITRATION

Fully understanding the applicability of AI in trust arbitration decision-making must begin with a general exploration into the potential avenues where AI may impact arbitration. In order to accomplish this goal, this Part introduces the basic concepts of arbitration, explains the complex domain of AI, explores the benefits of AI in arbitration proceedings, and contemplates essential factors to consider before incorporating AI into the arbitration process.

### *A. An Introduction to Arbitration*

Within the domain of Alternative Dispute Resolution ("ADR"),[22] arbitration enjoys a preeminent status. Arbitration is often described as a private and consensual method of dispute resolution, resulting in a binding decision.[23] Generally, arbitration awards cannot be appealed.[24] The binding and final nature of arbitration awards are the distinguishing factors between arbitration and other forms of ADR.

Arbitration has many advantages over conventional litigation as it allows parties to design their own "efficient, streamlined procedures tailored to the type of dispute" at issue.[25] However, this freedom of contract does not apply to proceedings that implicate contractual or constitutional violations or claims that arise from the conduct of the

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21. This Article will contemplate issues concerning arbitration in the context of trust disputes, though aspects of this analysis may seamlessly be applied to wills and other testamentary instruments.

22. Although there are other forms of ADR, this Article will focus on arbitration. For an in-depth look at mediation, see generally DWIGHT GOLAN & JAY FOLBERG, MEDIATION: THE ROLES OF ADVOCATE AND NEUTRAL (4th ed. 2022).

23. According to the American Arbitration Association, an arbitration is "the out-of-court resolution of a dispute between parties to a contract, decided by an impartial third party." *Arbitration*, AM. ARB. ASS'N, https://www.adr.org/Arbitration (last visited Nov. 6, 2023).

24. *See* Corey v. N.Y. Stock Exch., 691 F.2d 1205, 1212 (1982) (discussing the limited scope of review provided by the Federal Arbitration Act).

25. AT&T Mobility LLC v. Concepcion, 563 U.S. 333, 344 (2011).

parties when there are statutory rights at play, such as the right to a trial by a jury of one's peers.[26]

Arbitration has become increasingly prevalent in the legal sector.[27] The Federal Arbitration Act ("FAA") was enacted in 1925 to protect the integrity of many arbitration agreements by making them binding and limiting the reasons for which courts can review and set aside arbitration awards.[28] The FAA, and subsequent cases interpreting the FAA, made clear that arbitrators were vested with significant power, which made arbitrations more prevalent.[29]

Generally, the arbitration process can break down into a six-step process: (1) Case Initiation Stage; (2) Arbitrator Invitation Stage; (3) Arbitrator Appointment Stage; (4) Preliminary Hearing and Information Exchange Stage; (5) Hearing Stage; and (6) Award Stage.[30] First, the American Arbitration Association ("AAA"), or other arbitral institutions, notifies the parties that the case is filed and "provide[s] information regarding the arbitration process."[31] Next, the parties select an independent third party to conduct the proceedings in an impartial manner.[32] At this stage, the arbitrator reviews case information and checks for conflicts that they may have

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26. Leah Nicholls, *No, You Can't Just Write a Contract that Says No Federal Law Applies*, PUB. JUST. (Feb. 2, 2016), [https://perma.cc/RX9Q-VP2W].

27. Marc Galanter & Angela M. Frozena, *A Grin Without a Cat: The Continuing Decline & Displacement of Trials in American Courts*, 143 DAEDALUS 115, 126 (2014) (citing Shauhin A. Talesh, *The Privatization of Public Legal Rights: How Manufacturers Construct the Meaning of Consumer Law*, 44 L. & SOC'Y REV. 527, 527–61 (2009)); *see also* Robert P. Burns, *What Will We Lose if the Trial Vanishes?*, 37 OHIO N.U. L. REV. 575, 586 (2011). *See* Joseph M. 'Iws, *Consumer Arbitration: Is It Working Now and Will It Work in the Future?*, 79 FLA. BAR J. 1, 22 (2005) ("During the past 30 years, use of arbitration has expanded both as to the quantity and the nature of the disputes subjected to it.").

28. *See* 9 U.S.C. §§ 1–16. For a deeper understanding of the role of the FAA, see Imre S. Szalai, *Exploring the Federal Arbitration Act Through the Lens of History*, 2016 J. DISP. RESOL. 115, 118 (2016) (discussing the legislative history of the FAA as a statute enacted to govern "privately-negotiated arbitration agreements between merchants" and its expansion by the Supreme Court to "compel arbitration of a wide variety of disputes").

29. *See* Kulukundis Shipping Co. v. Amtorg Trading Corp., 126 F.2d 978, 985 (2d Cir. 1942) (holding that "the effect of the [FAA] is simply to make the contracting party live up to his agreement. . . . An arbitration agreement is placed on the same footing as other contracts, where it belongs.").

30. *Stages of the Arbitration Process*, AM. ARB. ASS'N, at 1–2, https://www.adr.org/sites/default/files/document_repository/AAA_Stages_of_the_Arbitration_Process.pdf (last visited Nov. 6, 2023).

31. *Id.* at 1.

32. *Id.* For purposes of this Part, it is assumed that any pertinent arbitration agreement is silent on issues unless stated otherwise. *See* MINA A. BREES ET AL., ARBITRATION ROAD MAP: A GUIDE TO CLAUSES, PROCEDURES AND HEARINGS ch.2, pt.1 at 2 (State Bar Tex. ed., 2007), 2007 WL 9650178.

regarding the dispute.[33] Third, the parties are given the opportunity to object to the arbitrator.[34] Fourth, the preliminary hearing and information exchange stage determines the amount and nature of discovery.[35] Additionally, the arbitrator will deal with any protective orders, subpoenas, affidavits, or postponements at this time.[36] Fifth, an evidentiary hearing commences before the arbitrator.[37] The types of evidence offered during the hearing stage will be similar to the types offered in a civil trial.[38] Finally, the arbitration concludes with the arbitrator entering a binding award on the parties.[39]

Dissimilar to judges, arbitrators have certain limitations. Arbitrators are rarely granted authority to consider external factors to the dispute, such as political trends or changes in societal norms.[40] In addition, arbitrators cannot disregard or modify existing law or precedent.[41] Arbitrators may only consider a prescribed factual scenario and apply the law as required by the parties. The arbitrator's first obligation is to the parties and to the terms of the arbitrated agreement.[42] By contrast, judges have an obligation to the

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33. BREES ET AL., *supra* note 32, at ch.2, pt.1 at 2.

34. *Stages of the Arbitration Process*, *supra* note 30, at 1.

35. JOHN J. FITZPATRICK, JR., 1 ALTERNATIVE DISPUTE RESOLUTION PRACTICE GUIDE § 11:5 (Bette J. Roth ed., 2023).

36. *Id.* at § 11:6.

37. Commercial Arbitration Rules and Mediation Procedures, AM. ARB. ASS'N 22, R-32 (2013) ("The claimant shall present evidence to support its claim. The respondent shall then present evidence to support its defense. Witnesses for each party shall also submit to questions from the arbitrator and the adverse party.").

38. *Id.* at R-34 ("[P]arties may offer such evidence as is relevant and material to the dispute and shall produce such evidence as the arbitrator may deem necessary to an understanding and determination of the dispute.").

39. *What Happens After the Arbitrator Issues an Award*, AM. ARB. ASS'N, at 1 (2023), https://www.adr.org/sites/default/files/document_repository/AAA229-After_Award_Issued.pdf ("[A]rbitration is a final, legally-binding process that may impact a parties rights. . . . The arbitrator's final decision . . . is like a judge's or jury's decision in a court case.").

40. *See* Paul Bennett Marrow et al., *Artificial Intelligence and Arbitration: The Computer as an Arbitrator–Are We There Yet?*, 74 DISP. RESOL. J. 35, 43 (2020); *see also* Sarah Rudolph Cole, *Curbing the Runaway Arbitrator in Commercial Arbitration: Making Exceeding the Powers Count*, 68 ALA. L. REV. 179, 183 n.12 (2016) ("If arbitrators were free to make decisions outside the scope of the contract, then arbitration would become an unstable means of dispute resolution." (quoting MyLinda K. Sims & Richard A. Bales, *Much Ado About Nothing: The Future of Manifest Disregard After* Hall Street, 62 S.C. L. REV. 407, 436 (2010))).

41. Marrow, *supra* note 40, at 44 ("In addition, the arbitrator [is not] allowed to modify the law by considering evolving needs created by societal changes and pressures.").

42. Thomas J. Stipanowich, *The Arbitration Penumbra: Arbitration Law and the Rapidly Changing Landscape of Dispute Resolution*, 8 NEV. L.J. 427, 432 (2007) ("Arbitration law is about enforcing consensual arrangements for private

law without concern for any agreement by parties limiting the ability to apply, interpret, or even nullify statutes, precedents, and regulations.[43] Further, judges are free to consider changing societal norms and conditions. Finally, judges may resolve cases of first impression (i.e., a case not known to have been evaluated by any judge).

There are many reasons why the parties to a dispute may opt for arbitration rather than litigation at trial.[44] For instance, arbitration may offer a faster solution compared to a lengthy trial process,[45] is generally considered to be more cost-efficient,[46] and provides a private and confidential process.[47] Moreover, arbitration is also highly favored in technical cases because arbitrators are often experts in the disputed field.[48]

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dispute resolution, with a central tenant being effectuation of the intent of the parties as expressed in their agreement." (citing 1 IAN R. MACNEIL, RICHARD E. SPIEDEL & THOMAS J. STIPANOWICH, FEDERAL ARBITRATION LAW: AGREEMENTS, AWARDS, AND REMEDIES UNDER THE FEDERAL ARBITRATION ACT § 3.2.1.1 (1994))).

43. *Cf.* Anthony R. Reeves, *Do Judges Have an Obligation to Enforce the Law?: Moral Responsibility and Judicial-Reasoning*, 29 L. & PHIL. 159, 184 (2010) (arguing "that we have little reason for thinking that judges have a general, special obligation to enforce standing law and abide by existing legal practice").

44. *See* John Lande, *Failing Faith in Litigation? A Survey of Business Lawyers' and Executives' Opinions*, 3 HARV. NEGOT. L. REV. 1, 6 (1998) ("The public as a whole generally has little personal contact with lawyers and courts and thus may find litigation to be confusing and intimidating."); *see also* Nat'l Ctr. for State Cts. & State Just. Inst., *The Landscape of Civil Litigation in State Courts* (2015), https://www.ncsc.org/__data/assets/pdf_file/0020/13376/civiljusticereport-2015.pdf (finding most litigants with resources "have already abandoned the civil justice system" through alternative choices such as ADR); *cf.* Pamela K. Bookman, *The Arbitration–Litigation Paradox*, 72 VAND. L. REV. 1119, 1119 (2019) (arguing because "courts play an important role in supporting arbitration, some litigation is needed to support arbitration").

45. *See* Thomas J. Stipanowich, *Rethinking American Arbitration*, 63 IND. L.J. 425, 438 (1988) ("[I]n a period of increasing dissatisfaction with the delays of the judicial system, arbitration purportedly offers a more expediate and efficient method of resolving civil disputes.").

46. *See id.* at 440 ("For example, abbreviated prehearing practice, shorter hearing time, and limited opportunities for successful appeal in arbitration may result in smaller expenditures for legal services than the litigation of a similar controversy.").

47. Thomas J. Stipanowich, *Arbitration: The "New Litigation"*, 2010 U. ILL. L. REV. 1, 4–5 (2010).

48. *See* W.H. Knull, III & Noah D. Rubins, *Betting the Farm on International Arbitration: Is It Time to Offer an Appeal Option?*, 11 AM. REV. INT'L ARB. 531, 540 (2000) ("Not only can parties select an arbitrator with technical background, a tripartite tribunal allows the parties to ensure a breadth and depth of legal and subject[]matter expertise impossible to find in one person."); Susan D. Franck, *The Role of International Arbitrators*, 12 ILSA J. INT'L & COMPAR. L. 499, 506–07

Arbitration, however, does have drawbacks. As arbitration has increased in popularity, practitioners have observed that arbitration is becoming as expensive as trials[49] and more similar to trials due to their extensive discovery and prehearing motion practice.[50] Notably, these developments have undermined the utility of the arbitration process. In addition, there is a perceived problem in that some arbitrators may have a bias towards repeat players in the arbitration process. Recently, "a federal court of appeals vacated an arbitrator's award . . . because the [arbitrator] did not disclose his ownership interest in the arbitral body that conducted the arbitration or the entity's non-trivial business dealings with a party involved in the arbitration."[51] The dissent noted that, at least to some extent, arbitrators are incentivized to make decisions that are viewed favorably by parties who are repeat players.[52] This highlights a "growing concern that parties who frequently appear before a particular ADR provider may benefit from a 'repeat player bias.'"[53]

Moreover, there are public policy concerns with arbitration. Because of the secret nature of arbitration, the development of the common law is stymied. In addition, arbitration's veil of privacy prevents public shaming that could have had a deterring effect on the public. Some scholars have referred to the arbitration process as "lawless,"[54] even alleging that arbitration providers have inspired fake awards, suspect agreements, and even used "artificial partnerships with Native American nations to create their own

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(2006) ("parties ask arbitrators to put aside biases in order to fairly and impartially exercise their independent judgment and apply their expertise").

