

The Legal Regulation of the AI Arbitrator and Procedural Justice Guarantees



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Abstract

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This study examines the legal framework for automated arbitration in light of the rapid developments in AI technologies, with a focus on the legislative gap in national laws, particularly Iraqi law, towards regulating this type of arbitration. The study examines the possibility of formulating a normative legal framework based on international soft rules such as the European Artificial Intelligence Act, the Silicon Valley Guidelines, and the UNCITRAL Principles.

The study concludes that current national regulations do not explicitly regulate AI-based arbitration, which makes the application of procedural fairness safeguards in this context closer to a forward-looking normative framework than to direct practical application. Accordingly, the study proposes a hybrid regulatory model based on the integration of human supervision and smart technologies (Human-in-the-loop) to ensure a balance between technical efficiency and guarantees of justice.

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التنظيم القانوني للمحكم الآلي وضمانات العدالة الإجرائية

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معلومات المقالة	الخلاصة
تاريخ الاستلام	تناول هذا البحث التنظيم القانوني للمحكم الآلي في ظل التطورات المتسارعة لتقنيات الذكاء الاصطناعي وتزايد دمجها في الآليات تسوية المنازعات. وتركز الدراسة على الفجوة التشريعية في الأنظمة القانونية الوطنية، ولا سيما القانون العراقي، فيما يتعلق بتنظيم التحكيم القائم على الذكاء الاصطناعي ومدى قدرة القواعد القانونية الحالية على استيعاب عمليات اتخاذ القرار المؤتمتة.
2026/3/8	كما تناول هذا البحث إمكانية وضع إطار قانوني معياري مستند إلى قواعد القانون المرن والتجارب التنظيمية المقارنة، بما في ذلك قانون الذكاء الاصطناعي الأوروبي، ومبادئ وادي السيليكون، وإرشادات الأونسيرال المتعلقة بالتجارة الإلكترونية وتسوية المنازعات. وتناقش كذلك التحديات القانونية والإجرائية المرتبطة بالتحكيم الخوارزمي، ولا سيما ما يتعلق بالشفافية، والمساءلة، والعدالة الإجرائية، وقابلية تنفيذ قرارات التحكيم الصادرة عن الأنظمة الذكية.
تاريخ القبول	يخلص الباحث إلى أن التشريعات الوطنية الحالية لا تتضمن تنظيماً صريحاً لآليات التحكيم الآلي، الأمر الذي يثير حالة من الغموض القانوني بشأن مشروعية وصحة القرارات التحكيمية الصادرة عن أنظمة الذكاء الاصطناعي. وبالتالي، فإن تطبيق ضمانات العدالة الإجرائية في هذا المجال ما يزال أقرب إلى إطار معياري مستقبلي منه إلى تطبيق عملي مباشر.
2026/5/21	

وبناءً على ذلك، تقترح الدراسة نموذجاً تنظيمياً هجيناً قائماً على مبدأ “الإنسان داخل الحلقة (Human-in-the-Loop)” من خلال دمج الإشراف البشري القضائي مع التقنيات الذكية المتقدمة، بما يضمن تحقيق التوازن بين الكفاءة التقنية، واليقين القانوني، وضمانات العدالة الإجرائية. كما توصي الدراسة بضرورة تطوير نصوص تشريعية متخصصة لتنظيم أنظمة التحكيم المعتمدة على الذكاء الاصطناعي ضمن الأطر القانونية العراقية والمقارنة.	تاريخ النشر 2026/6/20
الكلمات المفتاحية: التحكيم الآلي، الذكاء الاصطناعي، العدالة الإجرائية، الحوكمة الخوارزمية، التنظيم القانوني، التحكيم الإلكتروني.	
كيفية الاستشهاد بالبحث: حنين رياض جليل العكبي، التنظيم القانوني للمحكم الآلي وضمانات العدالة الإجرائية، مجلة الباحث للعلوم القانونية، المجلد 7، العدد 1، حزيران، السنة 2026. الصفحات : 175-188.	

1. Introduction

The rapid development of artificial intelligence technologies has fundamentally transformed dispute resolution mechanisms, as the concept of automated arbitration has emerged as one of the modern applications in the field of digital justice. This system is based on the use of intelligent algorithms in dispute analysis and in some cases the issuance of quasi-judicial recommendations or decisions.

However, this development raises a fundamental legal problem related to the extent to which procedural justice can be guaranteed in the absence of a clear legislative regulation regulating the work of these systems, especially with regard to the right of defense, the transparency of procedures, and the possibility of appealing decisions issued automatically.

The problem is not only the effectiveness of automated arbitration, but also the extent to which it can be subject to a legal system that ensures that the fundamental rights of the disputing parties are not infringed.

1. 1. Importance of the topic

The importance of this research stems from its treatment of a modern and sensitive topic represented in automated governance based on artificial intelligence technologies, and the legal problems it raises related to ensuring procedural justice and protecting the rights of litigants in light of the rapid digital transformation in judicial systems. The importance of the research is manifested in the following aspects:

1. **Scientific Importance:** The Research Contributes to Enriching Contemporary Legal Thought by Studying the Conceptual and Organizational Framework of Automated Judgment, And Analyzing Its Compatibility with the Basic Principles of Procedural Justice, Such As the Right of Defense, The Principle Of confrontation, the publicity of the proceedings and the reasoning of judgments.
2. **Legislative Importance:** The Research Helps to Highlight Legislative Shortcomings in Comparative National Laws on the Regulation of Automated Adjudication, And Provides a Scientific Basis on Which Legislators Can Rely When Drafting Legal Texts Regulating the Use of Smart Technologies in Adjudicating Judicial Disputes.
3. **Judicial Importance:** The Research Sheds Light on the Practical Challenges Facing the Judiciary When Integrating Automated Judgment into Judicial Work, Especially with Regard to the Responsibility of Judicial Decisions, The Possibility of Appealing It, And Ensuring Judicial Oversight of the Outputs of Smart Systems.
4. **Human Rights Importance:** The Research Highlights the Role of Legal Regulation in Protecting Human Rights and Ensuring a Fair Trial, By Emphasizing the Need for Automatic Sentencing to Be Subject to the Same Procedural Safeguards Prescribed by Traditional Judicial Rulings, In Order to Prevent Arbitrariness or Algorithmic Bias.
5. **Future Significance:** The research opens up prospects for future studies on the development of hybrid models that combine human judge and intelligent systems, and examines the possibility of

adopting automated judgment in specific types of disputes while preserving the essence of procedural justice.

1.2. The research problem:

The problem with the research lies in the absence of a clear national legal framework regulating the use of AI in arbitration, which raises questions about the feasibility of achieving procedural justice guarantees in a digital environment that is not regulated by legislation.

The main question therefore revolves around:

To what extent can a legal framework for automated arbitration be built that balances technical development with procedural justice guarantees in light of the existing legislative vacuum?

This problem stems from the urgent need to define the scope of the use of automated judgment, its legal and regulatory limits, and to put in place the necessary safeguards to prevent any possible violation of the fundamental rights of litigants, in order to ensure the community's confidence in the digital justice system.

1.3. Research Objectives.

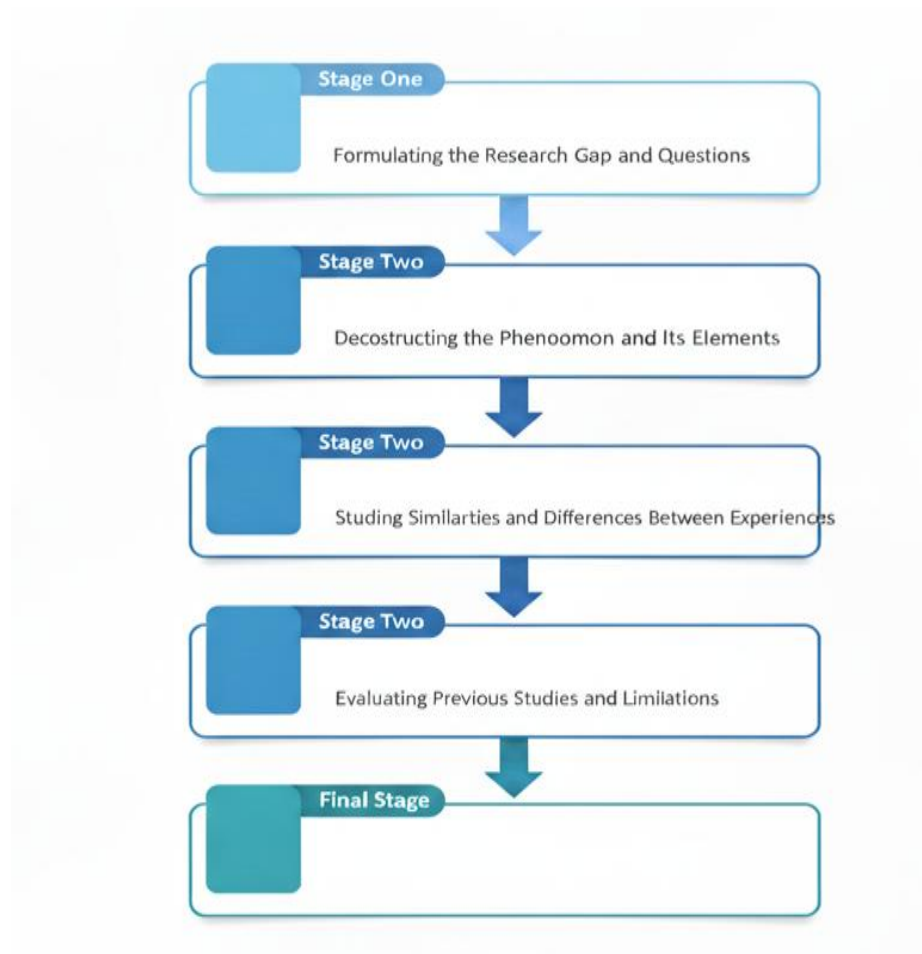
This study aims to achieve the following:

1. Analyze the legal reality of arbitration in national and international legislation in the absence of explicit regulation of artificial intelligence.
2. Determine the availability of procedural justice guarantees in arbitration mechanisms in general.
3. Exploring the Possibility of Developing a Hybrid Regulatory Framework that Integrates AI and Human Stewardship to Ensure Justice.

1.4. Research Methodology.

The research relies on the descriptive-analytical approach to study the legal regulation of automated governance and analyze its compatibility with the principles of procedural justice, in addition to the comparative approach to study international experiences and derive best practices, and the critical approach to review previous studies and draw out the strengths and shortcomings of the current legal organization. The study relies on national and international legal sources, refereed articles, and recent legal reports.

1.5. Research Methodology Outline:



1. 6. Research Plan:

- **First Topic: The Conceptual Framework of Automated Governance**
- **Second Topic: Legal Organization of Automated Governance**
- **Third Topic: Procedural Justice Guarantees**

2. The Conceptual Framework of Automated Governance

First: E-Governance There is no longer a single definition of e-governance, but there are many directions:

1. UN Definition: Using technology to enhance transparency, accountability and improve services.⁽¹⁾
2. World Bank Definition: Employing digital tools to reduce bureaucracy and improve the relationship with citizens.⁽²⁾
3. Jurisprudential Definition: An administrative and legal system that relies on digital means to ensure the rule of law and achieve justice⁽³⁾.

Second: E-Governance Objectives (Organizational Addendum)

(1) United Nations. (2020). E-Government Survey: Digital Government in the Decade of Action. UN Publishing.

(2) World Bank. (2016). Digital Governance and Public Sector Transformation Report. Washington DC.

(3) Al-Saadi, M. (2022). Electronic Governance in Legal Systems. Baghdad Legal Studies Journal.

- Promoting transparency and accountability
- Improving the efficiency of judicial and administrative performance
- Reducing administrative corruption
- Supporting the Transformation Towards Digital Justice ⁽¹⁾.

Third: Advantages of Electronic Arbitration Electronic arbitration has a number of advantages that make it an effective tool in settling disputes, most notably:

1. **Speed in adjudication of disputes:** It contributes to reducing procedural time compared to traditional arbitration.
2. **Reduced procedural costs:** By reducing expenses related to physical presence and paperwork.
3. **Expanding access to justice:** By enabling parties to file their claims remotely without geographical restrictions.
4. **Enhancing administrative efficiency:** By automating some arbitration procedures such as file management and document analysis.
5. **Procedural flexibility:** It allows the parties to choose procedures that are more appropriate to the nature of the dispute ⁽²⁾.

Fourth: Challenges facing electronic arbitration in the national judiciary Despite its advantages, electronic arbitration faces a set of challenges, the most important of which are:

- Lack of an explicit legal regulation regulating electronic arbitration proceedings.
- Limited digital infrastructure in some judicial institutions.
- Problems related to the authenticity of the electronic manual.
- Lack of technical expertise among some legal actors.