49. *See* Raphael Ng'etich, *The Current Trend of Costs in Arbitration: Implications on Access to Justice and the Attractiveness of Arbitration*, 5(2) ALT. DISP. RESOL. 111, 112 (2017); Michael O'Reilly, *Provisions on Costs and Appeals: An Assessment from an International Perspective*, BRIT. INST. OF INT'L AND COMPAR. L. 1–2, https://www.biicl.org/files/4936_biicl_13th_annual_mor.pdf (last visited Nov. 6, 2023).

50. Stipanowich, *supra* note 47, at 8–9, 11–15.

51. Andrew K. Robertson, *Repeat Player Bias in Arbitration Questioned*, ABA (Aug. 25, 2020), https://www.americanbar.org/groups/litigation/publications/litigation-news/top-stories/2020/repeat-player-bias-in-arbitration-questioned/; *see also* Monster Energy Co. v. City Beverages, LLC, 940 F.3d 1130, 1138–39 (9th Cir. 2019).

52. *Monster Energy*, 940 F.3d at 19 (Friedland, J., dissenting).

53. Robertson, *supra* note 51.

54. *See* Philip J. McConnaughay, *The Risks and Virtues of Lawlessness: A "Second Look" at International Commercial Arbitration*, 93 NW. U.L. REV. 453, 453, 459 (1999) (arguing that "[i]nternational commercial arbitrations today are virtually lawless, or at least they can be, at the election of the parties or the private arbitrators who serve them"); Linda Silberman, *International Arbitration: Comments from a Critic*, 13 AM. REV. INT'L ARB. 9, 11 (2002) (quoting McConnaughay, *supra* note 54, at 453). *But cf.* William W. Park, *The Specificity of International Arbitration: The Case for FAA Reform*, 36 VAND. J. TRANSNAT'L L. 1241, 1243–44 (2003).

skewed legal system."[55] Another concern among parties is the limited scope of judicial appeal, which is:

> limited to fundamental procedural deficiencies, such as procurement of the award "by corruption, fraud, or undue means," "evident partiality or corruption in the arbitrators," prejudicial arbitrator misconduct like a failure to hear material and relevant evidence, a decision beyond the scope of the arbitrators' contractual authority, or a decision "so imperfectly executed . . . that a . . . final[] and definite award upon the subject matter submitted was not made."[56]

In light that some of the attractiveness of arbitration has waned, AI has been heralded as a viable means by which to address these issues regarding the current state of arbitration. Accordingly, it is necessary to understand AI in general and explore the potential avenues in which AI may be applied to arbitration.

### *B. An Artificial Intelligence Primer*

From self-driving cars to Gmail's "quick-reply" feature, AI has made life more convenient in many ways and encompasses many aspects of our lives.[57] But what is AI? AI is a blanket term[58] for "the

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55. For an insightful discussion concerning so-called "Pirate Arbitration," see David Horton, *Pirate Arbitration*, 106 MINN. L. REV. 2111, 2135, 2150, 2171 (2022) (arguing that the U.S. Supreme Court's expansion of the FAA has transformed the American civil justice system, making it hard to regulate sophisticated arbitration-related scams).

56. Stipanowich, *supra* note 47, at 16 (citations omitted). *See also* Durkin v. Cigna Prop. & Cas. Corp., 986 F. Supp. 1356, 1358 (D. Kan. 1997) ("Because a primary purpose behind arbitration agreements is to avoid the expense and delay of court proceedings, it is well settled that judicial review of an arbitration award is very narrowly limited." (quoting ARW Exploration Corp. v. Aguirre, 45 F.3d 1455, 1463 (10th Cir. 1995))); Stephen L. Hayford, *A New Paradigm for Commercial Arbitration: Rethinking the Relationship Between Reasoned Awards and the Judicial Standards for Vacatur*, 66 GEO. WASH. L. REV. 433, 444–45 (1998) (noting that the absence of substantive written awards in arbitration effectively precludes judicial vacation).

57. *See generally* Matt McFarland, *Your Car's Data May Soon Be More Valuable than the Car Itself*, CNN (Feb. 7, 2017, 9:05 AM), https://money.cnn.com/2017/02/07/technology/car-data-value/index.html; David Levinson, *On the Differences Between Autonomous, Automated, Self-driving, and Driverless Cars*, TRANSPORTIST (June 29, 2017), https://transportist.org/2017/06/29/on-the-differences-between-autonomous-automated-self-driving-and-driverless-cars/.

58. There is no uniform definition of AI. John McCarthy, who first coined the term 'AI' in 1955, describes AI as "the science and engineering of making intelligent machines," "intelligence" being "the computational part of the ability to achieve goals in the world." *What is AI?/Basic Questions*, PROFESSOR JOHN MCCARTHY, http://jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html (last visited Nov. 6, 2023); *see also* Ryan Calo, *Artificial Intelligence Policy: A*

science of artificial intelligence," which uses computers to simulate human intellectual behavior such as "learning, judgment, and decision-making."[59]

Today, most AI-based technology uses "machine learning."[60] Machine learning is an umbrella of AI techniques that improves its algorithm—a sequence of precise instructions—by finding patterns in already-existing data and user feedback to imitate the way that humans think.[61] Simply, machine learning is an AI procedure where a "machine has been 'trained' through exposure to a large quantity of data and infers a rule from the patterns it observes."[62] The algorithms are not learning in a literal sense, rather they are learning in a functional sense by altering their behavior based on experience.[63] Accordingly, the strength of any AI tool using machine learning is

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*Primer and Roadmap*, 51 U.C. DAVIS L. REV. 399, 404 (2017) ("AI is best understood as a set of techniques aimed at approximating some aspect of human or animal cognition using machines.").

59. Caiming Zhang & Yang Lu, *Study on Artificial Intelligence: The State of the Art and Future Prospects*, 23 J. INDUS. INFO. INTEGRATION 1 (2021); *see also* Maxi Scherer, *International Arbitration 3.0 – How Artificial Intelligence Will Change Dispute Resolution*, AUSTRIAN Y.B. INT'L ARB. 503, 504 (2019). Various taxonomies are used to explain different degrees of AI, including Narrow/Weak AI-Artificial General Intelligence (strong AI) taxonomy, which is based on whether AI system has the ability to perform human-level intelligence. Ben Goertzel, *Artificial General Intelligence: Concept, State of the Art, and Future Prospects*, 5 J. ARTIFICIAL GEN. INTEL. 1–2, 1 n.1 (2014).

60. The terms "artificial intelligence" and "machine learning" are to some extent interchangeable and are used as such throughout this Article. *Cf.* Cary Coglianese & David Lehr, *Transparency and Algorithmic Governance*, 71 ADMIN. L. REV. 1, 2 n.2 (2019) ("By 'artificial intelligence' and 'machine learning,' we refer . . . to a broad approach to predictive analytics captured under various umbrella terms . . . ."). Although there are other types of learning models, this Article will focus primarily on Machine Learning. For an introduction to another type of learning—an AI Expert System, see generally Sai Kiran Yelagandula, *Designing an AI Expert System* (Nov. 6, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3735724. To see the difference between a Machine Learning and Expert System, see Greg Council, *Machine Learning AI v. Expert Systems AI | Why It's Better*, PARASCRIPT BLOG (March 29, 2018), https://www.parascript.com/blog/machine-learning-ai-vs-expert-systems-ai/.

61. *Machine Learning*, IBM, https://www.ibm.com/topics/machine-learning (last visited Nov. 6, 2023). *See also* Harry Surden, *Machine Learning and the Law*, 89 WASH. L. REV. 87, 89–90 (2014); MARGARET A. BODEN, ARTIFICIAL INTELLIGENCE: A VERY SHORT INTRODUCTION 39–43 (2018).

62. Joshua A. Kroll et al., *Accountable Algorithms*, 165 U. PA. L. REV. 633, 679 (2017).

63. *See, e.g.*, Sara Brown, *Machine Learning, Explained*, MIT SLOAN (Apr. 21, 2021), https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained; ETHEM ALPAYDIN, MACHINE LEARNING: THE NEW AI 17–24 (1st ed. 2016); Pedro Domingos, *A Few Useful Things to Know about Machine Learning*, 55 COMMC'N ACM 78, 79–80 (2012).

dependent on the quality and quantity of the data to which the tool is exposed.[64]

For the purposes of this Article, we will focus the scope to two categories of machine learning: supervised learning and unsupervised learning.[65]

The most common form of machine learning is supervised learning.[66] Supervised learning begins with training data, which is a dataset labeled by humans.[67] This dataset includes input data and known correct responses to the data (output), which will help the AI system classify data or predict outcomes and allow the algorithm to "learn" overtime.[68] As humans continue to input data into the model, the algorithm evolves until its rate of error has been minimized as much as possible.[69] Supervised learning uses classifications for data that can be separated into specific groups and regression for data that is a real number or falls into a range, to develop machine learning models.[70] An example of supervised learning that uses data classification would be Gmail placing spam in a separate folder.

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64. *See* ALPAYDIN, *supra* note 63, 1–28 (explaining machine learning process in comprehensive detail).

65. For a further explanation of the differences between supervised learning and unsupervised learning, see Julianna Delua, *Supervised vs. Unsupervised Learning: What's the Difference?*, IBM BLOG (March 12, 2021), https://www.ibm.com/cloud/blog/supervised-vs-unsupervised-learning.

66. *See* MARTIN FORD, ARCHITECTS OF INTELLIGENCE: THE TRUTH ABOUT AI FROM THE PEOPLE BUILDING IT 11 (2018) (stating that about 95% of all ML applications are based on supervised learning).

67. *See* Vihar Kurama, *A Beginner's Guide to Supervised Learning with Python*, BUILT IN (June 7, 2019), https://builtin.com/data-science/supervised-learning-python; Aidan Wilson, *A Brief Introduction to Supervised Learning*, TOWARDS DATA SCIENCE (Sept. 29, 2019), https://towardsdatascience.com/a-brief-introduction-to-supervised-learning-54a3e3932590. To get a better understanding of how important data is for machine learning performance, see Chen Sun et al., *Revisiting Unreasonable Effectiveness of Data in Deep Learning Era*, INST. ELEC. AND ELEC. ENG'RS. 843, 845 (2017).

68. *See, e.g.*, *What is Machine Learning?: How it Works, Why it Matters, and Getting Started,* MATHWORKS, https://www.mathworks.com/discovery/machine-learning.html (last visited Nov. 6, 2023); Priyadharshini, *What is Machine Learning and How Does It Work?*, SIMPLE LEARN (Mar. 10, 2023), https://www.simplilearn.com/tutorials/machine-learning-tutorial/what-is-machine-learning.

69. *What Is Supervised Learning?*, IBM, https://www.ibm.com/topics/supervised-learning (last visited Nov. 6, 2023). *See also* Pádraig Cunningham et al., *Supervised Learning, in* MACHINE LEARNING TECHNIQUES FOR MULTIMEDIA: CASE STUDIES ON ORGANIZATION AND RETRIEVAL 21 (Matthieu Cord & Pádraig Cunningham eds., 2008) ("[W]e ground [our] analysis of supervised learning on the theory of risk minimization.").

70. IBM, *supra* note 69.

Another form of machine learning is unsupervised learning.[71] Unlike supervised learning, unsupervised learning "uses machine learning algorithms to analyze and cluster unlabeled datasets."[72] Unsupervised learning models find patterns and groupings within datasets to discover similarities and differences in datasets.[73] Additionally, unsupervised learning involves algorithms that require no human intervention as it involves a large dataset to find patterns, both apparent and hidden, to make a decision with as close to 100% certainty as possible.[74] Unsupervised learning also relies heavily on clustering. Clustering is a method where "the researcher feeds unlabeled data to a learning algorithm, and allows patterns to emerge, typically based on similarity amongst observations . . . and dissimilarity between groupings of observations . . . ."[75] Researchers often use clustering to label data and this process is expediently valuable for making sense of "large, unwieldy, unlabeled, and

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71. There is also another type of machine learning model called "Reinforcement Learning," though not pertinent to this Article. For an explanation of reinforcement learning, see *Reinforcement Learning in Machine Learning*, PYTHON GEEKS, https://pythongeeks.org/reinforcement-learning-in-machine-learning/ (last visited Nov. 6, 2023); *What is Reinforcement Learning?*, SYNOPSYS, https://www.synopsys.com/ai/what-is-reinforcement-learning.html (last visited Nov. 6, 2023).