Fifth: Ways to promote electronic arbitration to achieve greater effectiveness of this type of arbitration, the following can be proposed:

1. **Legislation of a law on electronic arbitration** regulating its procedures and legal authority.
2. **Integrate smart systems into arbitration management** while maintaining human control.
3. **Developing the digital infrastructure of the judiciary** to keep pace with digital transformation.
4. **Training judges and arbitrators on modern techniques** in dispute resolution.
5. **Benefit from international experiences** in the field of electronic arbitration (e.g. EU and France).

3. Legal Organization of Automated Governance

3.1. The legal organization of arbitration in Iraqi legislation and the potential for the employment of artificial intelligence.

(1) Russell, S. & Norvig, P. (2021). Artificial Intelligence: A Modern Approach. Pearson.

(2) European Commission. (2024). EU Artificial Intelligence Act – Regulatory Framework. Brussels.

The Iraqi legislature regulated the arbitration provisions in the Civil Procedure Law No. (83) of 1969 within the third chapter of Book Three, specifically in Articles (251-276), where it dealt with the legal framework of arbitration in terms of agreeing on it, the arbitrator's conditions, the procedures for considering the dispute, the authority of the arbitration award, and the methods of appealing it. These texts are the legal basis for assessing the applicability of the Iraqi legislative system to accommodate the applications of artificial intelligence in the field of arbitration.

Article (251) stipulates that arbitration is permissible and agreed, whether it is a clause within the contract or an independent party, which confirms that the authority of the will constitutes the fundamental pillar of the arbitration system. Based on this, it can be said jurisprudently that the agreement of the parties to adopt artificial intelligence technologies in the dispute resolution process, as a tool of analysis or support for the arbitral award, does not contradict the essence of this article, as long as the final decision is attributed to a legally recognized arbitrator.

Article (255) also stipulates the availability of capacity in the arbitrator and prohibits the judge from combining his judicial function with the task of arbitration, which reflects the legislator's perception of the arbitrator as a natural person. It follows that artificial intelligence, under the existing text, cannot be considered an independent arbitrator, but it can be employed as an auxiliary technical means that the human arbitrator relies on to analyze the facts, weigh the evidence, and propose legal solutions, without prejudice to the condition of eligibility.

With regard to procedures, Article (260) grants the arbitrator the authority to regulate the procedures for the consideration of the arbitration case, in a manner that does not violate public order. This procedural flexibility opens the way for the use of artificial intelligence technologies in the management of electronic arbitration sessions, document processing, and acceleration of the resolution of disputes, in line with the arbitration philosophy based on speed, effectiveness and reducing formal complexities.

Articles (263 and 265) also allow the issuance of an arbitration award in accordance with the rules of law or justice and equity, if the arbitrator authorizes conciliation, which allows highlighting the role of artificial intelligence in achieving procedural neutrality, through the application of rules and standards in an objective and orderly manner, away from personal influences, while the authority of final judgment remains in the hands of the human arbitrator.

In terms of the authority of the award and its appeal, Article (273) specifies cases of annulment of the arbitral award, most of which are related to procedural defects or exceeding the limits of jurisdiction or duration. Here, artificial intelligence technologies, when used as an auxiliary tool, can contribute to reducing the chances of invalidity, by controlling the legal periods stipulated in Article (252) and strict adherence to the procedures, which enhances the chances of ratification of the arbitral award by the competent court in accordance with Articles (269-272).

In summary, the Iraqi Code of Procedure, despite its lack of explicit regulation of electronic arbitration or AI-based arbitration, does not close the door to the employment of smart technologies in arbitration, provided that the requirement of the arbitrator's human capacity is respected. Therefore, under the current Iraqi legislation, artificial intelligence can be viewed as a smart arbitration assistant, rather than an independent arbitrator, until the legislator intervenes by issuing a special regulation that recognizes electronic arbitration and defines its controls and guarantees.

3.2. Comparative Legislation of Arbitration Based on Artificial Intelligence

The Position of French Legislation on AI-Based Arbitration

French legislation is one of the most open to the use of modern technology in the field of justice and arbitration, particularly in the context of online arbitration ⁽¹⁾. Although French law does not explicitly recognize AI as an "independent arbitrator", it allows it to be used as an auxiliary technology in the management of arbitration proceedings and dispute analysis ⁽²⁾.

The French Code of Civil Procedure **has recognized** the principle of party freedom to regulate arbitral proceedings, which has allowed for the use of digital platforms and intelligent systems in the settlement of disputes, especially in minor commercial disputes and electronic disputes ⁽³⁾. French courts also require that the arbitral award be attributed to a specific human arbitrator, even if artificial intelligence algorithms or tools are relied upon in the preparation of the award or the analysis of the facts ⁽⁴⁾.