72. *What is unsupervised learning?*, IBM, https://www.ibm.com/cloud/learn/unsupervised-learning (last visited Nov. 6, 2023) [hereinafter *Unsupervised Learning*]; *see also* ETHEM ALPAYDIN, INTRODUCTION TO MACHINE LEARNING 11 (3d ed. 2014) ("In supervised learning, the aim is to learn a mapping from the input to an output whose correct values are provided by a supervisor. In unsupervised learning, there is no such supervisor and we have only input data. The aim is to find the regularities in the input. There is a structure to the input space such that certain patterns occur more often than others, and we want to see what generally happens and what does not.").

73. *Unsupervised Learning*, *supra* note 72. *See also* Simon Rentzmann & Mario V. Wüthrich, *Unsupervised Learning: What is a Sports Car?*, SWISS ASSOCIATION OF ACTUARIES SAV, (last revised Oct. 14, 2019) (manuscript at 1), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3439358 ("These techniques do not consider response variables, but they are solely based on the features themselves by studying incorporated similarities.").

74. *Deep Learning*, IBM, https://www.ibm.com/topics/deep-learning (last visited Nov. 6, 2023); *see, e.g.*, IAN GOODFELLOW ET AL., DEEP LEARNING, 117 (2016) (explaining that as "the training set increases, the optimal capacity" of the machine learning system also increases until it "plateaus" once it has enough information to "solve the task"); *Data Science vs Machine Learning vs AI vs Deep Learning vs Data Mining: Know the Differences*, ALTEXSOFT (Jan. 25, 2021), https://www.altexsoft.com/blog/data-science-artificial-intelligence-machine-learning-deep-learning-data-mining/ ("Deep learning is a subset of machine learning, but it is advanced with complex neural networks . . . .").

75. *See* PHILIP D. WAGGONER, UNSUPERVISED MACHINE LEARNING FOR CLUSTERING IN POLITICAL AND SOCIAL RESEARCH 1 (2020).

unstructured data . . . ."[76] An example of unsupervised learning technology is social network analysis which clusters friends depending on the frequency of connections between them.[77]

Machine learning has evolved to allow the introduction of AI systems that use Natural Language Processing ("NLP"). NLP combines "rule-based modeling of human language" with deep learning to give computers the ability to understand the "human language in the form of text or voice data."[78] The legal profession currently uses NLP to reduce the workload that lawyers provide.[79] For example, a lawyer could utilize NLP to search through a contract in order to identify whether an arbitration clause exists.[80]

Suffice it to say, AI and machine learning have revolutionized the way we live and work. Having provided a basic explanation of AI, this Article can now explore the possible ways in which AI-based technologies may be implemented to benefit the arbitration process.

### *C. Potential Applications of AI to Arbitration*

Building upon the prior discussion, an analysis of the applicability of AI to arbitration is in order. AI is considered a solution to some of the troublesome issues concerning the current state of arbitration—especially regarding cost-effectiveness and time-efficiency. In this endeavour, AI could benefit arbitration in two ways: (1) AI could assist human arbitrators in performing their

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76. *Id.*

77. *See Unsupervised Learning: Algorithms and Examples*, ALTEXSOFT (Apr. 13, 2021), https://www.altexsoft.com/blog/unsupervised-machine-learning/.

78. *What is Natural Language Processing (NLP)?*, IBM, https://www.ibm.com/topics/natural-language-processing (last visited Nov. 6, 2023); *see, e.g.*, Nikolaos Aletras et al., *Predicting Judicial Decision of the European Court of Human Rights: A Natural Language Processing Perspective*, PEER J. COMPUT. SCI. 1 (2016) (using NLP and Machine Learning to predict the outcome of cases tried by the European Court of Human Rights based solely on textual content).

79. Jens Frankenreiter & Julian Nyarko, *Natural Language Processing, in* LEGAL TECH AND THE FUTURE OF CIVIL JUSTICE 70, 71, 89–90 (David Freeman Engstrom ed., 2023). *See also* David Freeman Engstrom & Jonah B. Gelbach, *Legal Tech, Civil Procedure, and the Future of Adversaralism*, 169 U. PA. L. REV. 1001, 1001, 1011–12 (2021) (highlighting legal jobs NLP services can perform).

80. Frankenreiter & Nyarko, *supra* note 79, at 72, 86; Andrea Ferrario & Mara Nagelin, *The Art of Natural Language Processing: Classical, Modern and Contemporary Approaches to Text Document Classification*, SWISS ASS'N OF ACTUARIES SAV, (Mar. 31, 2020) (manuscript at 2) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3547887 ("the abundance of written evidence like . . . the possibility of recording customers' interactions with corporate conversational assistants ('chatbots'), provide . . . an ever increasing collection of text documents to be [analyzed] with NLP for the purpose of generating actionable and business-relevant insights"); Mahnoor Waqar, *The Use of AI in Arbitral Proceedings*, 37 OHIO STATE J. ON DISP. RESOL. 344, 351 (2022).

arbitral functions and (2) AI could replace human arbitrators in the decision-making process. Accordingly, this Part explores these potential uses.

### *1. AI in Assisting Arbitrator*

AI may be beneficial to arbitrators in fulling many of their arbitral functions. Even if parties to a dispute do not feel comfortable with a "black box" being the sole decision-maker in the arbitration process, AI could greatly assist arbitrators in their other functions—such as case management, fact finding and analysis, and decision-making.

#### a. Assisting in Case Management

AI can help arbitrators, and parties,[81] in managing the arbitration process. For example, arbitrators and the parties involved can utilize AI technology like Instant Meeting Scheduling.[82] This is an AI-application that could assist arbitrators and the parties in scheduling meetings and hearings and planning their workload.[83] The program connects to the user's calendars and is trained through machine learning models to identify the key components of a meeting such as the time, location, and parties.[84] This program, and similar

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81. Lawyers and law firms are already using AI in many forms. *See generally* Ben Roe, *The Year Ahead – Innovation: A New Generation of Legal Analysis Tools is Emerging*, LEXOLOGY (Jan. 21, 2019), https://www.lexology.com/library/detail.aspx?g=fa0aa71b-8a55-4701-b4c6-95ab94aee4e2 (stating that Baker McKenzie is using "machine learning [technology] and other tools . . . [to] assist with case preparation by automating tasks such as bundling, research, and drafting" as well as predicating the outcome and analysis of claims); Seher Elif Köse Özgüç, *Artificial Intelligence in Arbitration – Current Uses and the Turkish Law Approach*, LEXOLOGY (Apr. 6, 2021), https://www.lexology.com/library/detail.aspx?g=a38af5ee-2713-43b1-abb3-367955126604 (explaining that parties can use AI when arbitration ensues to pick an arbitrator). For instance, Arbitrator Intelligence attempts to increase access to information about arbitrators and their decision-making process by giving the participants, including parties and counsel, post-award questionnaires about case details. *Id.*; Gülüm Bayraktarğlu-Özçelik & Ş. Bariş Özçelik, *Use of AI-Based Technologies in International Commercial Arbitration*, 12 EUROPEAN J.L. & TECH. 1, 4 (2021) ("Moreover, the American Arbitration Association's . . . on-line tool '*Clause-Builder*' is developed to assist the clients to draft arbitration clauses depending on the nature of the dispute as well as their wish as regards the elements of an arbitration agreement.").

82. Azael Socorro Márquez, *Can Artificial Intelligence Be Used to Appoint Arbitrators?*, ASOCIACION VENEZOLANA DE ARBITRAJE, 249, 264 (2020) (outlining some "assistants' tools to organize the management of the arbitration process").

83. *Id.*

84. *Id. See also* Horst Eidenmüller & Faidon Varesis, *What is an Arbitration? Artificial Intelligence and the Vanishing Human Arbitrator* (July 15, 2020) (manuscript at 8), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3629145.

ones like it, can be useful to arbitrators in complex arbitrations which involve multiple parties or entities that are located around the world and in different time zones.

b. Assisting in Fact Gathering and Analysis

Arbitrators conduct vast amounts of research, summarize numerous cases, sort through countless documents, and analyze arguments presented by the lawyers. In this regard, arbitrators could use AI technology to make the arbitration process more efficient and effective.[85] In fact, law firms already use AI for e-discovery, document review, conflicts management, and outcome prediction.[86] Likewise, arbitrators can use these AI models to reduce the costs and time associated with arbitration.

AI can assist arbitrators in sorting and cataloguing outcome-determinative facts. For example, AI technology like Merlin uses machine learning algorithms to simplify the process of finding important information when searching vast amounts of documents.[87] Merlin works similar to Pandora Internet Radio by recommending documents based off of selecting the "thumbs-up" or "thumbs-down" icon.[88] Another application arbitrators can use to gather facts is eBrevia.[89] By using NLP, eBrevia claims to extract relevant textual data from legal contracts and other documents by recognizing "language patterns and identify[ing] key concepts in documents."[90]

Arbitrators also can use AI to help in their analysis of pertinent issues.[91] Arbitrators can use AI technology like Ross, a natural language search technology that IBM used, to analyze and understand a large amount of data.[92] By using Ross, the arbitrator could ask a question and Ross would give recommended readings,

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85. For a discussion concerning how AI can enhance legal representation, see generally Lucas Bento, *International Arbitration and Artificial Intelligence: Time to Tango?*, KLUWER ARB. BLOG (Feb. 23, 2018), http://arbitrationblog.kluwerarbitration.com/2018/02/23/international-arbitration-artificial-intelligence-time-tango/.

86. Roe, *supra* note 81.

87. MERLIN, https://www.merlin.tech (last visited Nov. 6, 2023).

88. *Id.*

89. EBREVIA, https://ebrevia.com/#overview (last visited Nov. 6, 2023).

90. *Id.*

91. *See generally* Odhiambo Jerameel Kevins Owuor, *When Artificial Intelligence Meets Arbitration: A Solemn Look See of Prospects and Challenges*, (Aug. 20, 2022) (manuscript at 6), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4190988 ("AI helps in providing their own expert opinions to the human arbitrators. AI excels in the research, summarization, and analysis of the arguments as well as the evidence.").

92. ROSS, https://www.rossintelligence.com/features (last visited Sept. 29, 2023).

related case law, and relevant secondary sources.[93] AI systems like Ross allow "arbitrators to navigate through documents, submissions, exhibits, and case law."[94]

c. Assisting in Decision-Making

AI applications that focus on decision-analysis and prediction of outcomes may assist arbitrators in determining awards. Although often designed to be used by legal counsel, these applications are useful to arbitrators as well. In many ways, "[t]hese tools allow arbitrators to deliver awards of better quality and enhance the legitimacy and acceptance of their decisions."[95]

Studies support the idea that AI-based technologies are better than humans in predicting outcomes of legal disputes.[96] For example, computer programs excelled in predicting the votes of individual U.S. Supreme Court justices for the 2002 term compared to a group comprised of eminent lawyers and law professors.[97] The study output predicted the outcome of the decisions and predicted each justice's vote.[98] Overall, the algorithm predicted the outcome of decisions and individual votes with over 70% accuracy.[99]

Similarly, an AI system "was able to predict the results of cases regarding Articles 3, 6, and 8, of the Convention of the Protection of Human Rights and Fundamental Freedoms."[100] The model, which was created by researchers at University College London, University of Sheffield, and the University of Pennsylvania, predicted the judicial decisions of the European Court of Human Rights with 79% accuracy.[101] These types of cases were picked because of the vast amounts of data that were available for them.[102] The test comprised of an equal number of violation and nonviolation cases to prevent bias

93. *Id.*

94. Márquez, *supra* note 82, at 264.

95. Eidenmüller & Varesis, *supra* note 84, at 13.

96. Maxi Scherer, *Artificial Intelligence and Legal Decision-Making: The Wide Open*, 36 J. INT'L ARB. 539, 546 & n.40 (2019).

97. Scherer, *supra* note 96, at 546–47 (citing Theodore W. Ruger et al., *The Supreme Court Forecasting Project: Legal and Political Sciences Approaches to Predicting Supreme Court Decisionmaking*, 104 COLUM. L. REV. 1150, 1152 (2004)).