The French judiciary emphasizes the need to respect the principles **of transparency, the right of defence and confrontation between litigants**, and any breach of these safeguards is grounds for appealing the arbitral award, even if it is the result of an advanced electronic arbitration system. Thus ⁽⁵⁾, the French position adopts a **hybrid model** based on the integration of the human arbitrator and artificial intelligence, without granting the latter the status of an independent arbitrator ⁽⁶⁾.

The EU's Position on AI-Based Arbitration

The European Union (EU) treats artificial intelligence in the field of justice and arbitration from a **rigorous human rights and regulatory perspective**, which aims to strike a balance between technological innovation and the protection of fundamental rights. This approach has been embodied in the issuance of a number of important documents, most notably:

- **Ethics Guidelines for Trustworthy AI**
- **European AI Act**

The European Union classifies the use of artificial intelligence in the judicial field as:

High-Risk AI Systems

This imposes strict restrictions on its use, particularly with regard to transparency, interpretability, and legal liability.

In the area of arbitration, the European Framework does not prohibit the use of AI in **dispute management or decision support**, but expressly rejects the assignment of the authority to the final adjudication of a dispute to a purely automated system without human oversight. The EU emphasizes that:

- The need for effective human supervision
- Guarantee of the right to appeal and review
- Preventing algorithmic bias
- Protection of personal data of parties

(1) exology. AI and Arbitration: A perspective from France. Available at:

<https://www.lexology.com/library/detail.aspx?g=e94c47da-57b7-4dad-9ca0-74d68dfea1dc>

(2) French Civil Procedure Code, Book IV on Arbitration, allowing parties the freedom to organize arbitration procedures. Available at: https://www.wipo.int/wipolex/en/text.jsp?file_id=23226

(3) Available at: <https://larevue.squirepattonboggs.com/battle-of-the-arbitration-seats-contrasting-the-2025-english-arbitration-act-reform-with-frances-reform-proposal.html>

(4) European Commission. Ethics Guidelines for Trustworthy AI. Available at: <https://digital-strategy.ec.europa.eu/en/library/ethics-guidelines-trustworthy-ai>

(5) ArXiv. Preventing Algorithmic Bias in High-Risk AI Systems, 2023. Available at: <https://arxiv.org/abs/2305.13938>

(6) ArXiv. Data Protection and Privacy Obligations under the EU AI Act, 2024. Available at: <https://arxiv.org/abs/2411.15149>

Therefore, the EU's position is based on rejecting the idea of an "independent automated arbitrator", in exchange for a broad acceptance of the idea of AI-powered arbitration within the framework of strict legal controls.

UNCITRAL's Position on AI-Based Arbitration

The United Nations Commission on International Trade Law (UNCITRAL) is one of the most prominent international actors in the development of the rules of international commercial arbitration⁽¹⁾. Although the **UNCITRAL Model Law on International Commercial Arbitration** does not explicitly provide for artificial intelligence, it has established general principles that allow for the absorption of technological developments⁽²⁾.

UNCITRAL has emphasized:

- The Principle of Neutrality of the Technological Means
- Freedom of the parties to choose arbitration proceedings
- Flexibility of Rules of Evidence and Procedures

UNCITRAL has also issued rules on **electronic commerce** and electronic communication, which is a legal basis for the use of artificial intelligence systems in dispute management, provided that the basic safeguards of arbitration are respected, foremost of which are:

- Independence and impartiality of the arbitrator⁽³⁾.
- Right of defense⁽⁴⁾
- Equality between the parties

UNCITRAL does not yet recognize artificial intelligence as an independent arbitrator, but does not oppose its use as an auxiliary technology tool within the framework of international electronic arbitration, which is in line with the general international trend towards the adoption of hybrid models in dispute resolution.

3.3. The National Legal Framework for Automated Governance

With the development of the use of automated judgment in digital justice, it has become necessary to have a **national legal framework** that regulates how smart systems are used in issuing judicial decisions. This framework aims to **protect the rights of the parties, ensure procedural justice**, and ensure a balance between technical development and human judicial authority⁽⁵⁾.