98. Daniel Martin Katz et al., *A General Approach for Predicting the Behavior of the Supreme Court of the United States*, 12(4) PLOS ONE 1, 1–2 (2017).

99. *Id.* at 1, 8.

100. Bayraktarglu-Özçelik & Özçelik, *supra* note 81 at 4–5.

101. *Id. See also* Bex Caygill, *AI Predicts Outcomes of Human Rights Trials*, UCL NEWS (Oct. 24, 2016), https://www.ucl.ac.uk/news/2016/oct/ai-predicts-outcomes-human-rights-trials (explaining that the model "automatically analyzes case text using machine learning algorithms"); Jane Wakefield, *AI Predicts Outcomes of Human Rights Cases*, BBC NEWS (Oct. 23, 2016), https://www.bbc.com/news/technology-37727387.

102. Wakefield, *supra* note 101. *Cf. infra* Part II.C.1.

and mislearning.[103] However, the test results found that the model tended to determine judgments incorrectly when the cases were very similar, indicating that the model was not able to detect the deeper intricacies of the law.[104]

Arbitrators could use similar AI technology in assisting them with decision-making. Arbitrators could check their decision against the AI's decision or prediction. In addition, arbitrators may use AI technology to craft an award for the dispute, in which the human arbitrator may or may not consider in reaching their final and binding conclusion. Also, arbitrators may us AI technology to draft the more generic (e.g., "boilerplate") sections of awards, such as procedural history or an overview of the pertinent legal rules, thereby expediting the process of award drafting.[105] Ultimately, using AI-based technology in this manner still leaves the human arbitrator responsible for determining the outcome of the dispute.

*2. AI as the Arbitrator*

Could AI-based technology be the sole decision-maker in the arbitration process?[106] Currently, AI systems are not technologically evolved enough to render binding awards. At some point in the near future, though, AI will be capable of decision-making functions. Even with this inevitable advancement, there is still debate concerning whether AI systems will competently make decisions in arbitration processes.

For some disputes, AI decision-making may be beneficial to arbitration. Similar to an arbitrator's preclusion from considering factors outside the case, AI cannot consider factors outside its dataset. If a case like *Brown v. Board of Education*[107] came before an arbitrator, the arbitrator would have to apply the separate but equal doctrine. The arbitrator would not be able to formulate a decision based on justice and fairness. When creating a dataset, the human will restrict the training data to what the parties want the AI model to consider—like the governing law and the facts of the case.[108] Because arbitrators cannot consider factors outside the scope of the

103. Wakefield, *supra* note 101.

104. *Id.*

105. Eidenmüller & Varesis, *supra* note 84.

106. *See* Coglianese & Ben-Dor, *supra* note 13.

107. *See* Derick H. Lindquist & Ylli Dautaj, *AI in International Arbitration: Need for the Human Touch*, 2021 J. DISP. RESOL. 39, 57–60, 60 n.151 (2021) (citing Brown v. Board of Education, 347 U.S. 483 (1954)); Brown v. Board of Education, 349 U.S. 294 (1955) (explaining that "a decision-maker must safeguard the evolution of law and contribute in a meaningful way to legal civilization"). For a deeper look at the limitations imposed on arbitrators and AI, see Marrow, *supra* note 40, at 44 ("The limitations imposed on arbitrators and A.I. make arbitration an ideal candidate for a computer-driven process.").

108. Kurama, *supra* note 67.

dispute and AI cannot consider factors outside its dataset, AI may seem compatible with only some types of arbitration.

However, AI systems cannot match some human abilities, such as "abstract reasoning, concept comprehension, emotional intelligence, general problem-solving skills, and the broad spectrum of other functions that are associated with human intelligence."[109] Furthermore, AI would have trouble applying principles of equity, as opposed to law. AI is not capable of "original thinking," also known as the human touch.[110] For instance, legal disputes may center on considerations based on fairness and justice; "that is, some sort of equity or good conscience."[111] Human arbitrators rely on their emotional intelligence, empathy, and life experiences to help resolve these disputes—something AI lacks.[112] In this regard, AI decision-making models may have little utility for more complex, and emotionally-infused disputes.

To date, AI-based decision-making has not been adopted in any court in the United States. Though, machine learning and reliance upon AI in the courtroom is not new. For instance, the accuracy of DNA testing and breathalyzer analysis evolved through machine learning.[113] Currently, the principal building blocks of AI in United States courts comprise the digitization of court filings and processes, the introduction of algorithmic tools for certain criminal court decisions, and the emergence of online dispute resolution as an alternative to traditional court proceedings for small claims.[114]

Several emerging trends, however, signal movement towards what may be the eventual use of automated adjudication via AI.[115] For instance, Adjusted Winner "is an algorithm developed by Steven J. Brams and Alan D. Taylor to divide . . . goods between two parties as fairly as possible."[116] The website highlights how the program works stating:

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109. Harry Surden, *Artificial Intelligence and Law: An Overview*, 35 GA. ST. UNIV. L. REV. 1305, 1309 (2019) (citation omitted).

110. Lindquist & Dautaj, *supra* note 107, at 51 (quoting Francisco Uribarri Soares, *New Technologies and Arbitration*, 7 INDIAN J. ARB. L. 84, 97 (2018)).

111. *Id.*

112. *Id.* at 42, 51.

113. Patrick W. Nutter, *Machine Learning Evidence: Admissibility and Weight*, 21 U. PA. J. CONST. L. 919, 925 (2019).

114. James Redden & Durren Banks, *Artificial Intelligence Applications for Criminal Courts: An Overview of Artificial Intelligence Applications for Prosecutors and Associated Considerations for the Criminal Court System*, NAT'L INST. OF JUST., 6–9 (August 2020), https://cjtec.org/files/5f5f943055f95.

115. *See* Implementation of Artificial Intelligence in Arbitration 6, 9–10, 17 (Dec. 1, 2021) (Master Thesis, University of Oslo) (on file at https://www.duo.uio.no/bitstream/handle/10852/92206/1/ICTLTHESIS---Master-Thesis.pdf).

116. Brams & Taylor, *supra* note 15.

> [Adjusted Winner] starts with the designation of goods or issues in a dispute. The parties then indicate how much they value obtaining the different goods, or "getting their way" on the different issues, by distributing 100 points across them. This information, which may or may not be made public, becomes the basis for fairly dividing the goods and issues later. Once the points have been assigned by both parties (in secret), a mediator (or a computer) can use [Adjusted Winner] to allocate the goods of each party, and to determine which good (there will be at most one) that may be divided.[117]

In addition, Graham Ross, a mediator and dispute resolution expert in Canada, recommended a legal dispute involving unpaid fees to an online tool that uses AI.[118] Mr. Ross stated that the algorithm "learn[s] the bidding tactics and priorities of the parties" based off the most recent bids the parties make.[119] The three-month dispute was settled in less than one hour.[120] Further, Estonia is developing AI technology to help resolve small claim disputes.[121] Similarly, China has already begun to use AI-based courts with nonhuman judges to resolve legal matters.[122] And even the French legislator has supported the use of AI and online dispute resolution for small and repetitive cases.[123]

Even as technology sufficiently advances to develop AI arbitrators, the use and scope of AI decision-making systems still must be determined. For instance, AI could pick the human arbitrator,[124] AI could be the sole decision-maker, or the parties can elect to create a panel of arbitrators consisting of two human

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117. *Id.*

118. Nick Hilborne, *Robot Mediator Settles First Ever Court Case*, ADR INST. CAN. (Feb. 19, 2019), https://adric.ca/robot-mediator-settles-first-ever-court-case/; *see also* Dafna Lavi, *No More Click? Click in Here: E-Mediation in Divorce Disputes—The Reality and the Desirable*, 16 CARDOZO J. CONFLICT RESOL. 479, 479 (2015) (discussing "innovative field of e-Mediation (also known as 'online mediation' or 'cyber mediation') as used for the resolution of divorce disputes").

119. Hilborne, *supra* note 118.

120. *Id.*

121. Niiler, *supra* note 17.

122. Vasdani, *supra* note 18; *see also* JI, *supra* note 18.

123. Antonio Musella, *Arbitration, Open Data, Justice and Artificial Intelligence: A New Step Forward*, KLUWER ARB. BLOG (Apr. 16, 2020), http://arbitrationblog.kluwerarbitration.com/2020/04/16/arbitration-open-data-justice-and-artificial-intelligence-a-new-step-forward/.

124. *See* Young-Yik Rhim & KyungBae Park, *The Applicability of Artificial Intelligence in International Law*, 12 J. E. ASIA & INT'L L. 7, 18 (2019) (explaining how AI can pick an arbitrator and stating, "[a]bove all, AI prepares the arbitrator's profile through database or Internet and then analyzes the detailed information of the arbitrator. Next, it selects the appropriate arbitrator for the relevant dispute and ranks them. AI can judge the conflicting interests . . . and can recommend three optimal arbitrators in the end.").

arbitrators and one AI-based model.[125] This latter method could provide a buffer between those parties distrustful of AI's black-box bias and those that want to utilize the next generation of technology.[126]

Once technology has evolved to create AI arbitrators, there still will be concerns and limitations on its implementation into the arbitration process.

a. Concerns

Although the use of AI decision-making in arbitration is becoming more realistic, there are some unresolved issues and concerns in effectuating an AI-based arbitration process.[127]

First, parties may not feel comfortable relying on a machine that gives no reasoning for its decision. When a court makes a ruling, it usually comes with a decision that explains why the court ruled the way it did. AI typically doesn't explain its reasoning for its outcome,[128] it merely determines an outcome. The potential of prejudicial effect, therefore, is that people see only the outputs generated by the AI, but cannot see into the system generating the outputs.[129] Some developers, though, have created AI models that generate explanations of the ultimate decision. These models are known as Explainable Artificial Intelligence ("XAI"). XAI provides a system to understand and validate the way the models are working.[130] Through this system, XAI helps humans understand

125. For a brief discussion on issues associated with mixed panels consisting of human and AI arbitrators, see Bayraktaroğlu-Özçelik & Özçelik, *supra* note 81, at 11 ("human arbitrators may have prejudice regarding the inclusion of AI in the decision making-process" by not giving the AI-arbitrator's decision any weight).

126. Cohen & Nappert, *supra* note 9.

127. For instance, some international jurisdictions, such as the Netherlands, require the arbitrator to be human. Dutch Code Civ. P. Art. 4:1023 ("Any *natural person* of legal capacity may be appointed as arbitrator.") (emphasis added). But laws may be amended and changed as technology advances. *See* Sokol, *supra* note 19, at 2, 4.

128. *See* Marrow, *supra* note 40, at 57; *see also* Peter Haas, *The Real Reasons to be Afraid of Artificial Intelligence*, TED, (Nov. 2017), https://www.ted.com/talks/peter_haas_the_real_reason_to_be_afraid_of_artificial_intelligence/transcript?language=en ("And that is the thing with AI algorithms, deep learning, machine learning. Even the developers who work on this stuff have no idea what it's doing.").

129. *See* Nutter, *supra* note 113, at 924.

130. Vijay Arya et al., *AI Explainability 360: An Extensible Toolkit for Understanding Data and Machine Learning Models*, 21 J. MACH. LEARNING RSCH. 1, 1–2 (2020). *But cf.,* Or Biran & Courtenay Cotton, *Explanation and Justification in Machine Learning: A Survey* 1, 4, http://www.cs.columbia.edu/~orb/papers/xai_survey_paper_2017.pdf (last visited Nov. 6, 2023) ("Despite this history, current efforts face unprecedented

machine learning by describing which part of the input is most important for the prediction.[131] Although XAI provides a better option for black box issues, it is unlikely that it would sufficiently provide the same depth of reasoning for an arbitration award compared to a human.

Second, an algorithm used in AI is only as good as the data fed into it. Of legitimate concern is that AI will still have potential biases and inaccuracies contained in the machine's "black box."[132] (The "black box" is a metaphor referring to AI's internal programming.) Algorithms are human-made and can be flawed. Humans have biases even if they do not realize it. One form of bias is explicit bias, which is when a person is aware of their feelings and attitudes.[133] Another form of bias is implicit bias, which is when a person is unaware of the bias yet it can still interfere with a person's decision-making.[134] Implicit bias comes with more of a risk because the person cannot attempt to guard against it as they do not realize they have the bias.

AI tries to get rid of this bias by relying on data, which is supposed to be immune to cognitive biases, but a problem transpires if the underlying data is biased. If the underlying data is biased, the algorithm will make decisions based on that biased data and treat the biases as true. An example of this is Microsoft's Tay. In 2016, Microsoft released a chatbot named Tay that used AI to post on X

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difficulties: contemporary models are more complex and less interpretable than ever; they are used for a wider array of tasks, and are more pervasive in everyday life than in the past; and they are increasingly allowed to make (and take) more autonomous decisions (and actions). Justifying these decisions will only become more crucial, and there is little doubt that this field will continue to rise in prominence and produce exciting and much needed work in the future.").

131. Biran & Cotton, *supra* note 130, at 1–2.

132. Andrea Roth, *Machine Testimony*, 126 YALE L.J. 1972, 1977–78 (2017) ("Just as human sources potentially suffer the so-called 'hearsay dangers' of insincerity, ambiguity, memory loss, and misperception, machine sources potentially suffer 'black box' dangers that could lead a factfinder to draw the wrong inference from information conveyed by a machine source. A machine does not exhibit a character for dishonesty or suffer from memory loss. But a machine's programming, whether the result of human coding or machine learning, could cause it to utter a falsehood by design. A machine's output could be imprecise or ambiguous because of human error at the programming, input, or operation stage, or because of machine error due to degradation and environmental forces. And human and machine errors at any of these stages could also lead a machine to misanalyze an event. Just as the 'hearsay dangers' are believed more likely to arise and remain undetected when the human source is not subject to the oath, physical confrontation, and cross-examination, black box dangers are more likely to arise and remain undetected when a machine utterance is the output of an 'inscrutable black box.'") (footnotes omitted).

133. Kimberly Papillon, *Bias and Well-Meaning People*, NAT'L CTR. FOR CULTURAL COMPETENCE, https://nccc.georgetown.edu/bias/module-3/1.php (last visited Nov. 6, 2023).

134. *Id.*

(formerly known as Twitter).[135] Tay would analyze threads on X and start data mining.[136] After a few hours, Tay started to tweet about racism, anti-Semitism, and dictators because X users were spamming Tay's threads with vulgar statements.[137] Although this example was an intentional manipulation of the dataset, this shows how biased data can influence AI decisions. This influence can be heightened when people are unaware the data is biased. Even with the advent of self-learning AI, there is still no guarantee of a "zero-error rate" because the genesis of self-learning models are human beings who are flawed. It should be kept in mind, though, that although AI may be subject to errors and bias, the counterfactual is that humans are subject to errors and bias as well. The question becomes, then, how AI errors and bias compare relative to its human counterparts. As one commentator noted, "[t]he margin of human error remains vaster than the margin of AI errors. And in essence, the source of AI errors is human error. Investment is needed to enhance error detection for both types of errors, with the aim of mitigating their impacts."[138]

A third concern is that AI does not have emotional intelligence.[139] Emotional intelligence involves "the ability to carry out accurate reasoning about emotions and the ability to use emotions and emotional knowledge to enhance thought."[140] An outcome may statistically be the "best" outcome, but it may not be the most feasible solution. For example, AI can take into account the economic value, but it is unable to take into account the emotional value when dividing property between two parties. On the contrary, human arbitrators are able to combine life experiences and the ability to

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135. Peter Lee, *Learning from Tay's Introduction*, MICROSOFT: OFF. MICROSOFT BLOG (Mar. 25, 2016), https://blogs.microsoft.com/blog/2016/03/25/learning-tays-introduction/; *see also* Casey Ross & Ike Swetlitz, *IBM's Watson Supercomputer Recommended 'Unsafe and Incorrect' Cancer Treatments, Internal Documents Show*, STAT (July 25, 2018), https://www.statnews.com/wp-content/uploads/2018/09/IBMs-Watson-recommended-unsafe-and-incorrect-cancer-treatments-STAT.pdf ("Watson supercomputer often spit out erroneous cancer treatment advice and that company medical specialists and customers identified 'multiple examples of unsafe and incorrect treatment recommendations.'").

136. Marty J. Wolf et al., *Why We Should Have Seem That Coming: Comments on Microsoft's Tay "Experiment," and Wider Implications*, 1 ORBIT J. 1, 1 (2017).

137. *Id.* at 1–2.

138. David Winter, *AI Errors vs. Human Errors*, INT'L DIRECTOR, https://internationaldirector.com/technology/ai-errors-vs-human-errors/ (last visited Feb. 17, 2023).

139. *But see* Charles Rich & Candace L. Sidner, *Robots and Avatars as Hosts, Advisors, Companions, and Jesters*, AI MAG., Spring 2009, at 29, 30–31 (discussing the development of "computational theories of emotion" that allow "robots and avatars . . . [to] interact with humans").

140. John D. Mayer et al., *Human Abilities: Emotional Intelligence*, 59 ANN. REV. PSYCH. 507, 511 (2008).

empathize, which can help them make decisions that a machine sometimes would not consider. Empathy is extremely important in arbitration because it helps the arbitrator understand why the parties want a certain outcome. The arbitrator can create a different theory of the case and understand the parties' motivations based on the arbitrators understanding of life, the different emotional reactions of the parties, and the difference in cultural views and sensitivities.[141] AI systems lack this "human touch" and fail to perform a task that is not specifically included in the initial algorithm.[142]

Finally, there is a lack of data for AI to make decisions. As stated previously, one of the core requirements of machine learning is access to copious amounts of data. The more data an algorithm has, the more accurate the model will be. The less data, the less accurate. This intersection of AI and arbitration is problematic. Two often cited main benefits of arbitration is privacy and confidentiality.[143] There are numerous reasons for confidentiality in arbitration, including not wanting to expose allegations to the public, publicize the loss, or take a position publicly.[144] Although arbitration laws are public, a lot of arbitration awards and decisions are not. This can present problems when trying to gather data to build a model. However, there are some sources trying to combat this problem, such as Dispute Resolution Data and Arbitrator Intelligence.[145] Dispute Resolution Data provides a database for data collection and reporting.[146] The data is

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141. DOAK BISHOP & EDWARD G. KEHOE, THE ART OF ADVOCACY IN INTERNATIONAL ARBITRATION 114 (2d ed. 2010); *but see* Robin Andrews, *AI Beats Humans at Emotional Recognition Test In Landmark Study*, IFLSCIENCE (Mar. 20, 2018), https://www.iflscience.com/ai-beats-humans-emotional-recognition-test-landmark-study-46701 (researchers at The Ohio State University performed a test where AI machines did just as good, and sometimes better, than humans in trying to guess a person's emotion based on facial expressions).

142. Lindquist & Dautaj, *supra* note 107 at 41–42.

143. Cindy G. Buys, *The Tensions Between Confidentiality and Transparency in International Arbitration*, 14 AM. REV. INT'L ARB. 121, 121 (2003); *see also* SCH. OF INT'L ARB. AT QUEEN MARY UNIV. OF LONDON WITH WHITE & CASE LLP, 2018 INTERNATIONAL ARBITRATION SURVEY: THE EVOLUTION OF INTERNATIONAL ARBITRATION 3, 24 (2018) ("87% of respondents believe that confidentiality in international commercial arbitration is of importance."). *But cf.* Michael Young & Simon Chapman, *Confidentiality in International Arbitration*, 27 ASA BULL. 26, 26 (2009) (stating that "we question whether the English approach is sustainable, or whether it would be better for the courts to abandon the so-called implied duty of confidentiality and approach the issue on the basis that confidentiality is a mailer best left to the discretion of the parties.").

144. *See* Buys, *supra* note 143, at 123.

145. Waqar, *supra* note 80, at 5; *see also About DRD*, DISP. RESOL. DATA, https://www.disputeresolutiondata.com/about_drd (last visited Nov. 6, 2023).

146. *See* Bayraktarglu-Özçelik & Özçelik, *supra* note 81, at 5–6 (explaining the DRD "gathers data from 18 institutions, including the International Chamber

collected from a wide variety of disputes and is updated continuously as cases are closed.[147] And, Arbitrator Intelligence uses post-award questionnaires to increase access to information about arbitrators and their decision-making process. Of course, another option is to make confidential decisions available only for the purpose of building the algorithm.

b. Practical Applications

As technology advances towards the development of AI-based decision-making systems for arbitration, there will still be issues regarding the practical implications of its implementation.[148] Notably, AI decision-making systems will not be equally beneficial or compatible to all types of disputes—the type of dispute matters. For instance, the marginal utility of using AI-based decision-making in arbitration declines precipitously when the dispute involves complex issues, unique facts, and emotionally-infused conflicts. Accordingly, the effectiveness and efficiency of an AI arbitration system is contingent on the simplicity or complexity of a given dispute and the degree of conflict and human interaction the dispute might involve.

First, the ultimate utility of AI decision-making in arbitration depends on the complexity of the dispute. Simple disputes are more likely to be compatible with AI decision-making.[149] These cases are ones that are usually uncontested, routine, and require little attorney participation. For instance, AI-based decision-making may be appropriate in the arbitration of small money claims, tax disputes, and commercial disputes where the outcome is based on the analysis of facts and the calculation of variables is easily quantifiable. Conversely, a sufficiently complex case may prove too difficult or impossible for AI to resolve for the foreseeable future.[150] A complex case is one with unique facts that requires exceptional management by the arbitrator to avoid placing unnecessary burdens on the parties and process, and requires the arbitrator "to expedite the case, keep

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of Commerce (ICC) and the AAA and has covered over 5000 arbitrations, with the parties representing 185 countries").

147. *See id.*

148. For an analysis of the effectiveness of AI decision-making in arbitration, this subpart assumes the data sets will be complete in order for AI to make valid decisions. Though, it will remain a concern if humans will be able to gather and input enough data to create applicable data sets.

149. *But see* Erlis Themeli & Stefan Philipsen, *AI as the Court: Assessing AI Deployment in Civil Cases*, *in* AI AND LAW A CRITICAL OVERVIEW 213, 222 (Karim Benyekhlef ed., Les Éditions Thémis 2020) (citing Tania Sourdin, *Judge v Robot? Artificial Intelligence and Judicial Decision-Making*, 41 U.N.S.W. L.J. 1114, 1127 (2018)).

150. *See id.*; *see also* Marrow, *supra* note 40, at 69 ("Training a computer with algorithms and data sets needed to address a broad range of conditions and situations is a far more complex task.").

costs reasonable, and promote effective decision making by the court . . . ."[151] In addition, disputes involving "hidden variables," such as "social or economic considerations not evident in legal or factual documents" will prove to be problematic for AI decision-making systems.[152] It should be noted, however, that complexity of disputes cannot merely be understood in the sense of legal complexity. For example, a rule may be easily understandable from a legal perspective, but may be more difficult to translate or be applied to an AI system.[153]

Second, the usefulness of AI decision-making in arbitration depends on the nature of the underlying conflict. Disputes involving highly emotionally-charged parties or hostile parties may be ill-suited for AI decision-making.[154] These high conflict cases involve situations where the parties are extremely emotional about, and vested in, the outcome of the dispute.[155] This could be due to the "financial value at stake, the emotional significance for the parties and the strategic value of the case."[156] These cases are more likely suitable for a human arbitrator, rather than an AI arbitrator that is incapable of taking into account the emotional significance of the dispute.[157]

Consequently, AI decision-making systems will be more applicable to

> small claims matters, defined as involving disputes (1) at law, excluding equitable matters of any kind, (2) with a dollar value of no more than a set amount, probably less than five figures, (3) involving simple factual and legal issues (4) and limited legal defenses, and (5) that can be easily classified as typical.[158]

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151. Cal. Rules of Court, Rule 3.400(a).

152. Eidenmüller & Varesis, *supra* note 84, at 17.

153. Themeli, *supra* note 149.

154. *Id.* at 223–24.

155. *Id.* at 223 ("Conflict, in this sense, means the level of animosity, rivalry or competitiveness between the parties.").

156. *Id.* (quoting ERLIS THEMELI, CIVIL JUSTICE SYSTEM COMPETITION IN THE EUROPEAN UNION: THE GREAT RACE OF COURTS 196–98 (2018)). For a deeper look at the causes of outcomes and conflicts see UNIV. OF MINN. LIBR., ORGANIZATIONAL BEHAVIOR, 10.3 CAUSES AND OUTCOMES OF CONFLICTS (2010) https://open.lib.umn.edu/organizationalbehavior/chapter/10-3-causes-and-outcomes-of-conflict/ (last visited Nov. 6, 2023).

157. Themeli, *supra* note 149, at 223 ("[a]lgorithm aversion is a know[n] phenomena, and it can be fueled by the intensity of the conflict between the parties." (citing Berkeley J. Dietvorst et al., *Algorithm aversion: People erroneously avoid algorithms after seeing them err*, 144 J. EXPERIMENTAL PSYCH.: GEN. 114, 114 (2015))). For more reasons on why parties avoid AI see Dietvorst, *supra* note 157.