In Iraq, although there are laws regulating the judiciary and judicial procedures, the **law on the use of technology in the judiciary** has not yet been clearly drafted, leaving room for legal challenges when incorporating automated governance. Some researchers have pointed to the need to update legislation to include **e-arbitration, smart courts, and digital defense rights**⁽⁶⁾.

Second: International and Comparative Legal Framework

The experiences of other countries illustrate the importance of establishing **precise legal controls for automated governance**:

1. **France:** It has developed **partial digital courts** for electronic arbitration in simple cases, with human supervision mandatory over final decisions⁽⁷⁾.

(1) <https://www.lexology.com/library/detail.aspx?g=e94c47da-57b7-4dad-9ca0-74d68dfea1dc>

(2) UNCITRAL. Model Law on Automated Contracting. Available at: <https://uncitral.un.org/ar/mlac>

(3) UNCITRAL. Principle of Technological Neutrality in Arbitration. Available at: <https://uncitral.un.org/en/texts/arbitration>

(4) UNCITRAL Arbitration Rules. Equality of Parties. (<https://pca-cpa.org/en/services/appointing-authority/uncitral-rules/>)

(5) Surden, "Artificial Intelligence and Law," 1320.

(6) Harry Surden, "A Legal Framework for Algorithmic Decision-Making in Courts," Stanford Law Review Online 72 (2020): (2020): 45–50, <https://doi.org/10.2139/ssrn.3556370>.

(7) Katsh and Rabinovich-Einy, Digital Justice, 60–65.

2. **United Kingdom:** The UK government has developed a legal framework for the application of smart systems in some courts, with a focus on **transparency, appealability, and protection of personal data**⁽¹⁾.
3. **European Union:** The European Commission has issued guidelines **to ensure legal responsibility, justice, and control over algorithms** used in digital justice systems⁽²⁾.

These experiences help to **draw inspiration from best practices** for the development of national legislation, ensuring that the benefits of automated governance are exploited without prejudice to the rights of the parties.

3.4. Guarantees of Procedural Justice in Automated Governance

Automated judgment, while accurate and efficient, cannot be adopted without adherence to basic legal safeguards:

1. **The right to defense and the principle of confrontation:** The intelligent system should allow the parties to submit pleadings and objections, and there should be **a mechanism for human appeal and review**⁽³⁾.
2. **Publicity of procedures and reasoning of judgments:** The decisions of smart systems must be **declared and interpreted** in accordance with the laws, allowing them to be reviewed and validated⁽⁴⁾.
3. **Judicial oversight of automated adjudication decisions:** Decisions made by intelligent systems must be reviewed by an independent human judge, to ensure adherence to the principles of justice and the protection of the rights of the parties⁽⁵⁾.
4. **Protection of human rights:** This includes data privacy, non-discrimination, and fairness in the application of the law, which are essential elements for maintaining **community trust in the digital judiciary**⁽⁶⁾.

3.5. Legal Challenges to Automated Governance

Despite the advantages, smart systems face several legal challenges, including:

- Ambiguity of national legislation on **the responsibility of an automated judicial decision**.
- Difficulty **reviewing complex algorithms** to ensure there are no implicit biases.
- The need **to integrate intelligent systems with human judges** to ensure procedural justice⁽⁷⁾.

(1) Richard Susskind, *Online Courts and the Future of Justice* (Oxford: Oxford University Press, 2020), 102–107.

(2) European Commission, *Ethics Guidelines for Trustworthy AI* (Brussels: European Commission, 2019), 12–15.