158. Marrow, *supra* note 40, at 70.

Conversely, AI-based decision-making systems will be less advantageous to emotionally-infused and complicated disputes, such as those found in trust arbitration. Therefore, an exploration of the special nature of trusts is required in order to eventually examine the use of AI in trust arbitration.

## II. TRUST LAW

An elementary understanding of the basic principles and tenants of U.S. trust law is necessary in order to analyze the compatibility of AI decision-making in trust arbitration.

### *A. An Overview of Trust Law*

Private trusts have developed as a means for individuals to make gifts while still maintaining some control over how the property is used. Basically, gifts involve a donor giving a gift outright to the donee, but a gift through trust splits the gift between a trustee and beneficiary.[159] When creating a private trust, the original property owner (the 'settlor', also known as the 'grantor') intentionally gives property to a trustee to hold for the benefit of a beneficiary upon the terms and conditions the settlor has imposed.[160] During this process, the trustee acquires legal title to the trust property while the beneficiary or beneficiaries acquire beneficial ownership, also known as equitable title.[161] This results in two distinct elements of asset ownership: (1) legal title and (2) beneficial ownership.

Although U.S. trust law is primarily governed by individual state law, most state laws are similar and hold the effectiveness of the settlor's intent as their primary goal.[162] Thus, trust law emphasizes

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159. Lee-ford Tritt, *The Limitations of an Economic Agency Cost Theory of Trust Law*, 32 CARDOZO L. REV. 2579, 2587 (2011)

160. As Scott's treatise contemplates, "[t]he duties of the trustee are such as the creator of the trust may choose to impose; the interests of the beneficiaries are such as he may choose to confer upon them." 1 AUSTIN WAKEMAN SCOTT & WILLIAM FRANKLIN FRATCHER, THE LAW OF TRUSTS § 1, at 2 (4th ed. 1987).

161. *See id.* at 4.

162. It is generally held that the overarching jurisprudential foundation of American estates law is donative freedom. *See* RESTATEMENT (THIRD) OF PROP.: WILLS & OTHER DONATIVE TRANSFERS § 10.1 cmt. a (AM. L. INST. 2003). *See* John H. Langbein, *Mandatory Rules in the Law of Trusts,* 98 NW. U. L. REV. 1105, 1109 (2004) (Effectuating the settlor's intent has been characterized as "[t]he dominant substantive principle of the law of gratuitous transfers . . . ."); Lee-ford Tritt, *Technical Correction or Tectonic Shift: Competing Default Rule Theories Under the New Uniform Probate Code*, 61 ALA. L. REV. 273, 287–90 (2010) (discussing the importance of intent effectuating default rules in trusts and estates law); Lee-ford Tritt, *Liberating Estates Law from the Constraints of Copyright,* 38 RUTGERS L.J. 109, 115–32 (2006) (explaining the doctrine of, and underlying policy reasons for, testamentary freedom). However, some scholars are skeptical concerning the actual deference paid to testamentary freedom in American estates law because of potential biased results from postmortem will

a robust concept of donative freedom to ensure that the settlor's intent is effectuated. Accordingly, trust law "consists overwhelmingly of default rules that the settlor . . . can alter or reject,"[163] and the settlor faces very few limitations or restraints when formulating the features of the trust instrument.[164]

Trust law also requires an appreciation of the fiduciary relationship that is at the heart of every trust. One of the basic principles of trust law is that the trustee (the legal owner) oversees the trust property for the benefit and enjoyment of the beneficiary or in accordance with the purpose of the trust.[165] When administering the trust, the trustee must comply with a robust and rich array of fiduciary duties.[166] In fact, robust fiduciary duties are one of the defining aspects of trusts because they function both as legal rules and social or moral norms.[167]

Moreover, the use and structure of trusts have evolved over time. First, although trusts were once relatively rare and only used by affluent people, trusts have now become increasingly more common and are accessible to people of various socio-economic backgrounds.[168] Second, trusts have become more managerial in function, in that property owners are using trusts for ongoing and intergenerational professional wealth management.[169] Third, trusts are often used for

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contests. *See, e.g.*, Melanie B. Leslie, *The Myth of Testamentary Freedom*, 38 ARIZ. L. REV. 235, 236 (1996) (theorizing that courts validate wills on the basis of whether the testator bequeathed his or her property to his or her biological family members rather than to nonrelatives); *see also* Ray D. Madoff, *Unmasking Undue Influence*, 81 MINN. L. REV. 571, 576 (1997) (arguing that "the undue influence doctrine denies freedom of testation for people who deviate from judicially imposed testamentary norms . . . .").

163. Langbein, *supra* note 162, at 1105.

164. The settlor's intent will be overridden only in those rare instances where it violates public policy, by encouraging illegal activity, fostering immorality, or requiring the destruction of property, and where the trust advocates "capricious purposes." For a discussion of the rule against capricious purposes, see *id.* at 1107, 1107–08 (quoting RESTATEMENT (THIRD) OF TR. § 29 cmt. m (AM. L. INST. 2003) (preserving the old rule)).

165. *See* RESTATEMENT (THIRD) OF TR. § 27 (AM. L. INST. 2003).

166. Tritt, *supra* note 159, at 2587.

167. *See* Melanie B. Leslie, *Trusting Trustees: Fiduciary Duties and the Limits of Default Rules*, 94 GEO. L.J. 67, 70 (2005) (discussing the importance of the social and moral norms underlying fiduciary duties).

168. The recent rise in trust accessibility and use has been labelled the "massification" or "pedestrianization" of trusts. *See* Joel C. Dobris, *Changes in the Role and the Form of the Trust at the New Millennium, or, We Don't Have to Think of England Anymore*, 62 ALBANY L. REV. 543, 545 (1998).

169. *See* GRAHAM MOFFAT ET AL., TRUSTS LAW: TEXTS AND MATERIALS 31–33 (William Twinning et al. eds., 3d ed. 1999); Edward C. Halbach, Jr., *The Uses and Purposes of Trusts in the United States*, *in* MODERN INTERNATIONAL DEVELOPMENTS IN TRUST LAW 123, 133–38 (David Hayton ed., 1999); John H. Langbein, *The Contractarian Basis of the Law of Trusts*, 105 YALE L.J. 625, 637

the sole purpose of shielding assets from potential future creditors.[170] Finally, some states have repealed or curtailed the rules against perpetual trusts.[171]

### *B. The Special Nature of Private Trusts*

An appreciation of the special nature of trusts helps elucidate the applicability of AI arbitration to trust disputes.

Private trusts are used for a variety of reasons and invoke personal preconceptions concerning death, property rights, personal legacies, paternalism, altruism, or other affective interests. Some typical reasons why people may create trusts are to provide ongoing familial support during difficult times, provide care for minors or incompetents, allow for flexibility in estate planning, help protect assets from creditors, minimize taxes, promote family values, and foster family harmony.[172] Settlors may be motivated by one goal or multiple goals. Moreover, these goals may be difficult to rank in some sort of lexical ordering.

Trusts come in many different structures, are created for many different reasons, and vary from simple to complex. A trust simply may be used as a will substitute to dispose of most or all of the decedent's property at death.[173] Trusts have also been used in a specified narrow fashion to manage or dispose of specialized property, such as real estate, insurance, or guns.[174] Trusts can be *inter vivos*—created during a settlor's life–or testamentary—created upon a settlor's death through a bequest in their will.[175] In addition, trusts can last for short periods of time or be perpetual in duration, at least

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(1995). This development derives from the liberalization of testamentary freedom, the abolishment of feudal restrictions on land transfer, and the modem disintegration of the nexus between wealth and land. *See* John H. Langbein, *The Twentieth-Century Revolution in Family Wealth Transmission*, 86 MICH. L. REV. 722, 723 (1988) (discussing historical changes in family wealth).

170. The use of trusts to implement asset protection functions is gaining prominence. *See* Joel C. Dobris, *SRI–Shibboleth or Canard (Socially Responsible Investing, That Is)*, 42 REAL PROP. PROB. & TR. J. 755, 762, 789 n.126 (2008). For a general discussion of spendthrift trusts, see Adam J. Hirsch, *Spendthrift Trusts and Public Policy: Economic and Cognitive Perspectives*, 73 WASH. U. L.Q. 1, 2 (1995) (defining a spendthrift trust).

171. To date, a majority of states and the District of Columbia have terminated restrictions on the duration of private trusts by abolishing the rule against perpetuities or severely curtailing its effect. *See* Scott Andrews Shepard, *A Uniform Perpetuities Reform Act*, 16 N.Y.U. J. LEGIS. & PUB. POL'Y 89, 100 & n.29 (2013).

172. Lee-ford Tritt, *Dispatches from the Trenches of America's Great Gun Trust Wars*, 108 NW. U. L. REV. 743, 753 (2014).

173. *Id.*

174. *Id.*

175. *Id.*

in some states.[176] Additionally, *inter vivos* trusts may be revocable or irrevocable.[177] Notably, trusts may contemplate both inexperienced individuals and experienced corporations serving as trustees.[178] Moreover, trusts are no longer only for the wealthy, although, *inter vivos* and/or the long-term (or perpetual) dynasty type of trusts are probably primarily used by the very affluent.

Trusts are entities in themselves, separate and distinct from the parties involved in their creation (i.e., settlor, trustee, and beneficiary). Regulations from the U.S. Department of the Treasury describe trusts as independent entities whose purpose is to protect and conserve property for the benefit of beneficiaries "who cannot share in the discharge of this responsibility and, therefore, are not associates in a joint enterprise for the conduct of business for profit."[179] Because trusts are perceived as separate entities, they have unique partitioning and protection features.[180]

Trust law also splits the trustee into two distinct legal persons—an individual acting on her own behalf and a trustee acting on behalf of the trust,[181] which insulates the trustee from creditors of the trust and protects trust assets from creditors of the trustee. The trust property can also be insulated from the beneficiaries' creditors through the use of a spendthrift or discretionary trust.[182] Finally, the settlor's creditors generally cannot reach trust assets so long as the

176. *Id.*

177. David J. Feder & Robert H. Sitkoff, *Revocable Trusts and Incapacity Planning: More than Just a Will Substitute*, 24 ELDER L.J. 1, 6 (2016) ("An inter vivos trust may be *revocable* or *irrevocable*, depending on the intent of the settlor."); *see* Strong, *supra* note 4, at 1171 ("All express trusts can be categorized as either a living (*inter vivos*) or testamentary trust, on the one hand, and as either a revocable or irrevocable trust, on the other.").

178. Melanie B. Leslie, *Trusting Trustees: Fiduciary Duties and the Limits of Default Rules*, 94 GEO. L.J. 67, 68 (2005) (discussing how settlors appoint "capable and conscientious individual . . . [and] institution[al]" trustees to manage the trust and its assets).

179. Treas. Reg. § 301.7701–4(a) (2022).

180. Henry Hansmann & Ugo Mattei, *The Functions of Trust Law: A Comparative Legal and Economic Analysis*, 73 N.Y.U. L. REV. 434, 438, 443, 445, 452, 470, 478–79 (1998) (noting that the property law aspect of shielding a trustee's assets from creditors is one of the most important contributions of trust law).

181. Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law,* 110 YALE L.J. 387, 416 (2000).

182. *See* Hirsch, *supra* note 170, at 2 (discussing how spendthrift provisions protect trust assets against creditors); *see also* Robert T. Danforth, *Rethinking the Law of Creditors' Rights in Trusts*, 53 HASTINGS L.J. 287, 292 (noting the nature of a beneficiary's interest in a discretionary trust shields trust assets from creditors).

settlor is not also a beneficiary and the settlor's transfer of assets into the trust was not fraudulent.[183]

Together, U.S. trust principles create a complex web of law, policy, and autonomy that nonspecialists can find difficult to fathom.

### *C. Characteristics of Trust Disputes*

It is important to understand the different types of trust disputes if one is to analyze the utility and effectiveness of AI-based decision-making in trust arbitration. Generally, there are two broad categories of disputes concerning trusts. One category of disputes is considered "external" in that the trust itself may be at odds with an unrelated third party. These external grievances, however, are not technically trust disputes because they arise out of contractual or other obligations between the trust and an unrelated third party. In essence, the trust and the third-party contract (or consent) to have the dispute arbitrated. The ability to resolve external trust grievances through arbitration is neither doubtful nor uncertain.[184] The second type of dispute involves "internal" trust disputes, which are far more common than external trust disputes.[185] An internal trust dispute arises when a conflict exists between any settlor, trustee, or beneficiary.

Moreover, not all internal trust disputes present precisely the same issues. Internal trust disputes might be divided into two subcategories.[186] The first concerns disputes arising from the administration and management of the trust. These types of disputes typically involve breaches of fiduciary duties, such as mismanagement of funds, conflicts of interests, or being partial to certain beneficiaries over others. The second type of internal disputes concerns the validity of the trust itself. This category typically involves a party arguing that the trust is invalid due to the result of diminished capacity, insane delusion, undue influence, fraud, and/or duress.

Regardless of the type of internal dispute, these internal conflicts are typically highly emotional, hostile, complex, and present unique factual issues.

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183. *See* Danforth, *supra* note 182, at 292, 312–13, 326 (explaining how creditors can reach assets of self-settled trusts, as well as assets that were moved into the trust fraudulently).

184. Typically, jurisdictions grant trustees the specific power to engage in "nonjudicial means of dispute resolutions." Strong, *supra* note 4, at 1161 n.7.

185. Michael Hwang, *Arbitration for Trust Disputes*, *in* GUIDE TO THE WORLD'S LEADING EXPERTS IN COMMERCIAL ARBITRATION 83, 84 (Legal Media Group ed., 2009).

186. *Id.* *See also* Stephen Wills Murphy, *Enforceable Arbitration Clauses in Wills and Trusts: A Critique,* 26 OHIO STATE J. ON DISP. RESOL. 627, 629 (2011).

### *D. The Current State of Trust Arbitration*

The unique nature of trust law suggests that it might not blend very well with other types of law. In general, transporting a legal theory developed under one legal discipline into an entirely different legal discipline may foster unforeseen difficulties, especially if the underlying policies of the separate legal disciplines are not adequately understood. This is particularly true of arbitration, which has its theoretical underpinnings in contract law, a field that is very different than trust law. However, the disparate nature of the two legal disciplines does not mean that trust disputes cannot be arbitrated. Instead, the tension between the two fields simply requires careful analysis of potential areas of conflict.

Arbitration of trust disputes can arise in two fashions: by consensual agreement of the parties or through a mandatory arbitration provision within the trust agreement.

#### *1. Consensual Arbitration of Trust Disputes*

Arbitration is one of the mechanisms that parties involved in a trust dispute may voluntarily choose to settle their differences. U.S. statutory and common-law schemes generally favour this choice. For example, section 816(23) of the Uniform Trust Code ("UTC") authorizes all trustees to "resolve a dispute concerning the interpretation of the trust of its administration by mediation, arbitration, or other procedure for alternative dispute resolution."[187] In addition, section 111 of the UTC encourages interested parties to a trust dispute to enter into a "binding nonjudicial settlement agreement with respect to any matter involving a trust."[188] If the parties to the trust dispute consensually agree to arbitrate, the law and codes support this decision.

#### *2. Mandatory Arbitration of Trust Disputes*

Mandatory arbitration of trust disputes concerns trust agreements in which the settlor includes a mandatory arbitration provision in order to try to compel the trustees and beneficiaries to

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187. UNIF. TR. CODE § 816(23) (UNIF. L. COMM'N amended 2010). The UTC has been adopted by 36 U.S. jurisdictions. *See Trust Code*, UNIF. L. COMM'N, https://www.uniformlaws.org/committees/community-home?communitykey=193ff839-7955-4846-8f3c-ce74ac23938d (last visited Nov. 6, 2023) (identifying U.S. jurisdictions that have adopted the UTC). For a discussion of arbitration in the context of the Uniform Trust Code, see David M. English, *Arbitration and the United States Uniform Trust Code*, *in* ARBITRATION OF TRUST DISPUTES: ISSUES IN NATIONAL AND INTERNATIONAL LAW 143, 143–49 (S.I. Strong & Tony Molloy eds., Oxford University Press 2016).

188. UNIF. TR. CODE § 111(b) (UNIF. L. COMM'N amended 2010). Although this Article focuses on private trusts, for an important exploration of general arbitration issues concerning a variety of types of trusts, see Strong, *supra* note 4, at 1157.

submit any disputes to binding arbitration. The use of mandatory arbitration provisions are controversial because arbitration traditionally rests upon a mutual consent to arbitrate that may not exist in cases involving internal trust disputes.[189] Some academics, practitioners, and legal organizations specializing in estate planning, however, advocate the use of provisions in private trust agreements that mandate arbitration of trust disputes on account of perceived potential benefits.[190] Despite the increasingly positive dialogue

189. *See* Schoneberger v. Oelze, 96 P.3d 1078, 1082–83 (Ariz. Ct. App. 2004), *superseded by statute*, ARIZ. REV. STAT. ANN. § 14-10205 (2022), *as recognized in* Jones v. Fink, No. 1 CA–SA 10–022, 2011 WL 601598, at *2 (Ariz. Ct. App. Feb. 22, 2011). Realize that the parties to an internal trust dispute could also consent to arbitration after the dispute arises by mutual consent.

190. Some of the ink spilled by the academy includes: Horton, *supra* note 3, at 1038 ("Thus, several courts held that a testator or settlor's right to mandate arbitration flowed naturally from his power to 'annex conditions . . . to his bequests.'" (quoting Wait v. Huntington, 40 Conn. 9, 11 (1873))); Erin Katzen, *Arbitration Clauses in Wills and Trusts: Defining the Parameters for Mandatory Arbitration of Wills and Trusts*, 24 QUINNIPIAC PROB. L.J. 118, 120 (2011) ("[L]egislatures should consider placing limitations on the enforceability of arbitration clauses in wills and trusts and create safeguards such as default or mandatory procedures for these arbitrations."); Murphy, *supra* note 186, at 634, 662–69; E. Gary Spitko, *Gone but Not Conforming: Protecting the Abhorrent Testator from Majoritarian Cultural Norms Through Minority Culture Arbitration*, 49 CASE W. RSRV. L. REV. 275, 308 (1999) ("Nevertheless, public policy should preclude the testator from unilaterally compelling arbitration before an arbitrator who is so biased that the arbitration is unlikely to provide a meaningful opportunity for the will contestant to present her case and prevail on the merits."); E. Gary Spitko, *The Will as an Implied Unilateral Arbitration Contract*, 68 FLA. L. REV. 49, 49 (2016); S.I. Strong, *Empowering Settlors: How Proper Language Can Increase the Enforceability of a Mandatory Arbitration Provision in a Trust*, 47 REAL PROP., TR. & EST. L.J. 275, 281 (2012) [hereinafter Strong, *Empowering Settlors*]; S.I. Strong, *Mandatory Arbitration of Internal Trust Disputes: Improving Arbitrability and Enforceability Through Proper Procedural Choices*, 28 ARB. INT'L 591, 591–92 (2012); Strong, *supra* note 4, at 1157; Rachel M. Hirshberg, Note, *You Can't Have Your Trust and Defeat it Too: Why Mandatory Arbitration Provisions in Trusts are Enforceable, and Why State Courts are Getting it Wrong*, 2013 J. DISP. RESOL. 213, 213 (2013). Contributions by practitioners include: Jonathan G. Blattmachr, *Reducing Estate and Trust Litigation Through Disclosure, in Terrorem Clauses, Mediation and Arbitration*, 9 CARDOZO J. CONFLICT RESOL. 237, 237 (2008); Michael P. Bruyere & Meghan D. Marino, *Mandatory Arbitration Provisions: A Powerful Tool to Prevent Contentious and Costly Trust Litigation, But Are They Enforceable?*, 42 REAL PROP. PROB. & TR. J. 351, 352 (2007); Nancy E. Delaney et al., *Rachel v. Reitz and the Evolution of the Enforceability of Arbitration Clauses in Estate Planning Documents*, 27 PROB. & PROP. 12, 13 (2013); Bridget A. Logstrom, *Arbitration in Estate and Trust Disputes: Friend or Foe?*, 30 AMERICAN COLL. OF TR. & EST. COUNS J. 266, 266–67 (2005); Juan C. Antúnez, FLA. PROB. + TR. LITIG. BLOG, www.flprobatelitigation.com/ (last visited Feb. 17, 2023). A wonderful contribution to the dialogue proffered by an estate planning legal organization is

concerning the use of mandatory arbitration provisions in trust agreements, their validity and effectiveness remain somewhat uncertain in the U.S.[191] Generally, courts have been somewhat inconsistent in upholding mandatory arbitration provisions in trust agreements.[192] Furthermore, only a few states have codified statutes that specifically legitimize and authorize the use of these types of provisions.[193] The situation proves especially problematic in a discipline of law that is quite "litigious"[194] and where many of the probate courts are overworked and underfunded.[195] Additionally, the lack of clarity and consistency surrounding the legal enforceability of these provisions may discourage the proliferation of their use among estate planners.[196] Therefore, at this point, the utility and usefulness of mandatory arbitration provisions may be somewhat limited.

The issue concerning these provisions is the fact that arbitration evolved around a theory of mutual consent—an agreement between the parties.[197] The arbitration process often is considered a "creature

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the American College of Trust and Estate Counsel (ACTEC), AMERICAN COLL. OF TR. & EST. COUNS., *supra* note 6, at 9.

191. *See* Horton, *supra* note 3, at 1030; Katzen, *supra* note 190, at 119; Strong, *Empowering Settlors*, *supra* note 190, at 287.

192. *See* Katzen, *supra* note 190, at 119 (noting that "the issue is unresolved in almost every jurisdiction" and that the current law on the subject is "thin and underdeveloped").

193. *See id.* ("The courts that have addressed the issue refused to enforce arbitration clauses in wills and trusts, suggesting that states must legislate in order to make such clauses enforceable. However, few courts or legislatures have directly addressed the matter.") (footnote omitted); *see, e.g.*, ARIZ. REV. STAT. ANN. § 14-10205 (2022) ("A trust instrument may provide mandatory, exclusive and reasonable procedures to resolve issues between the trustee and interested persons . . . with regard to administration or distribution of the trust.").

194. *See* Horton, *supra* note 3, at 1029. As noted in the Wall Street Journal, "[r]oughly 70% of families lose a chunk of their inherited wealth, mostly due to estate battles, according to the research conducted over two decades by the Williams Group, a San Clemente, Calif., firm that helps families avoid such conflicts." Liz Moyer, *When Heirs Collide*, WALL ST. J. (Sept. 26, 2014, 12:39 PM), http://online.wsj.com/articles/when-heirs-collide-1411749577.

195. For example, in Florida's Miami-Dade County, each probate judge, on average, "took on 2,848 new cases in . . . [the fiscal year] 2012-13, in Broward [County, Florida,] the figure was even higher, at 3,105" new cases per judge. Juan C. Antúnez, *2012–2013 Probate Court Filing Statistics*, PROB. + TR. LITIG. BLOG (Aug. 4, 2014), www.flprobatelitigation.com/2014/08/articles/trust-and-estates-litigation-in-the-news/2012-13-probate-court-filing-statistics/.

196. There is anecdotal evidence of the limited use of arbitration provisions in trust agreements. *See* Katzen, *supra* note 190, at 119; Strong, *supra* note 4, at 1162–63.

197. *See* Litton Fin. Printing Div. v. Nat'l Lab. Rels. Bd., 501 U.S. 190, 201 (1991) ("We reaffirm today that under the NLRA arbitration is a matter of consent, and that it will not be imposed upon parties beyond the scope of their agreement.").

of contract,"[198] and therefore many jurisdictions require an arbitration agreement to reflect certain contractual qualities.[199] A trust, on the other hand, is a "fiduciary relationship with respect to property, arising from a manifestation of intention to create that relationship and subjecting the person who holds title to the property to duties to deal with it for the benefit of charity or for one or more persons . . . ."[200] While some commentators have suggested that trusts contain a contractual element, trusts are traditionally considered to be donative in nature.

This dichotomy has led to two essential questions concerning the enforcement of mandatory arbitration provisions in trust agreements. First, can trust parties, specifically beneficiaries, ever be said to have consented to the arbitration provision and second, can trusts be considered contracts for purposes of existing arbitration law?[201]

Although a dispute has re-emerged among academics regarding whether the concept of a trust is grounded in property, contract, or organizational law,[202] courts traditionally have answered these questions in the negative. For example, in *Schoneberger v. Oelze*,[203] the Arizona Court of Appeals held that because trust beneficiaries traditionally do not consent to becoming beneficiaries, they are not

198. Strong, *supra* note 4, at 1209 (quoting Thomas J. Stipanowich, *Arbitration and the Multiparty Dispute: The Search for Workable Solutions*, 72 IOWA L. REV. 473, 476 (1987)).