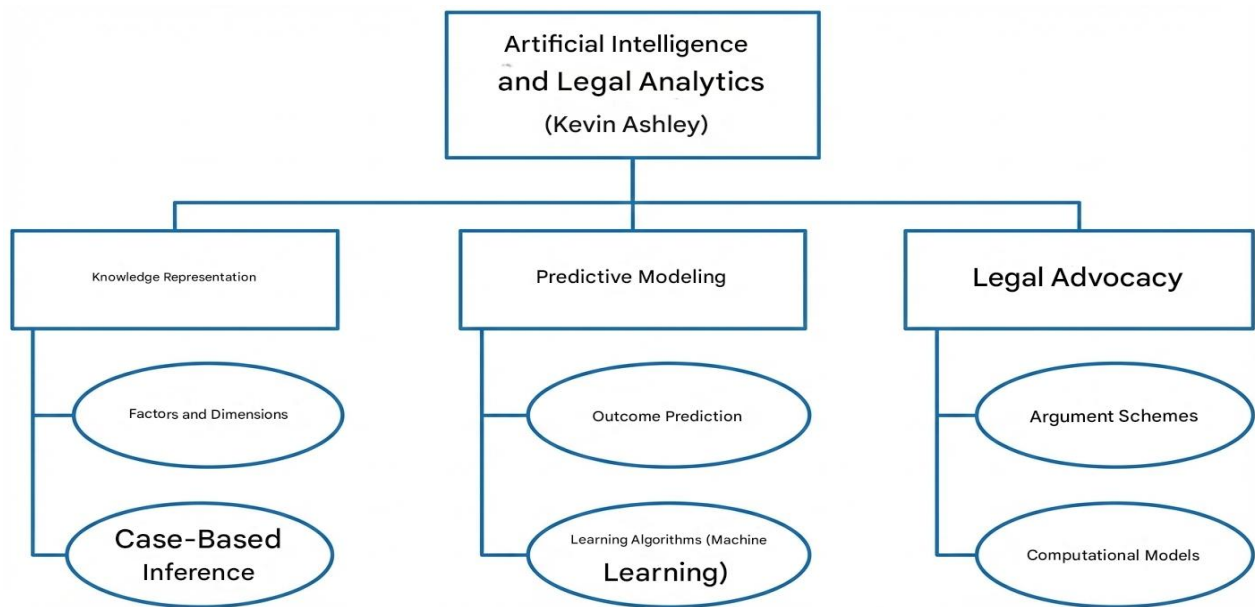
(3) Surden, “A Legal Framework for Algorithmic Decision-Making in Courts,” 48.

(4) Katsh and Rabinovich-Einy, *Digital Justice*, 68–70.

(5) Susskind, *Online Courts and the Future of Justice*, 105.

(6) European Commission, *Ethics Guidelines for Trustworthy AI*, 14–15.

(7) Ashley, *Artificial Intelligence and Legal Analytics*, 120–125.



4. Procedural Justice Guarantees in Automated Governance

4.1. The Concept of Procedural Justice:

Procedural justice is a **fundamental legal principle that ensures that all judicial proceedings are fair and equitable**, including:

- **Access to justice:** Ensures everyone has access to court to resolve disputes.
- **Right of defense:** Allows parties to present their pleadings and object to decisions.
- **The principle of equality:** equal treatment of all parties without discrimination.
- **Transparency and Decision Reasoning:** Clarifying how decisions are made and the legal reasons behind them.

In the context of automated governance, this principle becomes even more important because **of the minimization of direct human intervention**, which can lead to some parties feeling unfair if action is not taken clearly and controlled ⁽¹⁾.

4.2. Elements of Ensuring Procedural Justice in Automated Governance

Ensuring procedural justice depends on a set of elements that must be present in any intelligent judicial system:

1. The right to defend and plead

- Each party must have the ability to **present evidence and pleadings electronically**, even if the system is handled remotely.
- In electronic arbitration, there should be **clear mechanisms for summoning and hearing the parties**, to avoid any negative impact on the rights of the defence ⁽²⁾.

2. Transparency and Decision Reasoning

(1) Surden, "Artificial Intelligence and Law," 1325.

(2) Katsh and Rabinovich-Einy, Digital Justice, 68–70.

- Intelligent systems must provide **a clear version of the decision with a detailed explanation** of the legal criteria and algorithms used.
- How **the data can be processed and analyzed** to make a decision, so that any party or supervisory body can understand the legal and logical underpinnings of the decision.
- This contributes to **boosting trust in the digital system** and preventing feelings of bias or injustice⁽¹⁾.
- Digital confrontation: Rather than just exchanging memos, we recommend a Shared Data Environment mechanism to ensure that the machine doesn't rely on data hidden from one party.
- Interpretable Artificial Intelligence (XAI) is the technical solution to the "black box" problem, where systems are obliged to provide a "roadmap" for the logic they followed to reach the outcome, thus fulfilling the "reasoning of judgment" requirement.

4.3. Challenges Associated with Ensuring Procedural Justice

Despite the existence of safeguards, there are several challenges facing automated governance, including:

- 1. Balance between speed and efficiency on the one hand, and guarantee the rights of the parties on the other:**
 - Smart systems may deliver decisions much faster than traditional justices, but this should not be at the expense of defense rights or transparency.
- 2. Limitation of Legal Liability:**
 - In the event of an error in automated judgment, responsibility must be established among the developers, judges, or the system itself, to ensure fair accountability⁽²⁾.
- 3. Difficulty in interpreting some of the decisions resulting from machine learning algorithms:**
 - Some advanced algorithms may make complex decisions that are difficult for humans to fully understand, making it challenging to explain the decision to affected parties.
- 4. The need to constantly update legal systems:**
 - Legislation must be constantly amended to keep pace with technological development and ensure the sustainability of procedural justice.