199. *Id.* (citing GARY B. BORN, INTERNATIONAL COMMERCIAL ARBITRATION 640–42 (2009)).

200. RESTATEMENT (THIRD) OF TR. § 2 (AM. L. INST. 2003).

201. Answering this question in the affirmative could create some dangerous blurring of the lines between contract law and trust law, which could undermine the unique attributes of U.S. trust law.

202. For detailed descriptions of the view of trust law as property law, see Gregory S. Alexander, *A Cognitive Theory of Fiduciary Relationships*, 85 CORNELL L. REV. 767, 768 & n. 7 (2000); Joshua Getzler, *Legislative Incursions into Modern Trusts Doctrine in England: The Trustee Act 2000 and the Contracts (Rights of Third Parties) Act 1999*, 2 GLO. JURIST TOPICS, 2002, at 10–14; ROBERT PEARCE & JOHN STEVENS, THE LAW OF TRUSTS AND EQUITABLE OBLIGATIONS 87, 103–14 (LexisNexis Butterworths, 3d. ed. 2002). *See also* RESTATEMENT (THIRD) OF TR. § 5(i) & cmt. i (AM. L. INST. 2003) (stating that contracts to convey or for the benefit of third parties are not trusts). For the contractarian view of trust law, see Langbein, *Basis of the Law of Trusts*, *supra* note 169, at 627; Patrick Parkinson, *Reconceptualising the Express Trust*, 61 CAMBRIDGE L.J. 657, 659 (2002) (arguing "that the law of trusts is better conceptualized as a species of obligation rather than being understood as a form of property ownership"). For an organizational view of trust law, see generally Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law,* 110 YALE L.J. 387 (2000).

203. 96 P.3d 1078 (Ariz. Ct. App. 2004), *superseded by statute,* ARIZ. REV. STAT. ANN. § 14-10205 (2022), *as recognized in* Jones v. Fink, No. 1 CA–SA 10–022, 2011 WL 601598, at *2 (Ariz. Ct. App. 2011).

required to arbitrate under a mandatory arbitration provision.[204] The court reasoned that:

> Arbitration rests on an exchange of promises. Parties to a contract may decide to exchange promises to substitute an arbitral for a judicial forum. Their agreement to do so may end up binding (or benefitting) nonsignatories. In contrast, a trust does not rest on an exchange of promises. A trust merely requires a trustor to transfer a beneficial interest in property to a trustee who, under the trust instrument, relevant statutes and common law, holds that interest for the beneficiary. The "undertaking" between trustor and trustee "does not stem from the premise of mutual assent to an exchange of promises" and "is not properly characterized as contractual." That the defendants have referred to the Trusts interchangeably as "agreements" or "contracts" does not change their basic nature.[205]

Even if trusts are not conceptually similar to contracts and consent is less than obvious regarding mandatory arbitration provisions in trust agreements, a settlor may still mandate arbitration of trust disputes if the legislature supports such a process. In fact, this is exactly what Arizona did following the *Schoneberger* decision.[206] However, this type of legislative solution does not exist in all circumstances. Furthermore, as arbitration continues to forge a path into trust law, it might be either necessary or useful for advocates to find a way to reframe arbitration from a consent-centred mechanism to an intent-effectuating device so as to garner support from the estate planning community. Certainly it is true that legislatures can sidestep these issues by a stroke of the pen and can help courts avoid the need to apply a normatively thin concept of consent to trust agreements. Indeed, the best statutes would allow courts to uphold arbitration clauses because they effectuate the settlor's wishes.[207]

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204. *Id.* at 1082–83. For discussion concerning why trusts are not contracts for arbitration purposes, see *In re* Naarden Trust, 990 P.2d 1085, 1087–89 (Ariz. Ct. App. 1999), *superseded by implication*, ARIZ. REV. STAT. ANN. § 14-10205 (2022); Diaz v. Bukey, 125 Cal. Rptr. 3d 610, 612–15 (Cal. Ct. App. 2011), *rev. granted*, and *superseded* by Diaz v. Bukey, 257 P.3d 1129 (Cal. 2011), and *transferred* by Diaz v. Bukey, 287 P.3d 67 (Cal. 2012). Notably, the decision of the California Court of Appeals in *Diaz* is no longer considered valid pursuant to California procedural law.

205. *Schoneberger*, 96 P.3d at 1083 (citations omitted).

206. ARIZ. REV. STAT. ANN. § 14-10205.

207. As these provisions become more common, it will be interesting to see if their use will be actually discussed with and agreed to by the settlor, or if these provisions will become boilerplate in trust forms. Questions will also arise as to whether the settlor is agreeing to arbitration for all internal disputes. For example, if the settlor of a revocable trust is being removed as trustee during his

## III. ANALYSIS OF USING AI IN ARBITRATING TRUST DISPUTES

Having described the nature and types of trust disputes, this Article now proceeds with a normative analysis of the applicability and utility of AI-based technologies to trust arbitration. [208] One overarching concern, though, is that there may not be enough training data for accurate AI predictions, especially in more complex trust disputes.[209]

It stands to reason, though, that AI will be beneficial in assisting human arbitrators in trust disputes. AI will help arbitrators manage the arbitration process, organize and review documents, search for relevant case law or arguments, compare cases, and even draft decisions. In this regard, AI assistance will help improve the efficiency and effectiveness of the trust arbitration process.

However, whether AI-based decision-making is advantageous to trust arbitration depends on the nature of the underlying trust dispute. External trust disputes and internal trust disputes are very different in regard to complexity and conflicts. Accordingly, a separate analysis of the applicability of AI decision-making to both external and internal trust disputes is in order.

### *A. External Trust Disputes Revisited*

AI-based decision-making should be suitable and beneficial in arbitrating external trust disputes. As discussed above, noncomplex and low-conflict disputes are the most suitable to be solved by AI-based decision-making.[210] External trust disputes usually do not involve any issues uniquely associated with the trust *qua* trust. These types of disputes generally deal with contractual matters. The issues arising in these disputes tend to be routine and repetitive, and

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or her lifetime, would the settlor be bound by the mandatory arbitration provision if he or she challenges the attempted removal? Would the settlor have intended to be bound by such a provision? If the settlor has a dispute with the trustee concerning the distributions of funds after the removal or resignation of the trustee, would the settlor have intended to be bound by the arbitration provision? Similarly, if the settlor's main concerns are with family harmony and challenges to the instrument, should these clauses only extend to validity challenges and not administrative challenges? Finally, would the settlor really want to condition the beneficiary's interest upon arbitrating administrative disputes if other judicial or nonjudicial dispute resolutions may be more beneficial or appropriate?

208. Keep in mind that the trust bench and bar already seem apprehensive on the use of arbitration with human arbitrators and may be even more skeptical concerning the use of nonhuman arbitrators. *See supra* note 3 and accompanying text.

209. One possible solution to partially help alleviate this problem may be found in crowdsourcing. *See, e.g.*, Yiangos Papanastasiou et al., *Improving Dispute Resolution in Two-Sided Platforms: The Case Review Blackmail*, ARTICLES ADVANCE, at 1, 3, (Jan. 23, 2023), https://pubsonline.informs.org/doi/10.1287/mnsc.2022.4655.

210. *See* discussion *supra* Part II.C.

require less attorney attention than internal trust disputes. Moreover, pertinent facts tend not to be in dispute. In addition, these disputes are less emotionally charged because individual beneficiaries are not involved. These disputes tend to be clear in facts (and law), and do not present any challenge to AI decision-making in this regard. Therefore, the implementation of AI decision-making to external trust disputes could be very promising.

### *B. Internal Trust Disputes Revisited*

Unlike external trust disputes, AI-based decision-making may have limited usefulness in arbitrating the emotionally infused and complicated nature of internal trust disputes. It should be noted that internal trust disputes are far more common than external trust disputes[211] and, therefore, the analysis of AI's utility in trust arbitration of internal trust disputes is more pertinent.

Most internal trust disputes involving validity issues (such as mental capacity, insane delusion, undue influence, fraud, and/or duress) will be difficult, if not impossible, for AI to resolve in the foreseeable future. Most of these types of internal trust disputes are equitable in nature, presenting a potential problem for future AI decision-making systems. Generally, internal trust disputes of this nature tend to be fact sensitive, hostile, and emotionally charged. The disputes tend to involve pre-trial motions, numerous amounts of witnesses, copious amounts of documentary evidence, and a number of separately represented parties. In these disputes, arbitrators will be called upon to determine the facts, determine the credibility and authenticity of written evidence and witness testimony, and apply applicable law to new and novel facts. In addition, these cases tend to be emotionally charged with anger, animosity, family rivalry, competitiveness, jealousy, greed, and distrust.

In addition, AI-based decision-making systems may be less useful in determining awards for internal trust disputes arising from administrative issues (such as possible breaches of good faith, loyalty, and impartiality; or actions to modify, reform, or terminate the trust). These disputes tend to be equitable in nature as well. And, AI decision-making systems may be ill-suited in fashioning equitable awards. In addition, AI decision-making models require an enormous amount of data,[212] and best apply to uncomplicated, repetitive factual scenarios. These types of internal trust disputes are not routine, and the underlying facts tend to be novel and distinct. They involve pre-trial motions, a cascade of witnesses, and a mountain of documentary evidence. Moreover, these type of internal trust disputes are highly complex and rife with conflict.[213] The individual beneficiaries have

211. Strong, *supra* note 4, at 1161.
212. *See supra* notes 87, 92–94 and accompanying text.
213. *See supra* notes 149–57 and accompanying text.

real financial value and emotional significance at stake. Institutional trustees will have financial value, institutional reputation, and strategic value at stake.

AI decision-making systems, however, could play an important role in some internal trust disputes. For instance, AI may have great promise in internal trust disputes involving trustees' fees and lawyers' fees. While these types of disputes are becoming more common and costly, the proceedings are uncomplicated and repetitive in nature. Thus, with the proper data set, AI could dramatically streamline these types of disputes.

Another potential useful application of AI-based decision-making could be in determining disputes involving two areas of fiduciary duties: trust distributions and trust investments. Disputes often occur involving unhappy lifetime beneficiaries upset about the amount of money a trustee is distributing to them.[214] Of course, remainder beneficiaries would rather trustees not overly distribute trust assets to lifetime beneficiaries, and may bring actions as well. AI systems may be able to determine a proper distribution range from analyzing the purpose of the trust, the beneficiaries' burn rate and lifestyles, and projections concerning the value of the remainder interests, among other factors. As for disputes alleging breach of prudence in managing trust assets, AI may be able to determine a proper range of acceptable return on investments by taking into account the purposes of the trusts and the assets of the trusts (i.e., markable securities, unique assets such as artwork or oil). Of course, these disputes may nevertheless prove too complicated for an AI system in that these disputes will be fact specific considering the beneficiary's lifestyle, purpose of the trust, directions in the trust, and the assets held by the trust. And fashioning an equitable remedy may be outside the ability of future AI systems. Moreover, trust disputes typically involve multiple issues—not a singular issue. Trust disputes will raise multiple issues covering various topics and alleging multiple breaches of fiduciary duties. So, even if AI could determine one issue among the plethora of issues being disputed, AI would be limited in its usefulness in the overall arbitration of the trust grievances. Accordingly, AI decision-making systems may prove to be less-than-idea in arbitrating internal trust disputes.

## CONCLUSION

This Article engaged in a positive and normative analysis of the potential role of AI-based technologies in trust arbitration. It is important to have a realistic understanding of where AI-based technology is likely to positively impact the arbitration process of trust disputes and where it is not. AI-based technologies will have a

214. Robert Sitkoff, *An Agency Costs Theory of Trust Law*, 89 CORNELL L. REV. 621, 650–51 (2004).

positive impact on the resolution of trust disputes by assisting human arbitrators in performing their arbitral functions. In this regard, AI systems will be highly beneficial in assisting arbitrators in managing the arbitration process, organizing and reviewing documents, searching for relevant case law or arguments, comparing cases, and even drafting decisions. This assistance will increase the overall speed and efficiency of the arbitration process. The more important question, though, is whether human arbitrators can be replaced by AI-arbitrators. Although no such AI systems have been developed yet, the question is important due to the growing use of AI-based technologies in the legal field. Once AI systems sufficiently evolve into making arbitral decisions, AI decision-making systems should be compatible with simple external trust disputes and internal disputes concerning trustee fees and legal fees. However, AI technology has its limitations for the foreseeable future concerning complex disputes with a high degree of conflict. Unfortunately, AI-based technology will have little utility in deciding trust arbitration disputes for internal trust disputes, which comprises the vast majority of trust disputes.