4.4. Modern International Standards for Regulating Artificial Intelligence in Arbitration (Flexible Rules)

The legal regulation of automated arbitration is no longer limited to rigid legislative texts, but "Soft Law" has emerged as a leading practical framework, the most important of which are:

- 1- The Silicon Valley Guidelines (SVAMC 2024):** The first international practice to place restrictions on the arbitrator's use of AI, emphasizing the need to disclose the tools used and prohibit the entire delegation of decision-making authority to the machine.
- 2- The European Artificial Intelligence Act 2024:** which classified systems used in arbitration as "high-risk," imposing concrete technical obligations such as "audit records" and "algorithmic transparency."
- 3- The Seoul Protocol Principles:** which provide practical standards for the protection of the "right of confrontation" in digital environments, which takes research out of theorizing to applied international standards.

(1) Susskind, *Online Courts and the Future of Justice*, 105.

(2) Ashley, *Artificial Intelligence and Legal Analytics*, 125–128.

5. *Future Prospects*

- The continuous evolution of artificial intelligence and machine learning may allow systems to become **smarter and more transparent**.
- The integration of **Explainable AI techniques** helps make automated decisions understandable to humans, thereby enhancing procedural justice.
- The future of digital justice requires **a balanced integration between AI and human judge** to ensure fair and reliable decisions.

5.1. *Conclusions*

1. The claim that procedural fairness in automated arbitration is contingent on the adoption of "algorithmic transparency" standards, not just the automation of the proceedings.
2. There is a gap between traditional legislation (such as Iraq's Code of Procedure) and the nature of "automated decision," which requires a human-in-the-loop model.
3. Procedural justice is essential:
Ensuring the right to a defense, transparency, judicial oversight, and the protection of human rights are essential elements for maintaining procedural justice in decisions made by smart systems.
4. Legal and technical challenges: The study showed that there are significant challenges that include defining legal liability, interpreting AI algorithms, and keeping pace with national legislation on technological developments, which requires the development of flexible and effective mechanisms to deal with them.
5. International expertise is valuable for national development: The experiences of developed countries, such as France, the United Kingdom, and the European Union, provide a model that can be leveraged to develop national legislation that balances technology and judicial oversight to ensure justice.

5.2. *Recommendations*

- 1- Establishing a legislative framework: We propose to add an article in the draft Iraqi Arbitration Law stating: "An arbitral award may not be fully automated, and must be subject to the authentication of a human arbitrator to ensure that it is reviewed in accordance with the standards of fairness."
- 2- Regulatory: Obliging arbitration centers to adopt a "digital code of ethics" that outlines the liability of the system developer for algorithmic errors that may affect the rights of the defense.
- 3- Technically: The need to adopt (Audit Trail) techniques in arbitration platforms, to enable the judiciary to review the decision-making steps when challenging invalidity.
- 4- Integrating Human Monitoring into the Automated System: All decisions made by the smart system should be subject to human judicial review, especially decisions affecting the fundamental rights of the parties.
- 5- Promote transparency and accountability: Judicial authorities should ensure that the legal bases and algorithms used in the automated system are clarified, while providing access and review to parties or legal experts.
- 6- Providing clear appeal mechanisms: Establishing mechanisms for appealing and appealing electronic decisions issued automatically, to ensure the rights of defense and ongoing judicial oversight.
- 7- Training judges and lawyers on the use of smart systems: The need to prepare training programs for judges and lawyers to understand how smart systems work, how to review them, and ensure procedural fairness when using them.

- 8- Keeping pace with technological developments: Periodically updating legislation and laws to keep pace with the developments of artificial intelligence and judicial analysis techniques, while adopting ethical standards for the protection of human rights.
- 9- Drawing on international experiences: Studying the experiences of leading countries in automated governance, such as France, the United Kingdom, the Netherlands, and South Korea, to apply local best practices in line with the specificity of the national judicial system.
- 10- Developing Intelligent Explainable Systems: Working on designing systems whose decisions can be easily interpreted, to facilitate the review of decisions and the understanding of their legal and technical reasons by judges and parties.

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